

**SYLVANIA**

LAMPS CATALOGUE  
2013



**SYLVANIA**





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### Havells-Sylvania

We are Havells-Sylvania, one of the world's major lighting groups. For more than a century we have improved the way people live by enabling them to enjoy better lighting in a more sustainable manner. Today, we continue to build on our exceptional reputation as an innovator and creator of high-efficiency, energy-saving, light sources and luminaires, by providing full spectrum lighting solutions tailored to your individual and local needs. Our three main brands- Concord, Lumiance and Sylvania – concentrate strengths in research and development, LED lighting technology, product design, engineering and production, plus in-depth, honest application expertise, on their specialised areas of activity: high-end architectural, decorative and functional professional lighting.

Our recent acquisition, in 2007, by Havells India Ltd gives us the financial strength and resources to significantly expand and improve the business. The group, which has 94 branches and representative offices and 8,000 staff in more than 50 countries, has grown rapidly to become a US 1.3 billion company and currently operates 18 manufacturing plants in India, Europe, Latin America and Africa, producing globally acclaimed products such as switchgear, cables, wires and lighting.



QRG Towers Noida, India

## Concord Elegant Innovation

The Concord brand is part of the Havells-Sylvania Group and is one of Europe's most respected architectural lighting brands for retail and museum lighting. With a strong manufacturing base in the UK, Concord is renowned for its strong design ethos, high technical performance and aesthetic form. Concord focuses on bringing lighting solutions to meet the needs of architects and lighting designers.

[www.concord-lighting.com](http://www.concord-lighting.com)

## Lumiance Beautifully Functional

Lumiance offers a wide range of contemporary designed luminaires, intended for a variety of applications such as shops, offices, hotels, and restaurants.

[www.lumiance-lighting.com](http://www.lumiance-lighting.com)

## SYLVANIA Without Compromise

Sylvania Luminaires offers a comprehensive portfolio of attractive and competitively priced luminaires for Industrial and Commercial applications, such as offices, education, residential and leisure.

[www.sylvania-luminaires.com](http://www.sylvania-luminaires.com)

## SYLVANIA Without Compromise

Sylvania Lamps is one of the world's largest manufacturers of artificial light sources. It has a broad product offering, from halogen and low-energy lamps for the consumer market, to fluorescent lamps, HID lamps and various special products for the professional specifier.

[www.sylvania-lamps.com](http://www.sylvania-lamps.com)







The award winning HI-SPOT RefLED ES50 GU10 is manufactured in our Tienen factory

## Made In Europe

Havells Sylvania is proud of their strong manufacturing heritage in Europe. For over 100 years, group brands: Concord, Lumiance and Sylvania have manufactured lamps and luminaires in Belgium, Germany, France and the UK. These centres of excellence are our foundation, ensuring innovative design, development and production are aligned with the ever changing requirements of this dynamic marketplace

- **Newhaven (UK):** Concord and Lumiance luminaires
- **Saint Etienne (France):** Lumiance and Sylvania luminaires
- **Erlangen (Germany):** Sylvania Lamps
- **Tienen (Belgium):** Sylvania Lamps



Tienen Factory, Belgium



red**dot** design award  
winner 2010



**WINNER**  
2011



The Lighting Association



At Havells-Sylvania we pride ourselves on building the highest quality and most technologically advanced products within lighting. Our customers range from architectural practices, lighting designers and electrical contractors to end users. To this end our products have won many accolades and awards from the media, some of which are shown here.

2010	2011	2012	2013
Concord Stadium LED – Winner Lighting Design Awards	Concord Beacon Muse LED – Winner Lighting Industry Association	Lumiance Inverto - Finalist Electrical Industry Awards	Concord Glace – Finalist Lighting Design Awards
Concord Stadium LED – Winner Red Dot Design	Concord Beacon Muse LED – Winner LUX magazine	Concord LED Performance Cone – Finalist Lighting Design Awards	Concord Beacon Projector – Finalist Lighting Design Awards
	Concord Beacon Muse – Winner Lighting Design Awards	Sylvania Hi-Spot RefLED ES50 – Highly Commended Lighting Design Awards	
	Sylvania Superia CMI – Finalist Lighting Industry Awards		

## Exploring the catalogue

All pages follow a similar format, making it easier for you to identify the information you require quickly. Generally, the page format will include the information detailed below:

- 1 Colour tag
- 2 Brand
- 3 Product name
- 4 Product Image
- 5 Product features

- 6 Product icons / symbols
- Please refer to Icons & symbols guide at the back of the catalogue for more information
- 7 Ordering guide
- 8 Photometric data and related information
- 9 Dimensions (mm) and cap type

1

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9

**Hi-Spot® RefLED ES50 GU10 350lm**



**Hi-Spot® RefLED ES50 GU10 350lm**

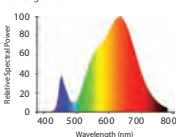
**SYLVANIA**

- Up to 85% energy saving compared to halogen lamps
- 7.5W - first true 50W halogen retrofit
- 100% retrofit - IEC standard dimensions
- Beam angle of 25° and 40°
- 47lm/W efficacy
- High light output: comparable to 50W halogen with 350lm for all colour versions
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Average rated life 25,000 hrs

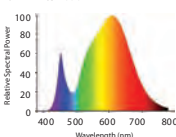
**5 YEAR WARRANTY**

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>50W halogen equivalent</b>									
0026746	RefLED ES50 7.5 W 350 LM 2700K 25° NON-DIM SL	7.5	220-240	25	GU10	2700	350	25000	15
0026748	RefLED ES50 7.5W 350 LM 2700K 40° NON-DIM SL	7.5	220-240	40	GU10	2700	350	25000	15
0026747	RefLED ES50 7.5W 350 LM 3000K 25° NON-DIM SL	7.5	220-240	25	GU10	3000	350	25000	15
0026749	RefLED ES50 7.5W 350 LM 3000K 40° NON-DIM SL	7.5	220-240	40	GU10	3000	350	25000	15
0026770	RefLED ES50 7.5W 350 LM 4000K 25° NON-DIM SL	7.5	220-240	25	GU10	4000	350	25000	15
0026771	RefLED ES50 7.5W 350 LM 4000K 40° NON-DIM SL	7.5	220-240	40	GU10	4000	350	25000	15
0026760	RefLED ES50 350LM 2700K 40° Orange base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026761	RefLED ES50 350LM 2700K 40° Red base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026762	RefLED ES50 350LM 2700K 40° Blue base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026763	RefLED ES50 350LM 2700K 40° White base SL	7.5	220-240	40	GU10	2700	350	25000	15

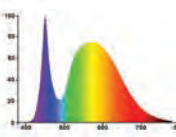
Homelight - 827



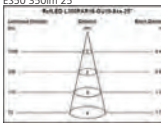
Warm white - 830



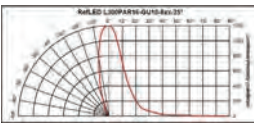
Cool white - 840



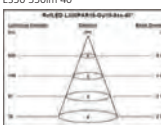
ES50 350lm 25°



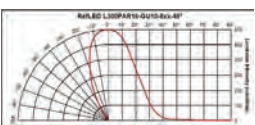
RefLED ES50 350lm 2700K 40°

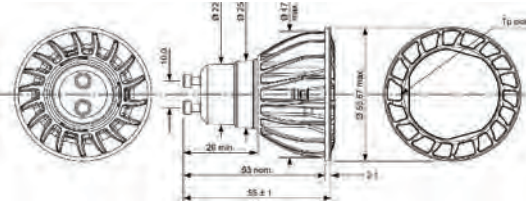


ES50 350lm 40°



RefLED ES50 350lm 40°





**Dimensions (mm)**



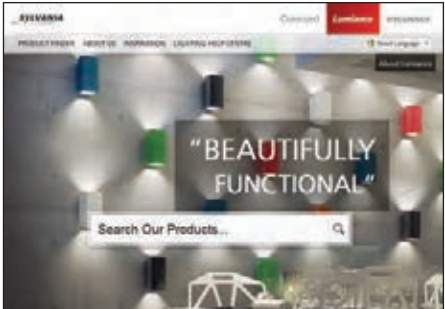
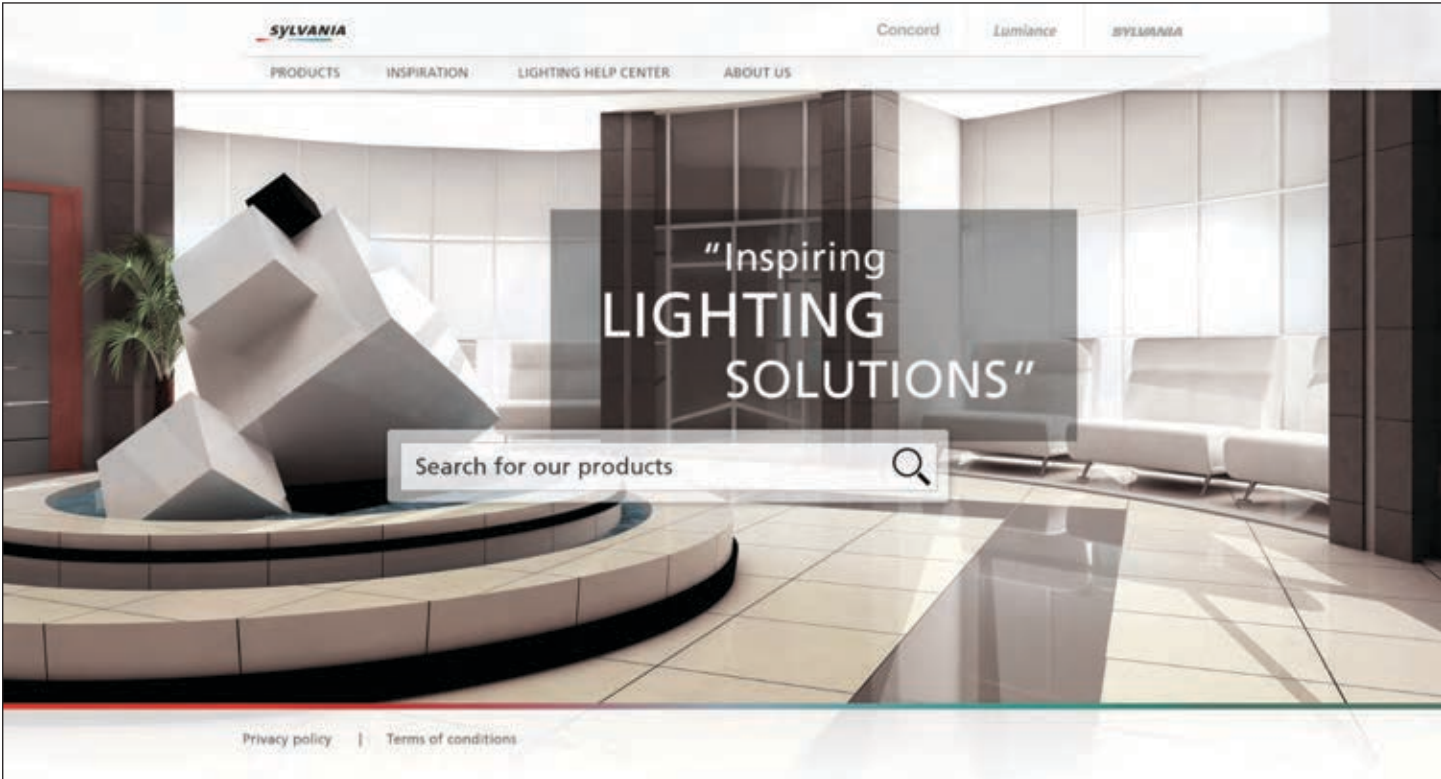
# Our Brand New Website

Havells-Sylvania is pleased to announce the launch of our new website, designed with a modern, refreshed look and feel and offering an unrivalled user experience. The website has been updated with all latest product and service information. You will be able to easily browse and search for products to get access to product images, installation information, technical data sheets and photometric files.

The main priority was to build a user friendly site that can be accessed from anywhere. Therefore it is compatible with all modern mobile devices enabling the users to find products and product information on the go.

We hope you will enjoy using our new website and that you will use see it as a useful tool for your business.

To view the new website and product finder, visit: [www.havells-sylvania.com](http://www.havells-sylvania.com)







11 ToLEDo  
Non-Directional



14 Hi-Spot® RefLED



22 RefLED LV SA111



23 RefLED 550lm  
AR111



24 ToLEDo Hi-Pin /  
Pygmy



26 Microlynx High  
Performance



27 ToLEDo Tubes





## LED Lamps

Our technology has reached the stage where you can confidently replace old technology lamps with the latest LED retrofit lamps for general lighting purposes. Sylvania LED lamps will deliver satisfied customers by replacing incandescent and halogen lamps with LED, keeping the light level and comfort they are used to, but achieving huge energy savings.

We manufacture LED lamps at Sylvania's state-of-the-art facilities in Germany and Belgium, ensuring European craftsmanship. The original halogen GU10 lamp was invented and first produced in our Tienen factory. Our LED lamps share one unique Sylvania design, building on our heritage with the spiralled reflectors used on halogen lamps. Our performance is best in class, making it easier to make the best choice on the market and take no risks on safety or quality. LED lamps contain no mercury, no lead, and achieve up to 90% energy savings, making them very environmentally friendly.



### HI-SPOT REFLED ES50 GU10

We invented the original halogen GU10 at our factory in Belgium over 15 years ago. Today we continue to be at the forefront of lamp innovation with breakthroughs in LED. Products include the highly commended HI-SPOT RefLED ES50 GU10 350lm, the first LED retrofit with the power to directly replace a 50W halogen.

### HI-SPOT REFLED MR16

A direct replacement for the popular MR16 halogen lamp. Available in 350lm and 450lm, they provide replacement options for both the 35W and 50W halogen versions.

#### WARRANTY

All lamps have a standard 2 year warranty but some LED lamps have an extended warranty of 3 and 5 years which is highlighted on each page



ToLEDo GLS Satin



ToLEDo GLS Clear

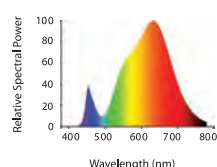
- Up to 80% energy saving compared to incandescent lamps
- Instant light
- 100% retrofit - Same dimensions as incandescent equivalent
- Suitable for replacement of up to 60W incandescent lamps
- Available in Homelight (2700K)
- Good colour rendering (CRI=80)
- Average rated life: 15000 to 35000 hrs


**3 YEAR WARRANTY\***
**ToLEDo GLS**

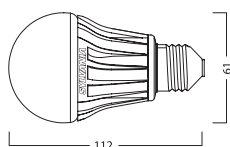
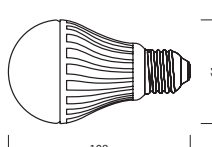
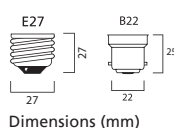
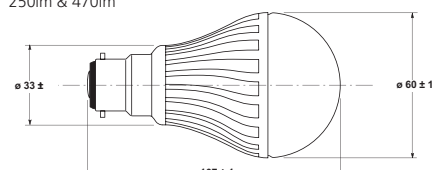
Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Up to 25W incandescent equivalent</b>									
<b>0026150</b>	ToLEDo GLS A60 5W Clear E27 SL	5	100-250	E27	Clear	2700	200	15000	10
<b>0026512</b>	ToLEDo GLS 5W E27 SL	5	200-250	E27	Satin	2700	250	15000	6
<b>0026717</b>	ToLEDo GLS 5W B22 SL	5	200-250	B22	Satin	2700	250	25000	6
<b>40W incandescent equivalent</b>									
<b>0026680</b>	ToLEDo GLS 7.5W E27 SL	7.5	200-250	E27	Satin	2700	470	15000	6
<b>0026719</b>	ToLEDo GLS 7.5W B22 SL	7.5	200-250	B22	Satin	2700	470	25000	6
<b>0026290*</b>	ToLEDo GLS Dimmable 10W E27 SL	10	220-240	E27	Satin	2700	470	35000	10
<b>60W incandescent equivalent</b>									
<b>0026737</b>	ToLEDo GLS 10.5W E27 SL	10.5	220-240	E27	Satin	2700	806	15000	6
<b>0026740</b>	ToLEDo GLS 10.5W B22 SL	10.5	220-240	E27	Satin	2700	806	15000	6

\* Only products with an asterisk benefit from longer warranty

LED-Homelight 827



LED-Homelight 827


 ToLEDo GLS Satin, E27  
250lm, 470lm & 806lm

 ToLEDo GLS Clear, E27  
200lm

 ToLEDo GLS Satin, B22  
250lm & 470lm


Dimensions (mm)



ToLEDo Ball Satin

- Up to 80% energy saving compared to incandescent lamps
- Instant light
- 100% retrofit - Same dimensions as incandescent equivalent
- Suitable for replacement of up to 40W incandescent lamps
- Available in Standard Homelight (2700K), Homelight (2600K) and Homelight Deluxe (2500K)
- Good colour rendering (CRI 80+)
- Average rated life 15,000 hrs (except 0025128/0026522 - 25,000 hrs)



ToLEDo Ball Clear



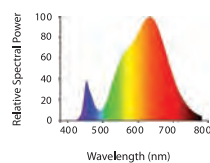
ToLEDo Globe

## ToLEDo Ball/Globe

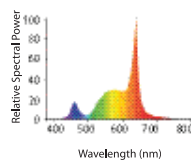
Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>ToLEDo Ball</b>									
<b>0025128*</b>	7 Colour LED Ball E27 Bls Changeable	0.7	220-240	E27	Satin	NA	5	25000	10
<b>0026307</b>	ToLEDo Home Ball 1,5W CI E14 BL	1.5	220-240	E14	Clear	2700	60	15000	10
<b>0026309</b>	ToLEDo Home Ball 1,5W CI E27 BL	1.5	220-240	E27	Clear	2700	60	15000	10
<b>0026162</b>	ToLEDo Ball 3W Clear E14 SL	3	100-250	E14	Clear	2700	90	15000	10
<b>0026186</b>	ToLEDo Ball 3W Clear E27 SL	3	100-250	E27	Clear	2700	90	15000	10
<b>0026164</b>	ToLEDo Ball Satin 2,5W E14 SL	2.5	220-240	E14	Satin	2600	136	15000	10
<b>0026178</b>	ToLEDo Ball Satin 2,5W E27 SL	2.5	220-240	E27	Satin	2600	136	15000	10
<b>0026297</b>	ToLEDo Ball 3W Satin E14 SL	3	220-240	E14	Satin	2500	250	15000	10
<b>0026299</b>	ToLEDo Ball 3W Satin E27 SL	3	220-240	E27	Satin	2500	250	15000	10
<b>ToLEDo Globe</b>									
<b>0026323*</b>	ToLEDo Globe G60 3W Satin E27 SL	3	220-240	E27	G60	2500	250	15000	10
<b>0026910</b>	ToLEDo Globe G60 5W 470LM SL	5	220-240	E27	G60	2500	470	15000	10
<b>0026522*</b>	ToLEDo Globe G95 9W SL	9	220-240	E27	G95	2700	470	25000	6

\* Only products with an asterisk benefit from longer warranty

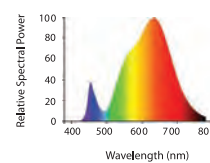
LED-Homelight 826



LED-Homelight Deluxe 925



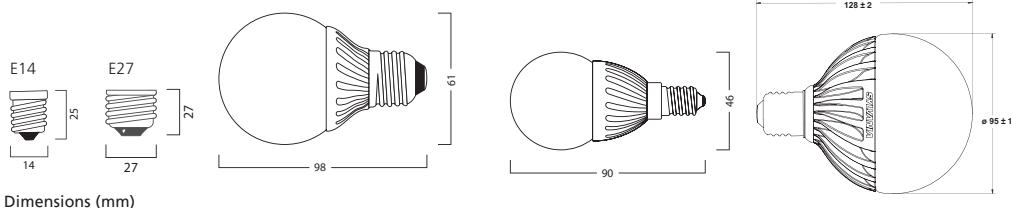
LED-Homelight 827



Toledo Globe G60

ToLEDo Ball

Toledo Globe G95







ToLEDo Bent-tip Candle Satin



ToLEDo Bent-tip Candle Clear



ToLEDo Candle Satin



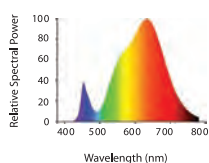
ToLEDo Candle Clear

- Up to 88% energy saving compared to incandescent lamps
- Instant light
- 100% retrofit - Same dimensions as incandescent equivalent
- Suitable for replacement of up to 25W incandescent lamps
- Uniform light distribution
- Available in Standard Homelight (2700K), Homelight (2600K) and Homelight Deluxe (2500K)
- Good colour rendering (CRI 80+)
- Average rated life 15,000 hrs

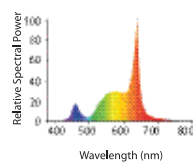

**ToLEDo Candle**

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0026304	ToLEDo Home Candle 1,5W CI E14 B	1.5	220-240	E14	Clear	2700	60	15000	10
0026326	ToLEDo Home Twisted Candle 1,5W C E14 B	1.5	220-240	E14	Clear	2700	60	15000	10
0026701	ToLEDo Home Bent Tip 1,5W E14 B	1.5	220-240	E14	Clear	2700	60	15000	10
0026154	ToLEDo Candle 3W Clear E14 SI	3	100-250	E14	Clear	2700	90	15000	10
0026158	ToLEDo Bent Tip 3W CI E14 SI	3	100-250	E14	Clear	2700	90	15000	10
0026156	ToLEDo Candle Satin 2,5W E14 SI	2.5	220-240	E14	Satin	2600	130	15000	10
0026160	ToLEDo Bent Tip 2,5W Satin E14 SI	2.5	220-240	E14	Satin	2600	130	15000	10
0026293	ToLEDo Candle 3W Satin E14 SI	3	220-240	E14	Satin	2500	250	15000	10
0026295	ToLEDo Bent Tip 3W Satin E14 SI	3	220-240	E14	Satin	2500	250	15000	10
0026299	ToLEDo Candle 3W Satin Dimmable	3	220-240	E14	Satin	2500	250	15000	10

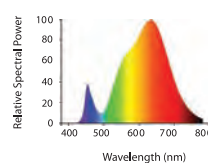
LED-Homelight 826



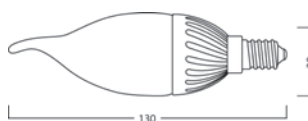
LED-Homelight Deluxe 925



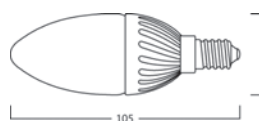
LED-Homelight 827



ToLEDo Bent-tip Candle



ToLEDo candle



Dimensions (mm)

# Hi-Spot® RefLED Home ES50 GU10 150lm Dimmable

**SYLVANIA**



- Up to 80% energy saving compared to incandescent lamps
- Dimmable with most leading edge dimmers
- 30° 4.5W - low energy consumption
- Suitable for indoor application in open/ventilated luminaires
- Suitable for retrofit replacement of mains voltage 25W halogen lamps (220-240V)
- Available in Warm White (3000K)
- High power factor of 0.9
- Good colour rendering (CRI=80)
- Average rated life 25,000 hrs

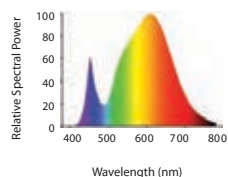


**3 YEAR WARRANTY**

## Hi-Spot® RefLED Home ES50 GU10 Dimmable

Code	Description	Watt (W)	Volt (V)	Cap	Beam (°)	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>25W halogen equivalent</b>									
<b>0026490</b>	RefLED Home Dim.Es50 4.5W Gu10 SL	4.5	220-240	GU10	30°	3000	150	25000	10

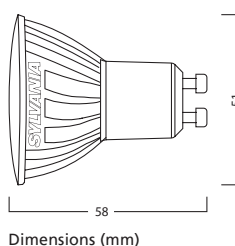
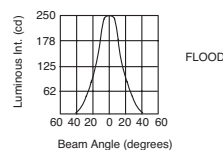
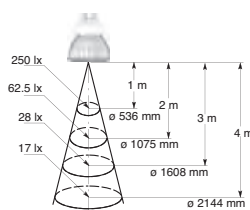
LED-Warm White 830



LED-Warm White 830



ES50 30° - 830



Dimensions (mm)

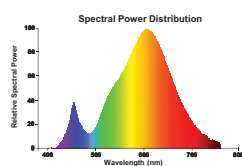


- Up to 85% energy saving compared to halogen lamps
- True 35W halogen retrofit
- 100% retrofit - IEC standard dimensions
- Beam angle of 25° and 40°
- 51lm/W efficacy
- High light output: 230lm
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Average rated life 25,000 hrs

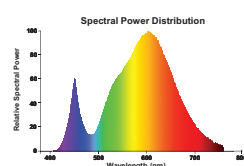

**5 YEAR WARRANTY**
**Hi-Spot® RefLED ES50 GU10 230 lm**

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>35W halogen equivalent</b>									
<b>0026525</b>	RefLED ES50 230LM 2700K 40° SL	4.5	220-240	40	GU10	2700	230	25000	15
<b>0026526</b>	RefLED ES50 230LM 3000K 25° SL	4.5	220-240	25	GU10	3000	230	25000	15
<b>0026528</b>	RefLED ES50 230LM 3000K 40° SL	4.5	220-240	40	GU10	3000	230	25000	15
<b>0026529</b>	RefLED ES50 230LM 4000K 25° SL	4.5	220-240	25	GU10	4000	230	25000	15

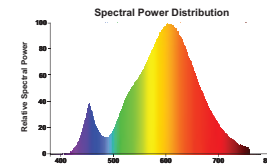
Homelight - 827



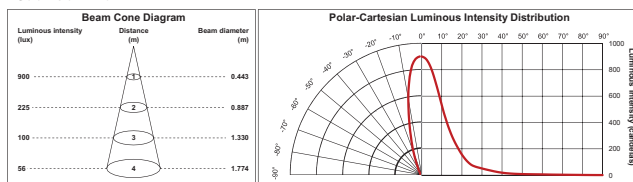
Warm White - 830



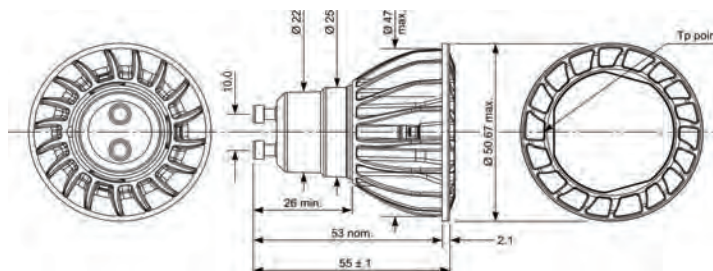
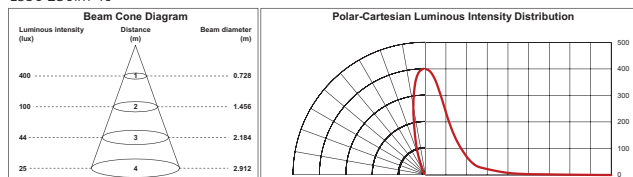
Cool White 840



ES50 230lm 25°



ES50 230lm 40°



Dimensions (mm)





- Up to 85% energy saving compared to halogen lamps
- 7.5W - first true 50W halogen retrofit
- 100% retrofit - IEC standard dimensions
- Beam angle of 25° and 40°
- 47lm/W efficacy
- High light output: comparable to 50W halogen with 350lm for all colour versions
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Average rated life 25,000 hrs

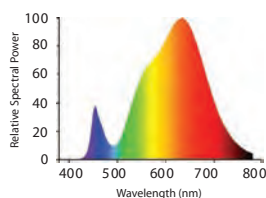


**5 YEAR WARRANTY**

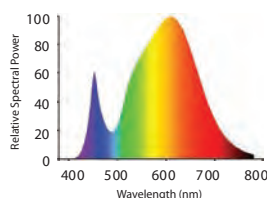
## Hi-Spot® RefLED ES50 GU10 350lm

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>50W halogen equivalent</b>									
0026746	RefLED ES50 7,5 W 350 LM 2700K 25° NON-DIM SL	7.5	220-240	25	GU10	2700	350	25000	15
0026748	RefLED ES50 7,5W 350 LM 2700K 40° NON-DIM SL	7.5	220-240	40	GU10	2700	350	25000	15
0026747	RefLED ES50 7,5W 350 LM 3000K 25° NON-DIM SL	7.5	220-240	25	GU10	3000	350	25000	15
0026749	RefLED ES50 7,5W 350 LM 3000K 40° NON-DIM SL	7.5	220-240	40	GU10	3000	350	25000	15
0026770	RefLED ES50 7,5W 350 LM 4000K 25° NON-DIM SL	7.5	220-240	25	GU10	4000	350	25000	15
0026771	RefLED ES50 7,5W 350 LM 4000K 40° NON-DIM SL	7.5	220-240	40	GU10	4000	350	25000	15
0026760	RefLED ES50 350LM 2700K 40° Orange base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026761	RefLED ES50 350LM 2700K 40° Red base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026762	RefLED ES50 350LM 2700K 40° Blue base SL	7.5	220-240	40	GU10	2700	350	25000	15
0026763	RefLED ES50 350LM 2700K 40° White base SL	7.5	220-240	40	GU10	2700	350	25000	15

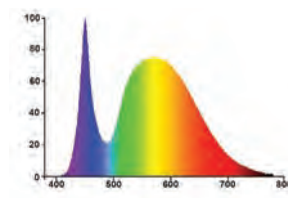
Homelight - 827



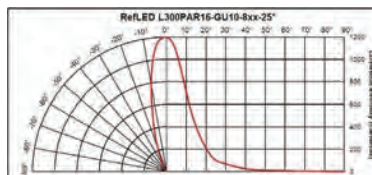
Warm white - 830



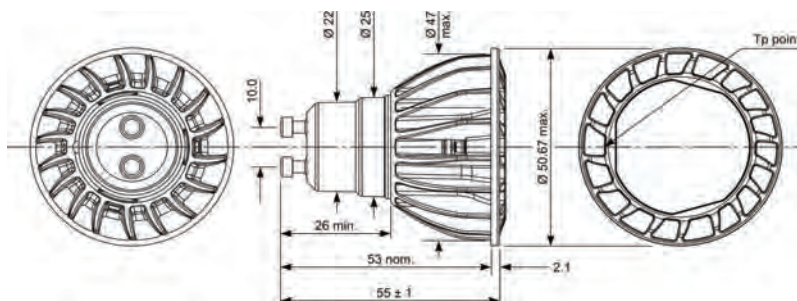
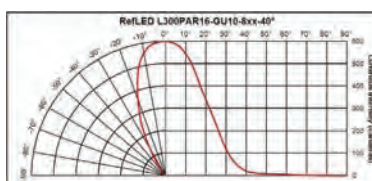
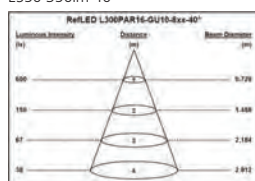
Cool white - 840



ES50 350lm 25°



ES50 350lm 40°



Dimensions (mm)

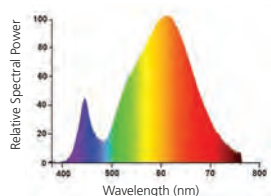


- Up to 90% energy saving compared to halogen lamps
- Dimmable on leading and trailing edge dimmers
- 5.5W - low energy consumption
- Beam angle of 25° and 40°
- 64lm/W efficacy
- High light output: comparable to 50W halogen with 350lm
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Average rated life 25,000 hrs
- Energy Class A

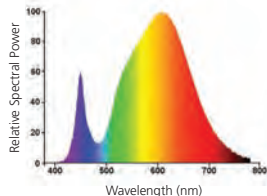

**Hi-Spot® Ref LED ES50 GU10 350lm Dimmable**

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>50W Halogen replacement Dimmable</b>									
<b>0026360</b>	DIM RefLED ES50 350LM 2700K 25°	5.5	220-240	25	GU10	2700	350	25000	15
<b>0026361</b>	DIM RefLED ES50 350LM 2700K 40°	5.5	220-240	40	GU10	2700	350	25000	15
<b>0026362</b>	DIM RefLED ES50 350LM 3000K 25°	5.5	220-240	25	GU10	3000	350	25000	15
<b>0026363</b>	DIM RefLED ES50 350LM 3000K 40°	5.5	220-240	40	GU10	3000	350	25000	15
<b>0026364</b>	DIM RefLED ES50 350LM 4000K 25°	5.5	220-240	25	GU10	4000	350	25000	15
<b>0026365</b>	DIM RefLED ES50 350LM 4000K 40°	5.5	220-240	40	GU10	4000	350	25000	15

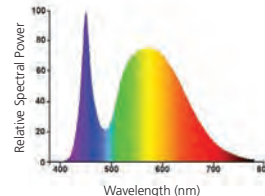
Homelight - 827



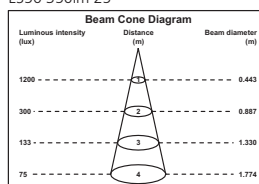
Warm white - 830



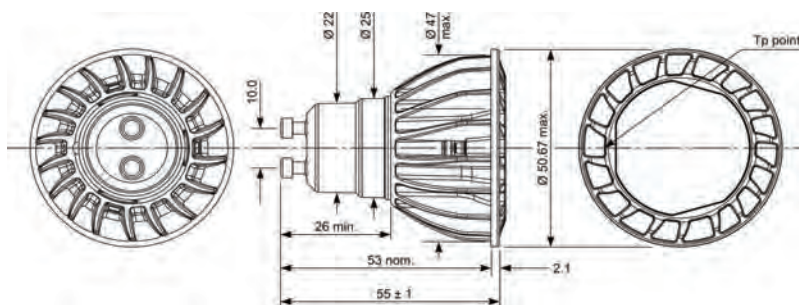
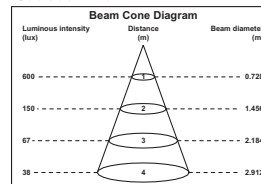
Cool white - 840



ES50 350lm 25°



ES50 350lm 40°



Dimensions (mm)



- Up to 85% energy saving compared to halogen lamps
- 7W - first true 63W halogen retrofit
- 100% retrofit - IEC standard dimensions
- Beam angle of 25° and 40°
- 64lm/W high efficacy
- High light output: 450lm
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Also available in white heat sink and base
- High power factor of 0.8
- Average rated life 25,000 hrs
- Energy Class A

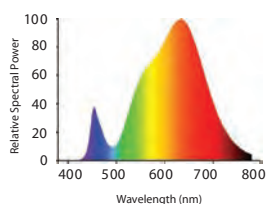


**5 YEAR WARRANTY**

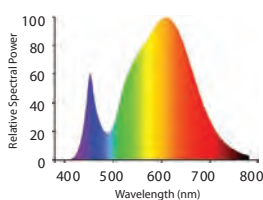
## Hi-Spot® RefLED ES50 GU10 450lm

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>63W Halogen replacement</b>									
0026308	RefLED ES50 450LM 2700K 25°	7	230	25	GU10	2700	450	25000	15
0026310	RefLED ES50 450LM 2700K 40°	7	230	40	GU10	2700	450	25000	15
0026311	RefLED ES50 450LM 3000K 25°	7	230	25	GU10	3000	450	25000	15
0026312	RefLED ES50 450LM 3000K 40°	7	230	40	GU10	3000	450	25000	15
0026313	RefLED ES50 450LM 4000K 25°	7	230	25	GU10	4000	450	25000	15
0026314	RefLED ES50 450LM 4000K 40°	7	230	40	GU10	4000	450	25000	15
0026319	RefLED WHITE ES50 450LM 2700K 40°	7	230	40	GU10	2700	450	25000	15
0026320	RefLED WHITE ES50 450LM 3000K 40°	7	230	40	GU10	3000	450	25000	15

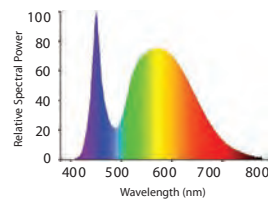
Homelight - 827



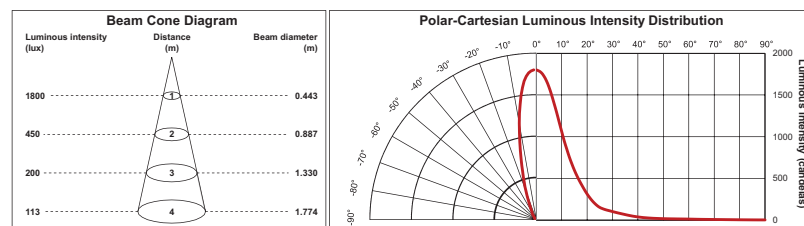
Warm white - 830



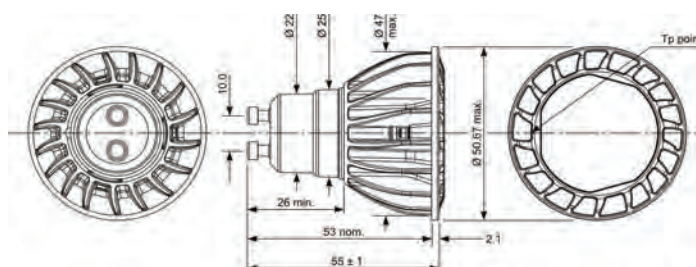
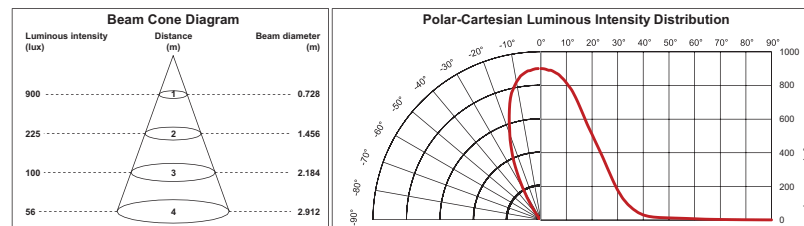
Cool white - 840



ES50 450lm 25°



ES50 450lm 40°



Dimensions (mm)





Hi-Spot RefLED PAR20



Hi-Spot RefLED PAR30

- Up to 80-90% energy saving compared to halogen lamps
- Suitable for retrofit replacement of incandescent and halogen PAR lamps (220-240V)
- Light output matching 50-70W halogen
- Available in Warm White (3000K)
- Good colour rendering (CRI=80)
- Average rated life: 30,000 hrs

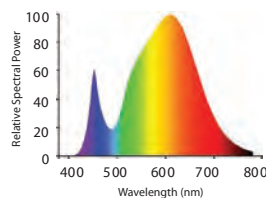


3 YEAR WARRANTY

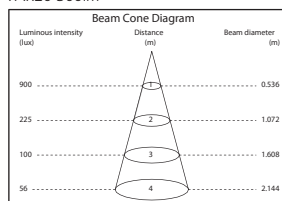
### Hi-Spot® RefLED PAR20/30

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>0126705</b>	Hi-Spot RefLED PAR20 SL	5.5	220-240	30	E27	3000	300	30000	10
<b>0126707</b>	Hi-Spot RefLED PAR30 SL	11	220-240	25	E27	3000	680	30000	10

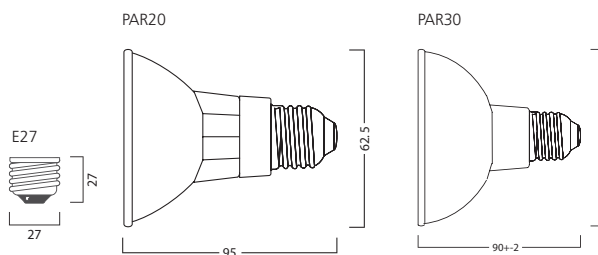
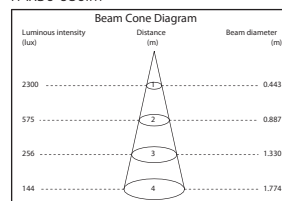
Warm White - 830



PAR20 300lm



PAR30 680lm



Dimensions (mm)

## Hi-Spot® RefLED PAR38

**SYLVANIA**



- Up to 90% energy saving compared to halogen lamps
- Weather resistant - suitable for exterior lighting with suitably rated luminaire
- Suitable for retrofit replacement of incandescent and halogen PAR lamps (220-240V)
- Available in Warm White (3000K)
- Good colour rendering (CRI=80)
- Average rated life 30,000 hrs



universal

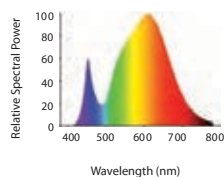


**3 YEAR WARRANTY**

### Hi-Spot® RefLED PAR38

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0026500	Hi Spot RefLED PAR38 SL	15	220-240	25	E27	3000	750	15000	10
0026501	Hi Spot RefLED PAR38 SL	10	220-240	25	E27	3000	900	30000	10

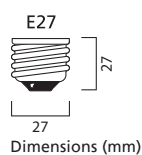
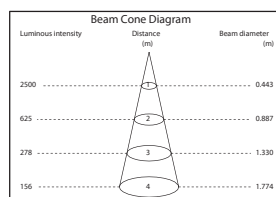
LED-Warm White 830



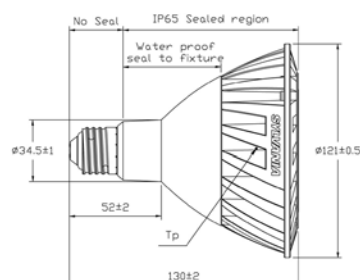
LED-Warm White 830



RefLED PAR38 25°



Dimensions (mm)





Compatible with 12V  
DC Non-dimmable  
transformer available  
Sylvania code **3036290**

- Up to 85% energy saving compared to halogen lamps
- 100% retrofit - IEC standard dimensions
- Suitable for use in bathrooms when installed in an IP44 rated fixture
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- High power factor of 0.7
- Fully compatible with magnetic transformers and broad compatibility with many electronic transformers
- Without cooling fan for quiet operation
- Driver 12V DC compatible with MR16 LED retrofit lamps
- Dimmable when use on magnetic dimmable transformers
- Average rated life 25,000 hrs

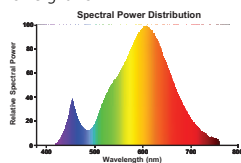


**5 YEAR  
WARRANTY**

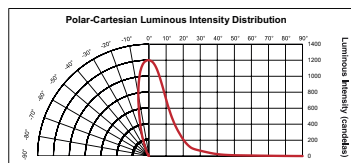
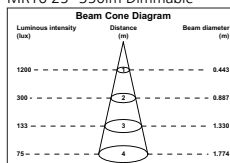
## Hi-Spot® RefLED MR16 350lm & 450lm Dimmable

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>0026306</b>	DIM RefLED MR16 7W 350lm	7	12	25	GU5.3	3000	350	25000	15
<b>0026340</b>	DIM RefLED MR16 7W 350lm	7	12	40	GU5.3	3000	350	25000	15
<b>0026341</b>	DIM RefLED MR16 7W 350lm	7	12	40	GU5.3	2700	350	25000	15
<b>0026351</b>	DIM RefLED MR16 7W 350lm	7	12	40	GU5.3	4000	350	25000	15
<b>0026350</b>	DIM RefLED MR16 7W 450lm	7	12	40	GU5.3	2700	450	25000	15
<b>0026342</b>	DIM RefLED MR16 7W 450lm	7	12	40	GU5.3	3000	450	25000	15

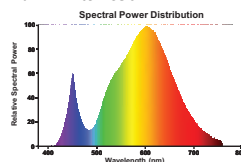
Homelight - 827



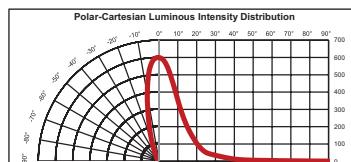
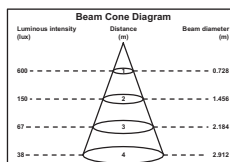
MR16 25° 350lm Dimmable



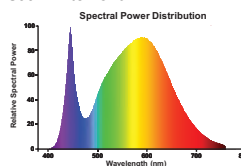
Warm white - 830



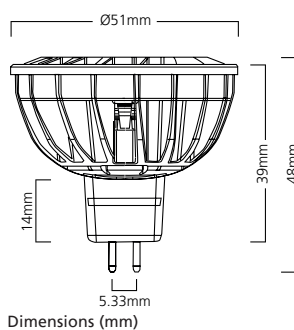
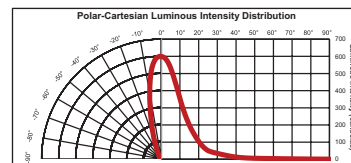
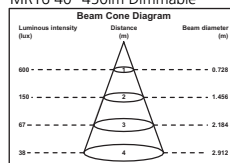
MR16 40° 350lm Dimmable



Cool white - 840



MR16 40° 450lm Dimmable







Compatible with 12V  
DC transformer  
available Sylvania code  
3036290

- Authentic SA 111 with aluminium patented spiralised reflector design offering uniform light distribution
- Only LED retrofit lamp that has the same attractive design as the halogen, due to LED's being placed at the back of the antiglare shield
- Very low glare
- Available in 2700K Warm white light (halogen-like)
- Comes in 8°, 25° and 40° beam angles
- Short pay back period, high energy savings compared to halogen lamps
- Recommend using a Lumiance Lumidriver (Item code: 3036290)
- Can be used on Lumiance Expospot and Motto luminaires
- Average rated life 25,000 hrs

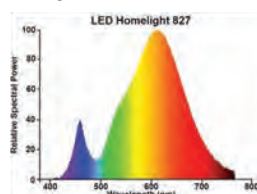


3 YEAR  
WARRANTY

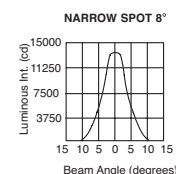
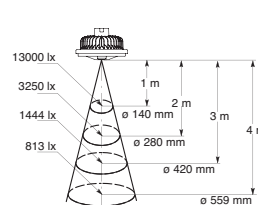
### RefLED LV SA111

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0026315	RefLED SA111 8° SL Warm White	11	12V	8	G53	2700	300	25000	10
0026316	RefLED SA111 25° SL Warm White	11	12V	25	G53	2700	300	25000	10
0026317	RefLED SA111 40° SL Warm White	11	12V	40	G53	2700	300	25000	10

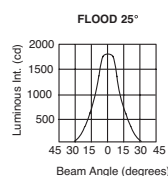
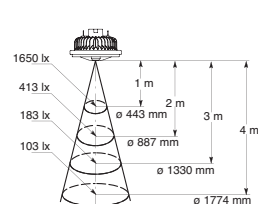
#### Homelight 827



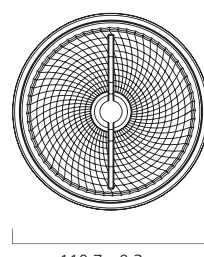
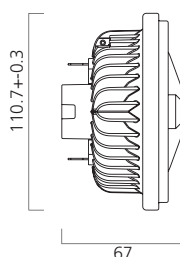
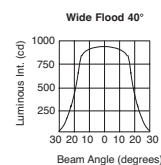
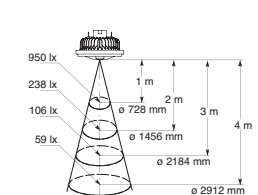
#### SA111 8° SL



#### SA111 25° SL



#### SA111 40° SL



Dimensions (mm)



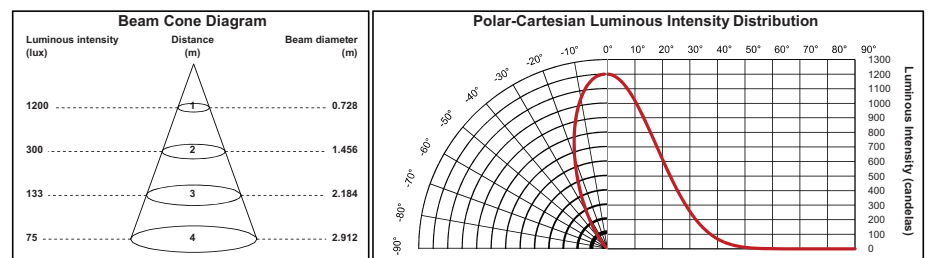
- 10W, low energy consumption product with low maintenance costs
- Good colour rendering CRI 80
- High output of 550lm
- High power factor, 0.9
- Dimmable on magnetic transformers
- Same size as halogen lamps, fits AR111 luminaires
- Broad compatibility with dimmers and high frequency electronic transformers
- Average rated life 50,000 hrs



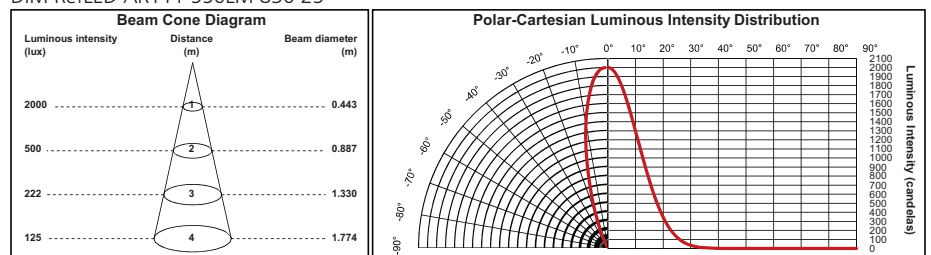
### RefLED AR111 550lm

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)
0026402	DIM RefLED 550lm AR111 10W 40°	10	12	40	G53	3000	550	50000
0026403	DIM RefLED 550lm AR111 10W 25°	10	12	25	G53	3000	550	50000

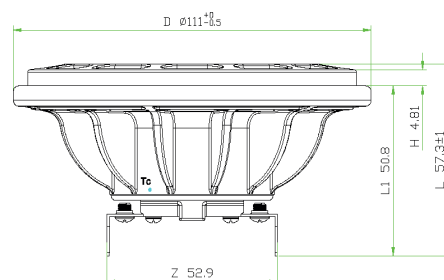
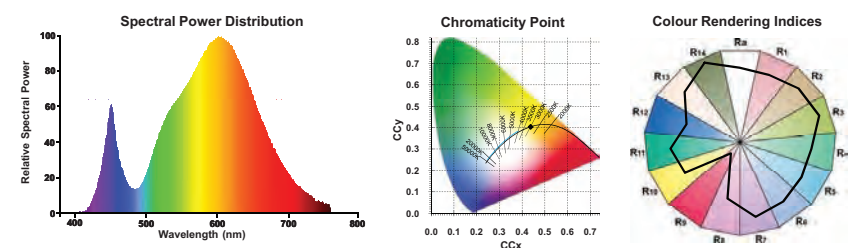
### DIM RefLED AR111 550LM 830 40°



### DIM RefLED AR111 550LM 830 25°



### Warm White - 830



Dimensions (mm)



- Up to 80% energy saving compared to halogen lamps
- Easy installation with G9 Plug-in base
- Suitable for use in open luminaire following Luminaire standard EN60598-1
- 100% retrofit - compact size for existing fittings
- Uniform light distribution
- Available in Homelight (2700K)
- Average rated life 25,000 hrs



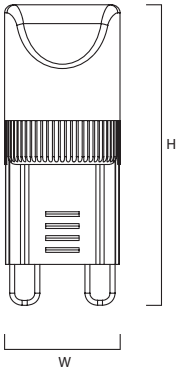
3 YEAR WARRANTY

ToLEDo HI-PIN G9

Code	Description	Watt (W)	Volt (V)	Colour Temp (K)	Cap	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0126730	LED Hi-Pin G9 Frosted 80LM SL	1.5	220-240	2700	G9	80	25000	6

Dimensions (mm)

G9	0126730
H	47+/-1
W	13.8+/-0.5



Dimensions (mm)



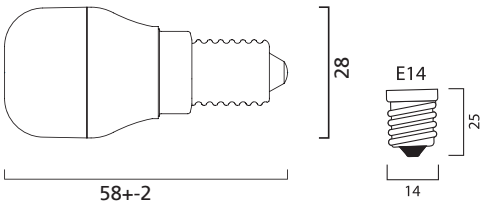


- 100% retrofit: direct incandescent lamp replacement
- Robust compact size
- IP65 lamp: water and dust resistant making it suitable for use in refrigerators
- Very low energy consumption
- 3000K Warm white
- Excellent light effect and colour rendering (Ra CRI = 80)
- Average rated life 15,000 hrs



ToLEDo Special Pygmy

Code	Description	Watt (W)	Volt (V)	Colour Temp (K)	Cap	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0026510	ToLEDo Special Pygmy SL	1.5	220-240	3000	E14	60	15000	6
0026508	ToLEDo Special Pygmy Frosted	0.8	220-240	3000	E14	36	15000	6



Dimensions (mm)



Micro-Lynx LED Satin (front view)



Micro-Lynx LED Satin (side view)



Micro-Lynx LED Clear (front view)



Micro-Lynx LED Clear (side view)

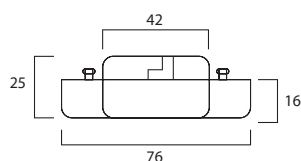
- High lumen output: 250lm (3000K)
- 2700K Homelight, 3000K Warm white, 4000K Cool White and 6000K Daylight
- Instant start
- Clear or satin finish
- Compatible with Lumiance Insaver & Microsaver (Recessed, Semi-Recessed & Surface mounted)
- Average rated life 15,000 hrs



**3 YEAR WARRANTY**

## LED Micro-Lynx 250lm

Code	Description	Watt (W)	Volt (V)	Colour Temp (K)	Cap	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>0026664</b>	Micro-Lynx LED 4W Clear 2700K	4	220-240	2700	GX53	250	15000	6
<b>0026780</b>	Micro-Lynx LED 4W Clear 3000K	4	220-240	3000	GX53	250	15000	6
<b>0026781</b>	Micro-Lynx LED 4W Clear 4000K	4	220-240	4000	GX53	260	15000	6
<b>0026830</b>	Micro-Lynx LED 4W Clear 6000K	4	220-240	6000	GX53	300	15000	6
<b>0026782</b>	Micro-Lynx LED 4W Satin 2700K	4	220-240	2700	GX53	250	15000	6
<b>0026783</b>	Micro-Lynx LED 4W Satin 3000K	4	220-240	3000	GX53	250	15000	6
<b>0026666</b>	Micro-Lynx LED 4W Satin 4000K	4	220-240	4000	GX53	260	15000	6
<b>0026831</b>	Micro-Lynx LED 4W Satin 6000K	4	220-240	6000	GX53	300	15000	6



Dimensions (mm)



- Retrofit for T8 luminaires, easy plug and play solution for magnetic ballasts
- Made in Germany to the highest quality standards
- High colour rendering (CRI=80+)
- Available in three color temperatures (3000K-4000K-6500K)
- Instant light, allows better utilisation of lighting control and even greater energy saving
- Very robust construction
- 100° degree rotating end cap which allows to direct the light
- Locking system preventing tubes from rotation, advantage for application areas with strong vibration
- 120° beam angle
- Low temperature operation, not impacted by the cold (-30C to +40C)
- Eco-friendly lamp; mercury-free
- Highly reliable click together construction
- Average rated life 40.000 hours, reduced maintenance cost

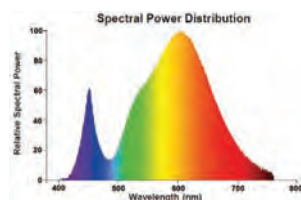


### ToLEDo Tube

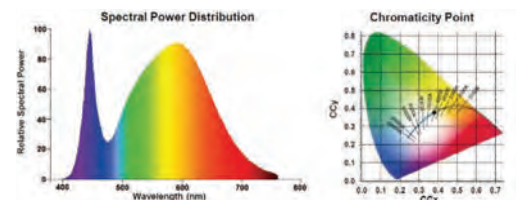
Code	Description	Watt (W)	Volt (V)	Colour Temp (K)	Cap	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0027020	ToLEDo Tube 2ft 3000K	11	220-240	3000	G13	1150	40000	6
0027021	ToLEDo Tube 2ft 4000K	11	220-240	4000	G13	1200	40000	6
0027022*	ToLEDo Tube 2ft 6500K	11	220-240	6500	G13	1250	40000	6
0027023	ToLEDo Tube 4ft 3000K	26	220-240	3000	G13	2500	40000	6
0027024	ToLEDo Tube 4ft 4000K	26	220-240	4000	G13	2600	40000	6
0027025*	ToLEDo Tube 4ft 6500K	26	220-240	6500	G13	2650	40000	6
0027026*	ToLEDo Tube 5ft 3000K	32	220-240	3000	G13	3100	40000	6
0027027	ToLEDo Tube 5ft 4000K	32	220-240	4000	G13	3200	40000	6
0027028*	ToLEDo Tube 5ft 6500K	32	220-240	6500	G13	3300	40000	6

\* Make to order

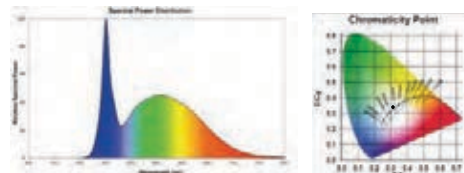
Warm white - 830



Cool white - 840



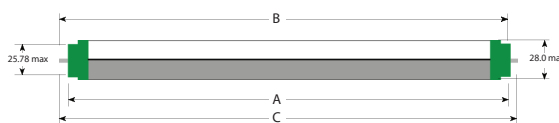
Daylight - 865



### LED ToLEDo Tube

Installation instructions for magnetic ballast

- No need to change luminaire or rewire the fixture
- Remove existing starter and replace with the starter provided with lamp
- Only suitable for use with MAGNETIC BALLAST, cannot be used with electronic ballasts



Dimensions (mm)

### Dimensions (mm)

2ft	A	B	C
Min	-	594.5	-
Max	598.8	596.9	604.0

### Dimensions (mm)

4ft	A	B	C
Min	-	1204.1	-
Max	1199.4	1206.5	1213.6

### Dimensions (mm)

5ft	A	B	C
Min	-	1504.7	-
Max	1500.0	1507.1	1514.0





31 Superia CMI



32 Superia CMI Mini



32 Superia CMI  
BriteSpot



33 Superia CMI-TT



34 CMI



35 UrbanWhite



36 Quartz Britespot



38 HSI



41 High Pressure  
Sodium



50 Mercury Discharge



55 Low Pressure  
Sodium



56 BriteTronic™  
Electronic Control  
Gear



### HID Lamps

High Intensity Discharge (HID) lamps comprise four major groups – metal halide, high pressure sodium, high pressure mercury and low pressure sodium – HID lamps meet a variety of lighting needs for interior and exterior applications. Sylvania's range of discharge lamps are characterised by quality materials, certified manufacturing techniques and stringent quality control procedures, to ensure the highest performance and reliability standards.

#### Superia CMI

Sylvania Superia CMI is our new generation ceramic metal halide range characterised by its unique one-piece elliptical arc tube. With its best in class red rendition, Superia CMI performs best in retail and display lighting, shop windows, museums and galleries.

#### CMI

Sylvania CMI represents a breakthrough in metal halide lamps. We have combined long life and excellent lumen maintenance in the CMI range to allow displays to look more vibrant and fresher, for longer. Available in all lamp finishes, colour temperatures and wattages the Sylvania CMI offers the full range portfolio to deliver strong accent lighting performance.





CMI-T



CMI-TC



CMI-TD

- Unique one-piece elliptical arc tube
- Ceramic arc tube ensures colour uniformity and stability throughout lamp life
- Very high luminous efficiency in a compact lamp format
- Excellent colour rendering
- UV-stop quartz reduces colour fading of merchandise
- For use only in luminaires equipped with a protective cover glass
- Applications in both interior and exterior lighting – shops, hotel lobbies and architectural
- WDL types can be operated on electronic and electromagnetic gear. NDL types have reduced life when operated on electromagnetic gear

## CMI-T / CMI-TC



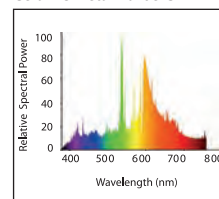
## CMI-TD



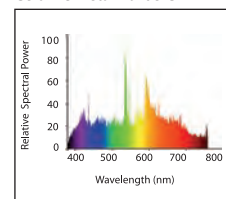
## Superia CMI-T/ CMI-TC / CMI-TD

Code	Description	Watt (W)	Lamp Finish	Cap/Base	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Superia CMI-T</b>									
0020296	Superia CMI-T 20W/WDL	20	Clear	G12	3000	85	1900	15000	12
0020300	Superia CMI-T 35W/WDL	35	Clear	G12	3000	91	4000	15000	12
0020290	Superia CMI-T 35W/NDL	35	Clear	G12	4200	92	4000	15000	12
0020293	Superia CMI-T 50W WDL	50	Clear	G12	3000	87	4900	15000	12
0020301	Superia CMI-T 70W/WDL	70	Clear	G12	3000	90	7300	15000	12
0020305	Superia CMI-T 70W/NDL	70	Clear	G12	4200	96	7300	15000	12
0020295	Superia CMI-T 100W WDL	100	Clear	G12	3000	83	10500	15000	12
0020302	Superia CMI-T 150W/WDL	150	Clear	G12	3000	90	15000	15000	12
0020306	Superia CMI-T 150W/NDL	150	Clear	G12	4200	96	15000	15000	12
<b>Superia CMI-TC</b>									
0020297	Superia CMI-TC 20W/WDL	20	Clear	G12	3000	85	1900	15000	12
0020303	Superia CMI-TC 35W/WDL	35	Clear	G8.5	3000	91	4000	15000	12
0020291	Superia CMI-TC 35W/NDL	35	Clear	G8.5	4200	94	4000	15000	12
0020294	Superia CMI-TC 50W/WDL	50	Clear	G8.5	3000	87	4900	15000	12
0020304	Superia CMI-TC 70W/WDL	70	Clear	G8.5	3000	94	7300	15000	12
0020292	Superia CMI-TC 70W/NDL	70	Clear	G8.5	4200	96	7300	15000	12
<b>Superia CMI-TD</b>									
0020307	Superia CMI-TD 70W/WDL	70	Clear	RX7s	Clear	90	6900	15000	12
0020308	Superia CMI-TD 70W/NDL	70	Clear	RX7s	Clear	96	7000	15000	12
0020309	Superia CMI-TD 150W/WDL	150	Clear	RX7s-24	Clear	93	15000	15000	12
0020310	Superia CMI-TD 150W/NDL	150	Clear	RX7s-24	Clear	93	15000	15000	12

Ceramic Metal Halide CMI WDL



Ceramic Metal Halide CMI NDL



CMI-T	35W	70W	150W
D	20	20	20
L	90	90	100
CMI-TD	70W		150W
D	22		25
L	118		135
CMI-TC	35W	70W	
D	17	17	
L	85	85	

G12



RX7s



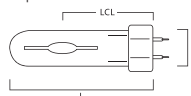
RX7s-24



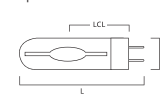
G8.5



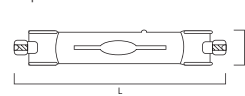
Superia CMI-T



Superia CMI-TC



Superia CMI-TD







Superia CMI-T<sub>mini</sub>



CMI-R<sub>BriteSpot</sub>

- Ceramic arc tube to ensure reliability, colour uniformity and stability throughout lamp life
- Unique one piece elliptical arc tube for highest efficacy combined with excellent colour rendition
- Very compact lamp design, allowing for compact fixture developments
- Easy to install and robust GX10 or GU6.5 twist and lock lamp base
- Crisp warm white light allowing significant energy saving versus low voltage halogen:  
Superia CMI 20W ~ Low Voltage Halogen 50W
- Operation on electronic control gear for 20W metal halide

Superia CMI-T<sub>mini</sub>



Superia CMI-R<sub>BriteSpot</sub>



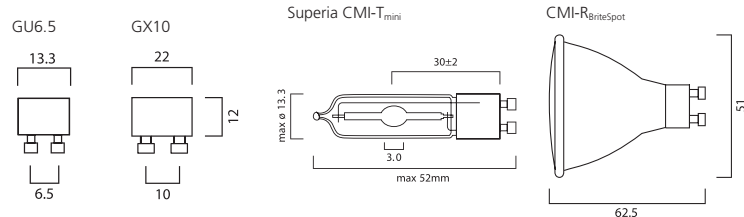
Superia CMI-T<sub>mini</sub>

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0020311	Superia CMI-T mini 20W/WDL	20	Clear	GU6.5	3000	85	1900	15000	12

Superia CMI-R<sub>BriteSpot</sub>

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0020312	Superia CMI-R BriteSpot ES50 20W 24°	20	Clear	GX10	3000	85	3600	12000	15
0020313	Superia CMI-R BriteSpot ES50 20W 38°	20	Clear	GX10	3000	85	2100	12000	15
0020314	Superia CMI-R BriteSpot ES50 20W 60°	20	Clear	GX10	3000	85	1000	12000	15

Dimensions (mm)





CMI-TT

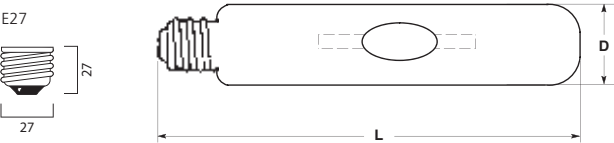
- Unique one-piece elliptical arc tube.
- Ceramic arc tube ensures colour uniformity and stability throughout lamp life.
- Very high luminous efficiency in a compact lamp format.
- Excellent colour rendering.
- For use only in luminaires equipped with a protective cover glass.
- CMI-TT lamps can directly replace High Pressure Sodium lamps for simple conversion to white light.
- Exterior applications such as car parks, perimeter lighting, security and building entrances.



SUPERIA CMI-TT

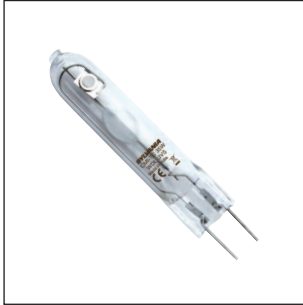
Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Initial Lumens (lm)	Average Rated Life (Hrs)	Packing Qty
0020379	SUPERIA CMI-TT 50W/WDL	50	Clear	E27	3000	84	5000	15,000	12
0020380	SUPERIA CMI-TT 70W/WDL	70	Clear	E27	3000	89	7400	15,000	12
0020381	SUPERIA CMI-TT 100W/WDL	100	Clear	E40	3000	85	10,800	15,000	12
0020382	SUPERIA CMI-TT 150W/WDL	150	Clear	E40	3000	82	15,000	15,000	12

CMI-TT	70W	100W	150W
L	156	211	211
D	39	48	48





CMI-T



CMI-TC



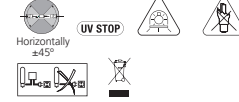
CMI-TD

- Unique one-piece elliptical arc tube
- Ceramic arc tube ensures colour uniformity and stability throughout lamp life
- Very high luminous efficiency in a compact lamp format
- Excellent colour rendering
- UV-stop quartz reduces colour fading of merchandise
- For use only in luminaires equipped with a protective cover glass
- Applications in both interior and exterior lighting - shops, hotel lobbies and architectural floodlighting
- WDL types can be operated on electronic and electromagnetic gear. NDL types have reduced life when operated on electromagnetic gear

## CMI-T / CMI-TC



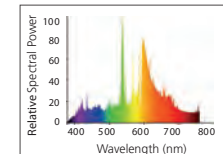
## CMI-TD



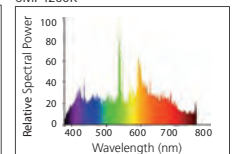
## CMI-T / CMI-TC / CMI-TD

Code	Description	Watt (W)	Lamp Finish	Cap/Base	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>CMI-T</b>									
0020365	CMI-T 35W/WDL	35	Clear	G12	3000	86	3750	12,000	12
0020367	CMI-T 35W/NDL	35	Clear	G12	4200	91	3700	12,000	12
0020369	CMI-T 70W/WDL	70	Clear	G12	3000	87	6700	12,000	12
0020371	CMI-T 70W/NDL	70	Clear	G12	4200	93	6700	12,000	12
0020375	CMI-T 150W/WDL	150	Clear	G12	3000	86	13800	12,000	12
0020376	CMI-T 150W/NDL	150	Clear	G12	4200	91	13500	12,000	12
<b>CMI-TC</b>									
0020366	CMI-TC 35W/WDL	35	Clear	G8.5	3000	87	3750	12,000	12
0020368	CMI-TC 35W/NDL	35	Clear	G8.5	4200	90	3750	12,000	12
0020370	CMI-TC 70W/WDL	70	Clear	G8.5	3000	89	6700	12,000	12
0020374	CMI-TC 70W/NDL	70	Clear	G8.5	4200	93	6700	12,000	12
<b>CMI-TD</b>									
0020372	CMI-TD 70W/WDL	70	Clear	Rx7s	3000	86	6500	12,000	12
0020373	CMI-TD 70W/NDL	70	Clear	RX7s	4200	93	6300	12,000	12
0020377	CMI-TD 150W/WDL	150	Clear	Rx7s-24	3000	86	13700	12,000	12
0020378	CMI-TD 150W/NDL	150	Clear	Rx7s-24	4200	90	13000	12,000	12

## CMI 3000K



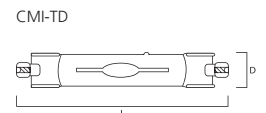
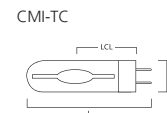
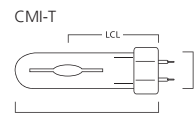
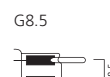
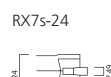
## CMI 4200K



Dimensions	35W	70W	150W
L / Length (mm)	90	90	100

Dimensions	35W	70W
L / Length (mm)	85	85

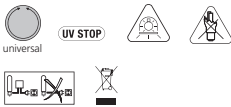
Dimensions	70W	150W
L / Length (mm)	117.6	135.4
D / Diameter (mm)	22	25



## Dimensions (mm)



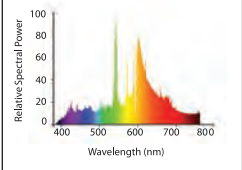
- Maximum performance of up to 118 lm/W
- High system efficacy for energy saving between 30% - 70% compared to SHP and HSL options
- Reduced CO2 emissions for a cleaner environment
- Improved colour rendering compared to SHP
- Precise optical positioning and fixation due to the PGZ12 twist and lock cap
- Optimal service life of 4 years
- Compact size for modern high-performance luminaires
- White light solution of outdoor applications using Ceramic Metal Halide technology



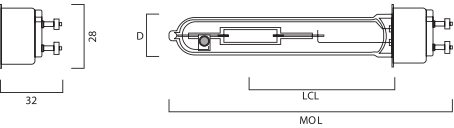
Urbanwhite

Code	Description	Watt (W)	Volt (V)	Current (A)	Lamp Finish	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>UrbanWhite</b>									
0020360	UrbanWhite CMO-TW 45W	45	90	0.5	Clear	PGZ12	2720	4300	12
0020361	UrbanWhite CMO-TW 60W	60	92	0.65	Clear	PGZ12	2730	6850	12
0020362	UrbanWhite CMO-TW 90W	90	92	0.98	Clear	PGZ12	2880	10450	12
0020363	UrbanWhite CMO-TW 140W	140	94	1.49	Clear	PGZ13	2860	16500	12

Ceramic Metal Halide-Urban White



Urban White	45W	60W	90W	140W
LCL	59	59	66	66
MOL	135	135	140	150
D	19	19	19	19

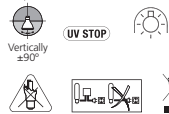




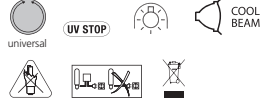


- The most compact quartz metal halide reflector lamp available, with stable light colour both initially and throughout life
- Crisp, powerful white light with outstanding colour rendering index of Ra90
- Three times more light compared to low voltage halogen lamps and reduced maintenance costs as a result of the long average lamp life
- Easy to install thanks to the robust new GX10 twist lock cap
- Extremely fast run-up (within less than 1 minute) with special design for safe failure at end of life
- Operation on compatible electronic gear as listed on the corporate website ([www.havells-sylvania.com](http://www.havells-sylvania.com))
- Wide range of interior applications in retail, restaurants, hotels, galleries and residential

BriteSpot ES



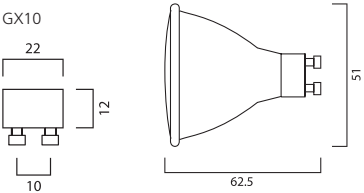
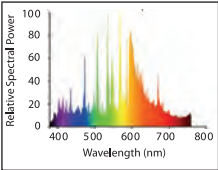
BriteSpot ESD



Britespot ES50™ / ESD50™

Code	Description	Watt (W)	Cap	Colour Temp (K)	CRI	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>BriteSpot ES50™</b>								
0020272	BriteSpot ES50 35W 24°	35	GX10	3000	90	7000	6000	15
0020270	BriteSpot ES50 35W 38°	35	GX10	3000	90	4000	6000	15
0020271	BriteSpot ES50 35W 60°	35	GX10	3000	90	2000	6000	15
<b>BriteSpot ESD50™ Dichroic</b>								
0020273	BriteSpot ESD50 35W 24°	35	GX10	3000	90	7000	6000	15
0020274	BriteSpot ESD50 35W 38°	35	GX10	3000	90	4000	6000	15
0020275	BriteSpot ESD50 35W 60°	35	GX10	3000	90	2000	6000	15

Metal Halide BriteSpot /WDL



Dimensions (mm)

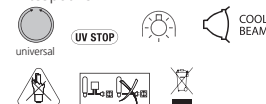


- Attractively styled lamp adds a touch of class to lighting designs
- Very high efficiency thanks to the large reflector and patented anti-glare optics
- Crisp, powerful white light with outstanding colour rendering index of Ra90
- Extremely high intensity possible with narrow beam versions, ideal for accent lighting
- Easy to install due to the robust new GX10 twist and lock cap
- Operation on compatible electronic gear as listed on the corporate website ([www.havells-sylvania.com](http://www.havells-sylvania.com))
- Wide range of interior applications in shops, restaurants, hotels, galleries and many other cultural and leisure venues

#### BriteSpot ES

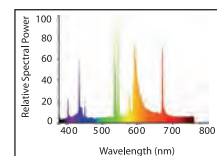


#### BriteSpot ESD

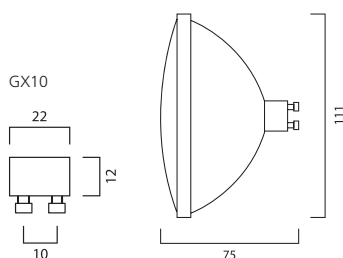


### Britespot ES111™ / ESD111™

Code	Description	Watt (W)	Cap	Colour Temp (K)	CRI	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>BriteSpot ES111™</b>								
0020200	BriteSpot ES111 35W 8°	35	GX10	3000	90	40000	6000	15
0020201	BriteSpot ES111 35W 24°	35	GX10	3000	90	10000	6000	15
0020202	BriteSpot ES111 35W 45°	35	GX10	3000	90	3500	6000	15
<b>BriteSpot ESD111™ Dichroic</b>								
0020207	BriteSpot ESD111 70W 24°	70	GX10	3000	90	20000	6000	15
0020208	BriteSpot ESD111 70W 45°	70	GX10	3000	90	7000	6000	15



Metal Halide BriteSpot / WDL



Dimensions (mm)



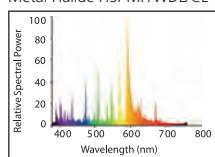
- A family of metal halide lamps specially designed for open and enclosed fixtures
- Lamps can directly replace High Pressure Sodium lamps to turn yellow installations to white light, simply by changing the lamp - for example, floodlighting, car parks
- Long service life of 15,000 hours keeps maintenance costs to a minimum
- Excellent colour maintenance throughout lamp life
- UV-stop outer jacket for reduced risks of fading
- Large variety of colours and wattages, in both clear and phosphor coated lamps
- Very economical light source for downlighting applications in large public spaces, for example airport terminals, halls, hotel lobbies and open-plan offices



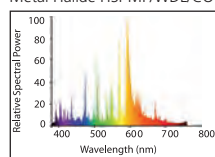
## HSI-MP MetalArc

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-MP MetalArc</b>									
0020810	HSI-MP 70W CL/WDL	70	Clear	E27	3000	65	5500	15,000	12
0020811	HSI-MP 70W CO/WDL	70	Coated	E27	2900	65	5200	15,000	12
0020812	HSI-MP 70W CL/NDL	70	Clear	E27	4000	65	5800	15,000	12
0020813	HSI-MP 70W CO/NDL	70	Coated	E27	3800	65	5500	15,000	12
0020820	HSI-MP 100W CL/WDL	100	Clear	E27	3000	70	8500	15,000	12
0020821	HSI-MP 100W CO/WDL	100	Coated	E27	2900	70	7000	15,000	12
0020822	HSI-MP 100W CL/NDL	100	Clear	E27	4000	70	8500	15,000	12
0020823	HSI-MP 100W CO/NDL	100	Coated	E27	3800	70	8100	15,000	12
0020830	HSI-MP 150W CL/WDL	150	Clear	E27	3000	65	13000	15,000	12
0020831	HSI-MP 150W CO/WDL	150	Coated	E27	2900	65	12500	15,000	12
0020832	HSI-MP 150W CL/NDL	150	Clear	E27	4000	70	13000	15,000	12
0020833	HSI-MP 150W CO/NDL	150	Coated	E27	3800	70	12500	15,000	12

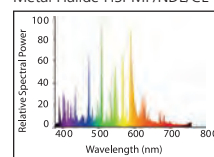
Metal Halide HSI-MP/WDL/CL



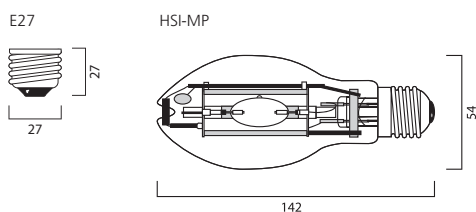
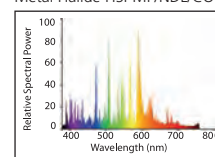
Metal Halide HSI-MP/WDL/CO



Metal Halide HSI-MP/NDL/CL



Metal Halide HSI-MP/NDL/CO





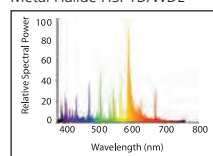
- Double ended quartz metal halide lamps with a compact tubular clear outer envelope
- Choice of three different colour temperatures: Warm, Neutral White and Daylight
- UV-stop outer jacket for reduced risks of fading
- High efficiency, compact arc tube
- Suitable for general interior lighting in uplights or downlights, e.g. in shops and malls
- Economical source for exterior floodlighting of monuments, parks and facades



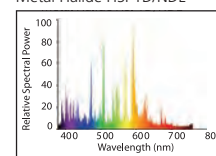
### HSI-TD MetalArc

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-TD MetalArc</b>									
<b>0020230</b>	HSI-TD 70W/WDL	70	Clear	RX7S	3200	70	5,200	9,000	10
<b>0020231</b>	HSI-TD 70W/NDL	70	Clear	RX7S	4000	70	5,500	9,000	10
<b>0020232</b>	HSI-TD 150W/WDL	150	Clear	RX7S	3200	70	11,250	9,000	10
<b>0020233</b>	HSI-TD 150W/NDL	150	Clear	RX7S	4000	70	11,250	9,000	10
<b>0020235</b>	HSI-TD 150W/D	150	Clear	RX7S	5200	70	11,250	9,000	10
<b>0021036</b>	HSI-TD 250W/WDL	250	Clear	FC2	3200	70	20,000	9,000	10
<b>0021037</b>	HSI-TD 250W/NDL	250	Clear	FC2	4200	70	20,000	9,000	10
<b>0021047</b>	HSI-TD 250W/D	250	Clear	FC2	5200	70	18,000	9,000	10

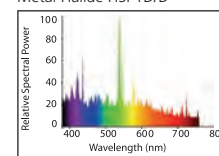
Metal Halide HSI-TD/WDL



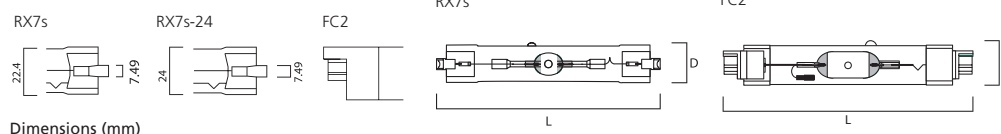
Metal Halide HSI-TD/NDL



Metal Halide HSI-TD/D



HSI-TD	70W	150W	250W
L	117.6	135.4	161.6
D	22	25	27.5







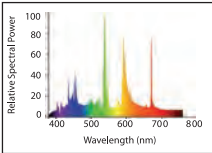
- Single ended quartz metal halide lamps with a compact tubular clear outer envelope
- Small point light source allows compact luminaire designs
- Ideal for spotlighting where high intensities are required
- UV-stop outer jacket for reduced risks of fading
- Suitable for interior accent and display lighting
- Exterior applications in floodlighting of monuments, parks and facades



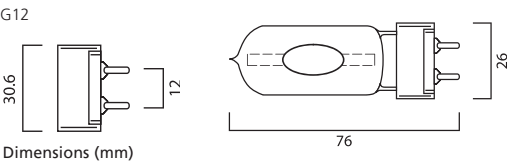
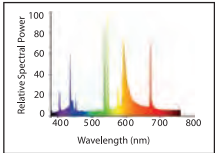
HSI-T Metalarc

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-T MetalArc</b>									
0020335	HSI-T 70W/WDL	70	Clear	G12	3000	70	6,000	6,000	12
0020340	HSI-T 70W/NDL	70	Clear	G12	4200	70	6,000	6,000	12
0020336	HSI-T 150W/WDL	150	Clear	G12	3000	70	13,000	6,000	12
0020341	HSI-T 150W/NDL	150	Clear	G12	4200	70	13,000	6,000	12

Metal Halide HSI-T/WDL



Metal Halide HSI-T/NDL





HSI-SX(P) BriteLux Elliptical



HSI-TSX BriteLux Tubular

- SX family of metal halide lamps for use with a sodium ballast
- Direct retrofit for sodium lamps to upgrade lighting to a more pleasant white light
- High lumen package with good colour rendering properties
- Good colour rendering properties
- 'P' protected versions incorporate integral shroud for safe use in open fixtures
- For commercial and industrial applications in shopping areas, factories, warehouses
- Exterior applications in city beautification to upgrade from yellow sodium light

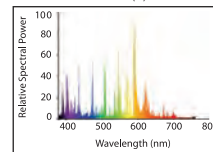
## HSI-SX/P BriteLux



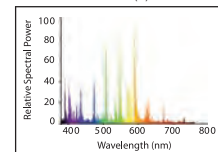
## HSI-SX/TSX BriteLux



## Metal Halide HSI-(T)SX/CL



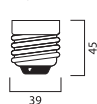
## Metal Halide HSI-(T)SX/CO



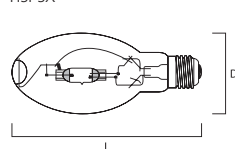
## HSI-SX / HSI-TSX BriteLux

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-SX BriteLux Elliptical</b>									
0020772	HSI-SX 250W/CL BriteLux	250	Clear	E40	4100	70	23500	20,000	12
0020776	HSI-SX 250W/CL/P BriteLux	250	CL/Protected	E40	4500	70	21000	15,000	12
0020771	HSI-SX 250W/CO BriteLux	250	Coated	E40	3800	70	22300	15,000	12
0020775	HSI-SX 250W/CO/P BriteLux	250	Co./Protected	E40	4200	70	20000	15,000	12
0020774	HSI-SX 400W/CL/P BriteLux	400	CL./Protected	E40	4300	70	40000	15,000	6
0020773	HSI-SX 400W/CO/P BriteLux	400	Co./Protected	E40	4200	70	42000	15,000	6
<b>HSI-TSX BriteLux Tubular</b>									
0024407	HSI-TSX 250W BriteLux	250	Clear	E40	4200	70	21000	20,000	12
0024409	HSI-TSX 400W BriteLux	400	Clear	E40	4200	70	40000	20,000	12

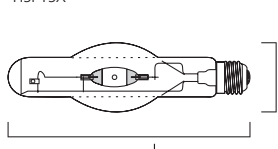
E40



HSI-SX



HSI-TSX



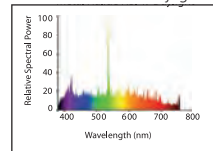
	HSI-SX	250W	400W
L	227	290	
D	90	120	
	HSI-SX T	250W	400W
L	260	270	
D	48	63	



- Single ended metal halide lamps with crisp daylight colour
- Excellent colour rendering Class 1A
- High light output
- Good lumen maintenance over life
- Industrial lighting e.g. car parks, rail yards, petrol stations and street lighting
- Sports arena lighting



## Metal Halide HSI-T/ Daylight



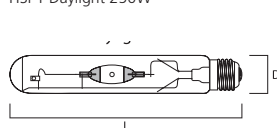
## HSI-T Daylight

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-T Daylight</b>									
0020530	HSI-T 250W/D	250	Clear	E40	5300	70	20000	20,000	12
0020531	HSI-T 400W/D	400	Clear	E40	6100	70	32000	20,000	12

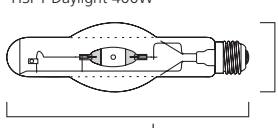
E40



HSI-T Daylight 250W



HSI-T Daylight 400W



	HSI-T Daylight	250W	400W
L	257	285	
D	48	63	



- HX family of metal halide lamps for use with a mercury ballast with soft ignitor
- HX family can also be operated on SHP control gear, resulting in both different output and colour temperature
- 'I' internal ignitor versions available, for simpler circuits with no ignitor
- 'I' versions can be used as a direct replacement for mercury discharge lamps
- High lumen package with good colour rendering properties
- For industrial applications such as petrol stations, car parks, rail yards
- Popular choice for sports arena lighting

**HSI-HX**



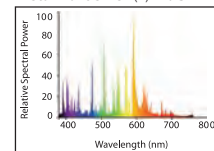
**HSI-HX/1**



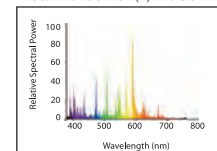
**HSI-HX / HSI-THX**

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-HX Elliptical</b>									
<b>0020357</b>	HSI-HX 250W/CL	250	Clear	E40	4500	70	23000	20,000	12
<b>0020355</b>	HSI-HX 250W/CO	250	Coated	E40	3800	70	21000	20,000	12
<b>0020353</b>	HSI-HX 400W/CL	400	Clear	E40	4500	70	37000	20,000	12
<b>0020350</b>	HSI-HX 400W/CO	400	Coated	E40	3800	70	35200	20,000	12
<b>0020351</b>	HSI-HX 400W/CO/I	400	Coated	E40	3800	70	35200	20,000	12
<b>HSI-THX Tubular</b>									
<b>0020394</b>	HSI-THX 250W	245	Clear	E40	4500	70	20000	20,000	12
<b>0020546</b>	HSI-THX 400W	400	Clear	E40	4200	70	36000	20,000	12

Metal Halide HSI-(T)HX/CL



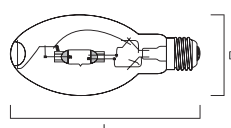
Metal Halide HSI-(T)HX/CO



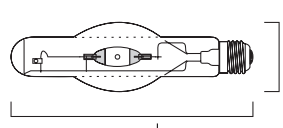
HSI-HX	250W	400W
L	227	290
D	90	120
HSI-SX T	250W	400W
L	257	270
D	48	63



HSI-HX



HSI-THX





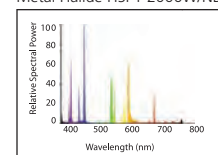
- Single ended quartz metal halide lamps with a tubular outer envelope
- Both internal and external ignitor versions available
- All versions operate on a standard mercury ballast, with or without (I type) external ignitor
- Very high light output with outstanding colour properties
- Suitable for colour television filming in sports stadia and large arena
- Industrial lighting applications in exterior car parks, rail and dock yards



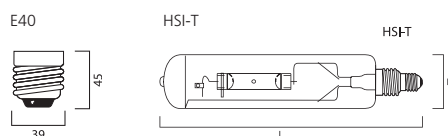
### HSI-T

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>HSI-T</b>									
<b>0020597</b>	HSI-T 1000W	1000	Clear	E40	4000	70	81000	7,000	4
<b>0020533</b>	HSI-T 2000W-S/380V	2000	Clear	E40	4000	70	200000	7,000	4
<b>0020540</b>	HSI-T 2000W-S/I/380V	2000	Clear	E40	4000	70	200000	7,000	4

Metal Halide HSI-T 2000W/NDL



HSI-T	1000W	2000W
L	382	430
D	66	102



Dimensions (mm)





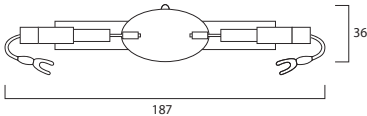
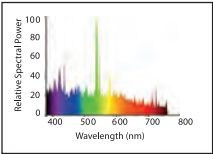
- Compact double ended quartz metal halide lamp
- Short arc source allows for good optical control in floodlighting luminaires
- No outer envelope required, permitting the design of compact luminaires
- Very high light output with excellent colour rendering properties
- Suitable for colour television filming in sports stadia and large arenas
- Exterior lighting applications in outdoor car parks, petrol stations, rail and dock yards



HSI-TD

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
HSI-TD									
0020349	HSI-TD 1000W/D	1000	Clear	Cable	5900	70	90000	6000	10
0020339	HSI-TD 2000W/D	2000	Clear	Cable	5900	70	200000	4000	10

Metal Halide HSI-TD 2000W/D





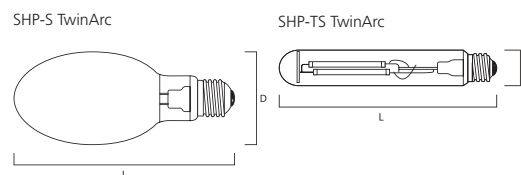
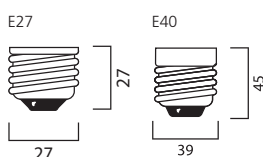
- Range of high pressure sodium lamps with double arc tube construction
- Dual arc tube design guarantees immediate re-strike after a power interruption
- Doubled lamp life and reduced occurrence of early failures
- Exceptional reliability, offering 6 years of maintenance-free service and superior lumen maintenance, exceeding 95% over life
- Ideal for applications which are difficult to access, or where maintenance is expensive
- Perfect for tunnels, airports, military installations, harbours and industrial sites



### SHP-S / SHP-TS Twinarc

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>SHP-S TwinArc Elliptical</b>									
0020720	SHP-S 35W TwinArc	35	Coated	E27	2050	20	2014	40,000	40
0020717	SHP-S 50W TwinArc	50	Coated	E27	2050	20	3446	40,000	40
0020719	SHP-S 70W TwinArc	70	Coated	E27	2050	20	5694	55,000	40
0020725	SHP-S 100W TwinArc	100	Coated	E40	2050	20	9420	55,000	40
0020740	SHP-S 150W TwinArc	150	Coated	E40	2050	20	15917	55,000	12
0020742	SHP-S 250W TwinArc	250	Coated	E40	2050	20	29486	55,000	12
0020744	SHP-S 400W TwinArc	410	Coated	E40	2050	20	53242	55,000	12
<b>SHP-TS TwinArc Tubular</b>									
0020712	SHP-TS 50W TwinArc	50	Clear	E27	2050	20	3844	40,000	40
0020718	SHP-TS 70W TwinArc	70	Clear	E27	2050	20	6186	55,000	40
0020724	SHP-TS 100W TwinArc	100	Clear	E40	2050	20	10233	55,000	12
0020739	SHP-TS 150W TwinArc	150	Clear	E40	2050	20	16718	55,000	12
0020741	SHP-TS 250W TwinArc	255	Clear	E40	2050	20	31592	55,000	12
0020743	SHP-TS 400W TwinArc	400	Clear	E40	2050	20	53130	55,000	12

SHP-S	35W	50W	70W	100W	150W	250W	400W
L	165	165	165	186	227	227	292
D	72	72	72	78	91	91	122
SHP-TS	35W	50W	70W	100W	150W	250W	400W
L	156	156	156	211	211	260	292
D	39	39	39	48	48	48	48





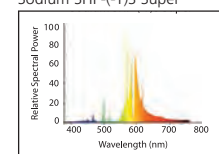
- Patented new construction featuring the Sylvania Wound Ignition Antenna for the ultimate starting reliability throughout lamp life
- Exclusive 'frameless' construction delivers superior system efficiency and improves lumen maintenance over life
- Exceptional reliability, offering 4 years service with over 95% lumen maintenance
- Super versions with high xenon pressure boost luminous efficacy up to 150 lm/W
- Offers increased lighting levels and an extended maintenance-free service life in all road and industrial applications



## SHP-S/SHP-TS Super

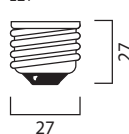
Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>SHP-S Super Elliptical</b>									
0020448	SHP-S 35W	35	Coated	E27	2050	20	2004	25,000	40
0020688	SHP-S 50W	50	Coated	E27	2050	20	3604	24,000	40
0020690	SHP-S 70W	70	Coated	E27	2050	20	5985	30,000	40
0020692	SHP-S 100W	100	Coated	E40	2050	20	9873	30,000	40
0020693	SHP-S 150W	150	Coated	E40	2050	20	16463	32,000	12
0020715	SHP-S 250W	250	Coated	E40	2050	20	30189	32,000	12
0020716	SHP-S 400W	400	Coated	E40	2050	20	53567	32,000	12
<b>SHP-TS Super Tubular</b>									
0020326	SHP-TS 35W	35	Clear	E27	2050	20	2089	25,000	40
0020687	SHP-TS 50W	50	Clear	E27	2050	20	3947	24,000	40
0020678	SHP-TS 70W	70	Clear	E27	2050	20	6521	30,000	40
0020686	SHP-TS 100W	100	Clear	E40	2050	20	10622	30,000	12
0020685	SHP-TS 150W	150	Clear	E40	2050	20	17143	32,000	12
0020713	SHP-TS 250W	255	Clear	E40	2050	20	32581	32,000	12
0020714	SHP-TS 400W	400	Clear	E40	2050	20	54526	32,000	12
0020805	SHP-TS 600W	600	Clear	E40	2050	20	87088	24,000	12

Sodium SHP-(-)TS Super

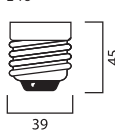


SHP-S	35W	50W	70W	100W	150W	250W	400W
L	165	165	165	186	227	227	292
D	72	72	72	78	91	91	122
SHP-TS	35W	50W	70W	100W	150W	250W	400W
L	156	156	156	211	211	260	292
D	39	39	39	48	48	48	48

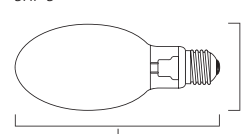
E27



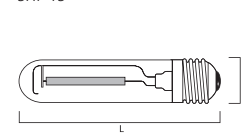
E40



SHP-S



SHP-TS



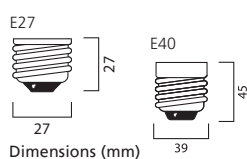


- ErP compliant High Pressure Sodium Lamps
- Long life between 24,000 to 28,000 hours, T90 at 16,000 hours
- Strong performance with high reliability
- Car park, Street and Floodlighting applications

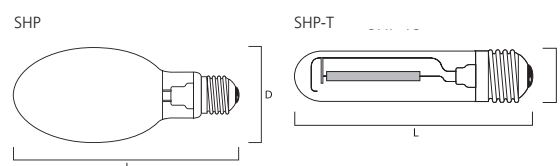

**SHP / SHP-T Standard and Basic PLUS**

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	CRI	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>SHP / SHP-T BASIC PLUS</b>									
0020841	SHP 70W BASIC PLUS	70	Coated	E27	2050	20	6040	28,000	40
0020839	SHP 100W BASIC PLUS	100	Coated	E40	2050	20	9500	28,000	40
0020842	SHP 150W BASIC PLUS	150	Coated	E40	2050	20	16000	28,000	12
0020843	SHP 250W BASIC PLUS	250	Coated	E40	2050	20	29000	28,000	12
0020844	SHP 400W BASIC PLUS	400	Coated	E40	2050	20	51300	28,000	12
0020846	SHP-T 70W BASIC PLUS	70	Clear	E27	2050	20	6500	28,000	40
0020838	SHP-T 100W BASIC PLUS	100	Clear	E40	2050	20	10000	28,000	12
0020847	SHP-T 150W BASIC PLUS	150	Clear	E40	2050	20	17000	28,000	12
0020848	SHP-T 250W BASIC PLUS	250	Clear	E40	2050	20	33000	28,000	12
0020849	SHP-T 400W BASIC PLUS	400	Clear	E40	2050	20	55000	28,000	12
<b>SHP / SHP-T Standard</b>									
0020554	SHP 50W	50	Coated	E27	2050	20	3547	24,000	40
0020555	SHP 70W	70	Coated	E27	2050	20	5800	24,000	40
0020481	SHP 250W	250	Coated	E40	2050	20	28488	24,000	12
0020484	SHP 400W	400	Coated	E40	2050	20	50574	24,000	12
0020455	SHP-T 50W	50	Clear	E27	2050	20	3771	24,000	40
0020457	SHP-T 70W	70	Clear	E27	2050	20	5855	24,000	40
0020482	SHP-T 250W	250	Clear	E40	2050	20	30589	24,000	12
0020485	SHP-T 400W	392	Clear	E40	2050	20	50602	24,000	12
0020504	SHP-T 1000W	960	Clear	E40	2050	20	130000	24,000	4

SHP	50W	70W	100W	150W	250W	400W	
L	165	165	178	227	227	292	
D	72	72	78	91	91	122	
SHP-T	35W	70W	100W	150W	250W	400W	1000W
L	156	156	-	211	260	292	400
D	39	39	-	48	48	48	68

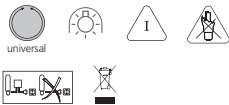


Dimensions (mm)





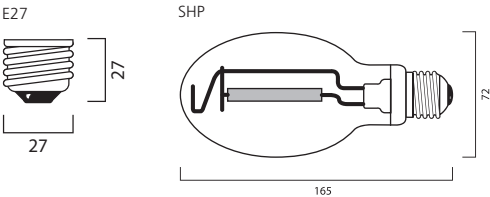
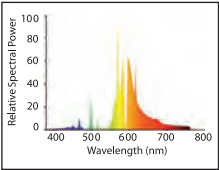
- Range of high pressure sodium lamps with internal ignitor
- Cost reduction opportunities since no ignitor or external wiring is required
- Enables luminaire size to be reduced since no ignitor is required
- Available in clear or coated elliptical bulbs
- Popular choice for parks, gardens, pedestrian zones and residential street lighting
- Low-cost illumination of workshops and small industrial areas



SHP Self-Starting

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
SHP Self-Starting Elliptical						
0020550	SHP 50W/CO-I	50	Coated	E27	2050	40
0020551	SHP 70W/CO-I	70	Coated	E27	2050	40
0020553	SHP 70W/CL-I	70	Clear	E27	2050	40

SHP-(T)(TD) Standard







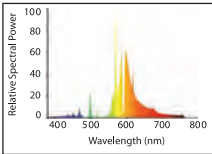
- Patented arc tube delivers highest photosynthetic efficiency of any lamp in the world
- Performance maintained at an exceptional level due to improved structure of outer bulb
- Optimised for the highest Phytolumens or PAR output
- GroLux light spectrum maximises red output essential for plant growth
- Industry leading lumen maintenance of 95% at the end of life
- Suitable for a plethora of applications related to plant growth



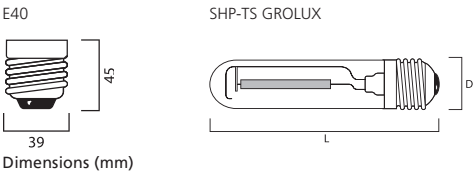
SHP-TS GroLux

Code	Description	Watt (W)	Volt (V)	Current (A)	Lamp Finish	Cap	Colour Temp (K)	Par (μ mol)	Photosynthesis (PhytoLm)	Packing Qty
SHP-TS GroLux Tubular										
0020819	SHP-TS 250W GroLux	265	115	2.60	Clear	E40	2050	425	75500	12
0020807	SHP-TS 400W GroLux	425	120	4.00	Clear	E40	2050	713	128000	12
0020808	SHP-TS 600W GroLux	615	125	5.50	Clear	E40	2050	1100	200000	12
0020809	SHP-TS 600W/400V GroLux	620	200	3.50	Clear	E40	1950	1180	215000	12

Sodium SHP-TS GroLux

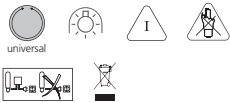


SHP-TS GroLux	250W	400W	600W
L	260	292	292
D	48	48	48





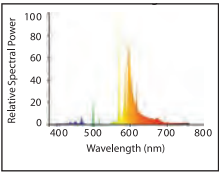
- Range of high pressure sodium lamps for direct retrofit of mercury lamps
- Offers reduced energy consumption and higher light levels when replacing mercury lamps
- Long average rated life, up to 20,000 hours
- Not recommended for operation on circuits having a leading power factor
- Suitable for direct installation in street and industrial applications using mercury lamps



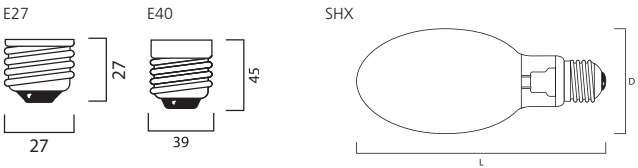
SHX Plug-In

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
SHX Plug-In Elliptical						
0020560	SHX 110W	110	Coated	E27	2000	40
0020488	SHX 210W	210	Coated	E40	2000	12
0020490	SHX 350W	350	Coated	E40	2000	12

Sodium SHX Plug-In

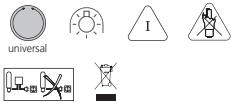


SHX	110W	210W	350W
L	178	228	292
D	76	91	122





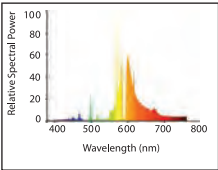
- Range of high pressure sodium lamps for direct retrofit of mercury lamps
- High xenon pressure delivers improved light output and reduced energy consumption over standard retrofit types
- Internal electronic ignitor provides reliable ignition of the xenon-filled arc tube
- Provides instant energy savings up to 18% over existing mercury installations
- Increased light output up to 50% more than comparable high pressure mercury lamp
- Excellent lumen maintenance throughout the long lamp life
- Upgrade for road/industrial installations to higher lighting levels with reduced energy consumption



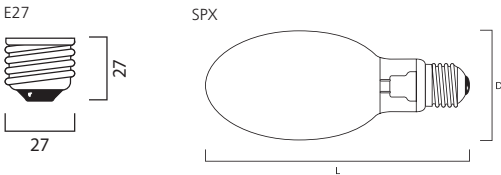
SPX EcoArc

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
<b>SPX EcoArc Elliptical</b>						
0020800	SPX EcoArc 69/108W	69	Coated	E27	1800	40
0020800	SPX EcoArc 69/108W	108	Coated	E27	1900	40

Sodium SPX EcoArc

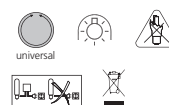


SHX	69W	108W
L	176	176
D	76	76





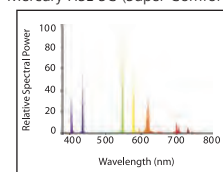
- Range of high pressure mercury lamps with improved colour rendering index (Ra60)
- Warm white colour temperature of 3400K
- Low cost white lighting solution operating on simple mercury choke circuit
- Excellent reliability throughout the long 29,000 hours average rated life
- High efficacy up to 60 lm/W
- Suitable for general interior lighting, and floodlighting of buildings and monuments



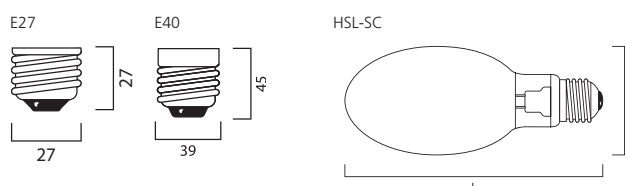
## HSL-SC Super Comfort

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
<b>HSL-SC Super Comfort Elliptical</b>						
<b>0020895</b>	HSL-SC 50W	50	Coated	E27	3400	24
<b>0020890</b>	HSL-SC 80W	80	Coated	E27	3400	40
<b>0020891</b>	HSL-SC 125W	125	Coated	E27	3400	40
<b>0020892</b>	HSL-SC 250W	250	Coated	E40	3400	12
<b>0020893</b>	HSL-SC 400W	400	Coated	E40	3400	12

Mercury HSL-SC (Super Comfort)

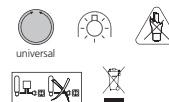


HSL-SC	50W	80W	125W	250W	400W
L	130	166	178	228	292
D	56	71	76	91	122





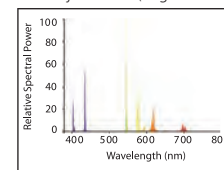
- Range of standard high pressure mercury lamps with Yttrium Vanadate phosphor
- Neutral white colour temperature of 4000K
- Low cost white lighting solution operating on simple mercury choke circuit
- Excellent reliability throughout the long 29,000 hours average rated life
- High efficacy up to 60 lm/W
- For replacement purposes only in roads, parks, industrial, rail and dock yard lighting



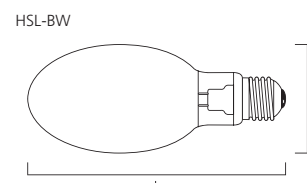
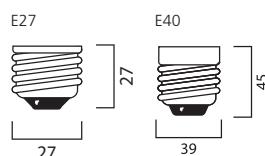
### HSL-BW Bright White Standard

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
<b>HSL-BW Bright White Standard Elliptical</b>						
<b>0020405</b>	HSL-BW 50W	50	Coated	E27	4000	24
<b>0020406</b>	HSL-BW 80W	80	Coated	E27	4000	40
<b>0020407</b>	HSL-BW 125W	125	Coated	E27	4000	40
<b>0020408</b>	HSL-BW 250W	250	Coated	E40	4000	12
<b>0020409</b>	HSL-BW 400W	400	Coated	E40	3800	12
<b>0020410</b>	HSL-BW 700W	700	Coated	E40	4000	6
<b>0020411</b>	HSL-BW 1000W	1000	Coated	E40	4000	6

Mercury HSL-BW (Bright White)



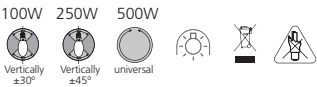
HSL-BW	50W	80W	125W	250W	400W	700W	1000W
L	130	166	178	228	292	357	411
D	56	71	76	91	122	152	167







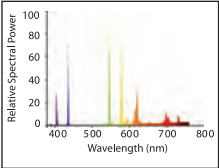
- Range of self-ballasted high pressure mercury lamps
- Direct plug-in replacement for incandescent, with mains voltage operation
- Extremely low system cost as no control gear is required
- Reliable starting down to -18°C
- Pleasant white light with good colour rendering index (Ra60)
- Improved lighting levels over incandescent in industrial and exterior environments



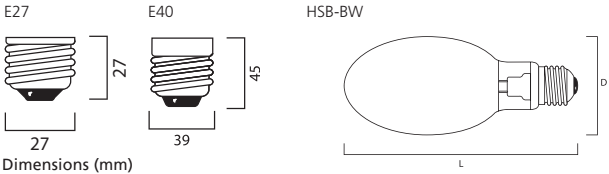
HSB-BW Bright White Blended

Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
HSB-BW Bright White Blended Elliptical 230V						
0020414	HSB-BW 160W 230V	160	Coated	E27	3500	40
0020415	HSB-BW 250W 230V	250	Coated	E40	3500	12
0020456	HSB-BW 500W 230V	500	Coated	E40	3500	12
HSB-BW Bright White Blended Elliptical 240V						
0020475	HSB-BW 160W 240V	160	Coated	E27	3500	40
0020477	HSB-BW 250W 240V	250	Coated	E40	3500	12

Mercury HSB-BW (Blended)



HSB-BW E27	160W	500W
L	178	-
D	76	-
HSB-BW E40	160W	250W 500W
L	-	228 292
D	-	91 122





- Range of monochromatic low pressure sodium discharge lamps
- Highest efficacy available – up to 183 lm/W
- Monochromatic warm yellow light
- Radiates light in the most effective part of the visible spectrum
- Road lighting with maximum light levels with minimum energy costs
- Pedestrian crossing lighting for contrast with mercury or fluorescent sources

## SLP 18/35/55W

Base up  
±110°

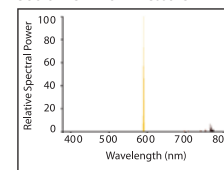
## SLP 90/135/180W

Horizontally  
±20°

## SLP

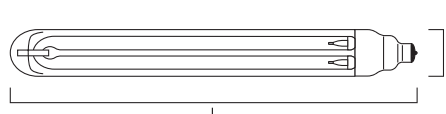
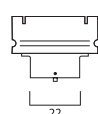
Code	Description	Watt (W)	Lamp Finish	Cap	Colour Temp (K)	Packing Qty
<b>SLP Tubular</b>						
<b>0020528</b>	SLP 18W	18	Clear	BY22d	1800	12
<b>0020495</b>	SLP 35W	35	Clear	BY22d	1800	12
<b>0020496</b>	SLP 55W	55	Clear	BY22d	1800	12
<b>0020497</b>	SLP 90W	90	Clear	BY22d	1800	12
<b>0020498</b>	SLP 135W	135	Clear	BY22d	1800	12
<b>0020499</b>	SLP 180W	180	Clear	BY22d	1800	6

Sodium SLP Low Pressure



SLP	18W	35W	55W	90W	135W	180W
L	216	311	425	528	775	1120
D	54	54	54	68	68	68

BY22d





- Remote & Built-In available
- Optimal Lamp operation
- Compliant with all EN regulations
- Over temperature Cut-off
- Low Power Consumption
- ENEC approved
- 220-240V, 50-60 HZ
- XTREME to be used with UrbanWhite lamps



BriteTronic™

Code	Description	Packing Qty
<b>Brite Tronic™</b>		
0010940	BriteTronic™ XTREME 0045 CMO-TW	12
0010941	BriteTronic™ XTREME 0060 CMO-TW	12
0010942	BriteTronic™ XTREME 0090 CMO-TW	12
0010943	BriteTronic™ XTREME 0140 CMO-TW	12
0010912	BriteTronic™ 20W C011	15
0010913	BriteTronic™ 35/70W C011 (70W)	15
0010914	BriteTronic™ 35W C021	15
0010911	BriteTronic™ 70W C021	15











# FLUORESCENT TUBES

**SYLVANIA**

61 T5



66 T8



74 T12



76 T9



77 Cop Safety Starters



78 FS Standard Starters



### Fluorescent Tubes

The key benefits of fluorescent lamps are their proven efficiency and long lamp life and their suitability for use with magnetic ballasts or electronic control gear. Sylvania offers a comprehensive range of high-efficiency fluorescent lamps in various lengths, diameters, wattages, colours as well as lamps for a wide range of specialist applications.



#### T5 Ecoline

The most efficient replacement for standard T5 lamps. Powered by our advanced coating technique which allows reaching higher luminous efficacy while maintaining the same lumen output at a lower power consumption.

#### T8 Luxline Eco

A range of T8 fluorescent lamps for use with general lighting applications. Intended to replace standard halophosphor T8 lamps, they achieve high colour rendering together with long life and high energy efficiencies, meaning great quality light with low cost to the user and the environment.



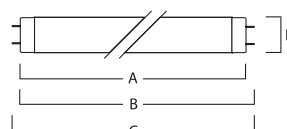
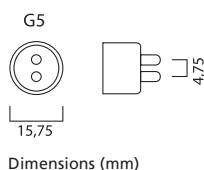
- Up to 10% energy saving on constant current electronic ballast
- Reduction in power consumption of up to 7W
- High luminous efficiency of up to 116 lm/W
- The same lumen output as compared with Standard LUXLINE T5 FHE & FHO lamps
- Up to 10% lower CO2 emissions
- 1:1 replacement of Standard T5 lamps
- For electronic ballast operation only
- High colour rendering (CRI=85, Class B)
- Average lifetime of 24000 hours with pre-heating ballast



### T5 Linear Ecoline Fluorescent

Code	Description	Watt (W)	Replacement Wattage (W)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux Nominal at 25°	Flux Max 34-38°	Packing Qty
<b>T5 High Efficiency Series</b>										
0002902	FHE-13W/T5/830	13	14	549	85	G5	3000	1230	1350	25
0002901	FHE-13W/T5/840	13	14	549	85	G5	4000	1230	1350	25
0002926	FHE-19W/T5/830	19	21	849	85	G5	3000	1910	2100	25
0002925	FHE-19W/T5/840	19	21	849	85	G5	4000	1910	2100	25
0002906	FHE-25W/T5/830	25	28	1149	85	G5	3000	2640	2900	25
0002905	FHE-25W/T5/840	25	28	1149	85	G5	4000	2640	2900	25
0002910	FHE-32W/T5/830	32	35	1449	85	G5	3000	3320	3650	25
0002909	FHE-32W/T5/840	32	35	1449	85	G5	4000	3320	3650	25
<b>T5 High Output Series</b>										
0002914	FHO-20W/T5/830	20	24	549	85	G5	3000	1700	2000	25
0002913	FHO-20W/T5/840	20	24	549	85	G5	4000	1700	2000	25
0002918	FHO-35W/T5/830	35	39	849	85	G5	3000	3220	3500	25
0002917	FHO-35W/T5/840	35	39	849	85	G5	4000	3220	3500	25
0002924	FHO-50W/T5/830	50	54	1149	85	G5	3000	4450	5000	25
0002923	FHO-50W/T5/840	50	54	1149	85	G5	4000	4450	5000	25
0002921	FHO-45W/T5/830	45	49	1149	85	G5	3000	4165	4900	25
0002920	FHO-45W/T5/840	45	49	1449	85	G5	4000	4165	4900	25
0002928	FHO-73W/T5/830	73	80	1449	85	G5	3000	6150	7000	25
0002927	FHO-73W/T5/840	73	80	1449	85	G5	4000	6150	7000	25

	A max	B min	B max	C max	D nom
24W	549	553.7	556.1	563.2	16
39W	849	853.7	856.1	863.2	16
49W	1449	1453.7	1456.1	1463.2	16
54W	1149	1153.7	1156.1	1163.2	16
80W	1449	1453.7	1456.1	1463.2	16



Dimensions (mm)



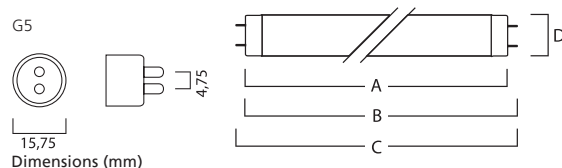
- Energy savings of up to 25% compared to a T8 tube
- T5 FHE Luxline Plus triphosphor lamp ideal solution for new, slim, aesthetic luminaires
- High luminous efficacy of up to 104 lm/W.
- For electronic ballast operation only
- Optimum luminous flux at an ambient temperature of approx 35°C
- Almost constant lumen maintenance throughout the entire lamp life due to Luxline Plus triphosphor technology
- Average life time of 24,000 hours with pre-heating ballast



### T5 FHE Luxline® Plus

Code	Description	Watt (W)	Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux Nominal at 25° (lm)	Flux Max 34-38° (lm)	Packing Qty
<b>T5 FHE Luxline Plus Homelight De Luxe (827)</b>											
0002798	FHE 14W/827	14	86	0.165	549	1B	G5	2700	1230	1350	25
0002799	FH 21W/827	21	126	0.165	849	1B	G5	2700	1910	2100	25
0002800	FHE 28W/827	28	166	0.170	1149	1B	G5	2700	2640	2900	25
0002801	FHE 35W/827	35	205	0.175	1449	1B	G5	2700	3320	3650	25
<b>T5 FHE Luxline Plus Warm White De Luxe (830)</b>											
0002760	FHE 14W/830	14	86	0.165	549	1B	G5	3000	1230	1350	25
0002763	FHE 21W/830	21	126	0.165	849	1B	G5	3000	1910	2100	25
0002766	FHE 28W/830	28	166	0.170	1149	1B	G5	3000	2640	2900	25
0002769	FHE 35W/830	35	205	0.175	1449	1B	G5	3000	3320	3650	25
<b>T5 FHE Luxline Plus White De Luxe (835)</b>											
0002787	FHE 14W/835	14	86	0.165	549	1B	G5	3500	1230	1350	25
0002788	FHE 21W/835	21	126	0.165	849	1B	G5	3500	1910	2100	25
0002789	FHE 28W/835	28	166	0.170	1149	1B	G5	3500	2640	2900	25
0002790	FHE 35W/835	35	205	0.175	1449	1B	G5	3000	3320	3650	25
<b>T5 FHE Luxline Plus Cool White De Luxe (840)</b>											
0002761	FHE 14W/840	14	86	0.165	549	1B	G5	4000	1230	1350	25
0002764	FHE 21W/840	21	126	0.165	849	1B	G5	4000	1910	2100	25
0002767	FHE 28W/840	28	166	0.170	1149	1B	G5	4000	2460	2900	25
0002770	FHE 35W/840	35	205	0.175	1449	1B	G5	4000	3320	2900	25
<b>T5 FHE Luxline Plus Daylight De Luxe (865)</b>											
0002762	FHE 14W/865	14	86	0.165	549	1B	G5	6500	1140	1250	25
0002765	FHE 21W/865	21	126	0.165	849	1B	G5	6500	1775	1950	25
0002768	FHE 28W/865	28	166	0.170	1149	1B	G5	6500	2460	2700	25
0002771	FHE 35W/865	35	205	0.175	1449	1B	G5	6500	3095	3400	25

	A max	B min	B max	C max	D nom
14W	549	553.7	556.1	563.2	16
21W	849	853.7	856.1	863.2	16
28W	1449	1453.7	1456.1	1463.2	16
35W	1149	1153.7	1156.1	1163.2	16





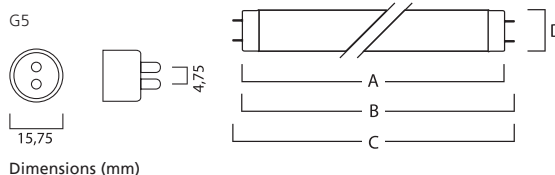
- The T5 FHO Luxline Plus triphosphor lamp is the ideal solution for indirect and direct lighting, i.e. industrial lighting systems with high ceilings
- For applications where a high luminous flux is required (up to 7000 lm per lamp)
- High colour rendering (CRI=85/Class 1B)
- For electronic ballast operation only
- Optimum luminous flux at an ambient temperature of approx 35°C
- Average life time of 24,000 hours with pre-heating ballast



## T5 FHO Luxline® Plus

Code	Description	Watt (W)	Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux Nominal at 25° (lm)	Flux Max 34-38° (lm)	Packing Qty
<b>T5 FHO Luxline Plus Home light De Luxe (827)</b>											
0002802	FHO 24W/827	24	77	0.295	549	1B	G5	2700	1700	2000	25
0002803	FHO 39W/827	39	118	0.325	849	1B	G5	2700	3220	3500	25
0002805	FHO 54W/827	54	120	0.455	1149	1B	G5	2700	4450	5000	25
0002804	FHO 49W/827	49	195	0.255	1449	1B	G5	2700	4165	4900	25
<b>T5 FHO Luxline Plus Warm White De Luxe (830)</b>											
0002772	FHO 24W/830	24	77	0.295	549	1B	G5	3000	1700	2000	25
0002775	FHO 39W/830	39	118	0.325	849	1B	G5	3000	3220	3500	25
0002781	FHO 54W/830	54	120	0.455	1149	1B	G5	3000	4450	5000	25
0002778	FHO 49W/830	49	195	0.255	1449	1B	G5	3000	4165	4900	25
0002784	FHO 80W/830	80	152	0.530	1449	1B	G5	3000	6150	7000	25
<b>T5 FHO Luxline Plus White De Luxe (835)</b>											
0002791	FHO 24W/835	24	77	0.295	549	1B	G5	3500	1700	2000	25
0002792	FHO 39W/835	39	118	0.325	849	1B	G5	3500	3220	3500	25
0002794	FHO 54W/835	54	120	0.455	1149	1B	G5	3500	4450	5000	25
0002793	FHO 49W/835	49	195	0.255	1449	1B	G5	3500	4165	4900	25
<b>T5 FHO Luxline Plus Cool White De Luxe (840)</b>											
0002773	FHO 24W/840	24	77	0.295	549	1B	G5	4000	1700	2000	25
0002776	FHO 39W/840	39	118	0.325	849	1B	G5	4000	3220	3500	25
0002782	FHO 54W/840	54	120	0.455	1149	1B	G5	4000	4450	5000	25
0002777	FHO 49W/840	49	195	0.255	1449	1B	G5	4000	4165	4900	25
0002785	FHO 80W/840	80	152	0.530	1449	1B	G5	4000	6150	7000	25
<b>T5 FHO Luxline Plus Daylight De Luxe (865)</b>											
0002774	FHO 24W/865	24	77	0.295	549	1B	G5	6500	1570	1850	25
0002779	FHO 39W/865	39	118	0.325	849	1B	G5	6500	2990	3250	25
0002783	FHO 54W/865	54	120	0.455	1149	1B	G5	6500	4050	4550	25
0002780	FHO 49W/865	49	195	0.255	1449	1B	G5	6500	3950	4650	25
0002786	FHO 80W/865	80	152	0.530	1449	1B	G5	6500	5700	6650	25

	A max	B min	B max	C max	D nom
24W	549	553.7	556.1	563.2	16
39W	849	853.7	856.1	863.2	16
49W	1449	1453.7	1456.1	1463.2	16
54W	1149	1153.7	1156.1	1163.2	16
80W	1449	1453.7	1456.1	1463.2	16







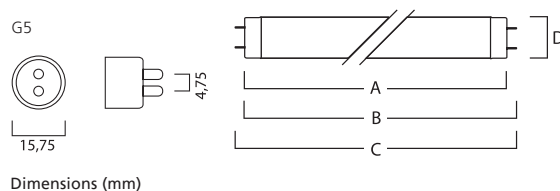
- 16mm fluorescent lamps in Standard and Luxline Plus colours
- For applications where space is limited
- Ideal solution for furniture, showcases, bathroom cabinets, transportation and leisure applications
- For higher colour rendering index we recommend fluorescent T5 Short Luxline Plus (6W and 8W)



### T5 Standard Luxline® Plus

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T5 Standard Warm White (29-530)</b>										
0000014	F6W/29-530	6	42	0.160	212	3	G5	3000	280	25
0000382	F8W/29-530	8	56	0.145	288	3	G5	3000	400	25
0000032	F13W/29-530	13	95	0.165	517	3	G5	3000	880	25
<b>T5 Standard White (35-535)</b>										
0000002	F4W/35-535	4	29	0.170	136	3	G5	3500	140	25
0000012	F6W/35-535	6	42	0.160	212	3	G5	3500	280	25
0000020	F8W/35-535	8	56	0.145	288	3	G5	3500	400	25
0000030	F13W/35-535	13	95	0.165	517	3	G5	3500	880	25
<b>T5 Standard Cool White (33-640)</b>										
0000003	F4W/33-640	4	29	0.170	136	2B	G5	4000	140	25
0000013	F6W/33-640	6	42	0.160	212	2B	G5	4000	280	25
0000021	F8W/33-640	8	56	0.145	288	2B	G5	4000	400	25
0000031	F13W/33-640	13	95	0.165	517	2B	G5	4000	880	25
<b>T5 Standard Daylight (54-765)</b>										
0000001	F4W/54-765	4	29	0.170	136	2A	G5	6500	115	25
0000011	F6W/54-765	6	42	0.160	212	2A	G5	6500	240	25
0000019	F8W/54-765	8	56	0.145	288	2A	G5	6500	340	25
0000029	F13W/54-765	13	95	0.165	517	2A	G5	6500	750	25

	A max	B min	B max	C max	D nom
4W	135.9	140.6	143.0	150.1	16
6W	212.1	216.8	219.2	226.3	16
8W	288.3	293.0	295.4	302.5	16
13W	516.9	521.6	524.0	531.1	16



Dimensions (mm)



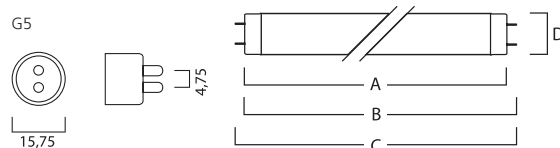
- 16mm fluorescent lamps in Standard and Luxline Plus colours
- For exclusive use in emergency lighting luminaires
- Only for operation by battery with electronic ballast (low lamp currents)
- Reliable ignition with compatible ballast
- Luminous flux dependant on individual ballast



### T5 Emergency

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Single Lamp Current (A)	Cap to Cap Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Packing Qty
<b>T5 Emergency Cool White (33-640)</b>									
0001900	F6W/33-640	6	48	0.040	212	2B	G5	4000	200
0001905	F8W/33-640	8	71	0.040	288	2B	G5	4000	200
<b>T5 Emergency Daylight (54-765)</b>									
0001902	F6W/54-765	6	48	0.040	212	2A	G5	6500	200
0001908	F8W/54-765	8	71	0.040	288	2A	G5	6500	200
<b>T5 Emergency Cool White De Luxe (840) Luxline Plus</b>									
0001909	F6W/840	6	48	0.040	212	1B	G5	4000	200
0001907	F8W/840	8	71	0.040	288	1B	G5	4000	200

	A max	B min	B max	C max	D nom
6W	212.1	216.8	219.2	226.3	16
8W	288.3	293.0	295.4	302.5	16



Dimensions (mm)



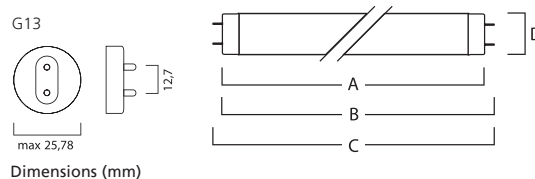
- Intended to replace standard halophosphor T8 lamps offering 10% energy saving with no loss in light output
- T8 fluorescent lamp with high colour rendering and excellent lumen maintenance
- Good colour rendering: (CRI=80-89/Class 1B)
- High luminous efficacy
- Operates on conventional and electronic ballasts
- Meets the lighting requirements as specified in the European Standard EN 12464-1 for workplaces
- Retrofit with standard T8 lamps
- Average rated life 15000 hours with pre-heating ballast



## T8 Luxline® Eco

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T8 Luxline Eco Warm White De Luxe (830)</b>										
0001605	F32W/830 T8 ECO	32	91	0.450	1200	1B	G13	3000	2900	25
0001609	F51W/830 T8 ECO	51	96	0.700	1500	1B	G13	3000	4700	25
<b>T8 Luxline Eco Cool White De Luxe (840)</b>										
0001607	F32W/840 T8 ECO	32	91	0.450	1200	1B	G13	4000	2900	25
0001610	F51W/840 T8 ECO	51	96	0.700	1500	1B	G13	4000	4700	25
<b>T8 Luxline Eco Cool White De Luxe (865)</b>										
0001608	F32W/865 T8 ECO	32	91	0.450	1200	1B	G13	6500	2750	25
0001612	F51W/865 T8 ECO	51	96	0.700	1500	1B	G13	6500	-	25

	A max	B min	B max	C max	D nom
32W	1199.4	1204.1	1206.5	1213.6	26
51W	1500.0	1504.7	1507.1	1514.2	26





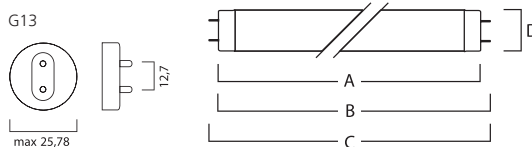
- T8 fluorescent lamp with high colour rendering and excellent lumen maintenance
- Good colour rendering: (CRI=80-89/Class 1B)
- High luminous efficacy
- Operates on conventional and electronic ballasts
- Meets the lighting requirements as specified in the European Standard EN 12464-1 for workplaces
- Average rated life 20000 hours with pre-heating ballast



## T8Luxline® Plus

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T8 LuxLine Plus Homelight De Luxe (827)</b>										
0001505	F18W/827	18	57	0.370	590	1B	G13	2700	1350	25
0001514	F36W/827	36	103	0.430	1200	1B	G13	2700	3350	25
0001535	F58W/827	58	110	0.670	1500	1B	G13	2700	5200	25
0000582	F70W/827	70	128	0.700	1764	1B	G13	2700	6000	25
<b>T8 LuxLine Plus Warm White De Luxe (830)</b>										
0001501	F18W/830	18	57	0.370	590	1B	G13	3000	1350	25
0001511	F36W/830	36	103	0.430	1200	1B	G13	3000	3350	25
0001531	F58W/830	58	110	0.670	1500	1B	G13	3000	5200	25
0001093	F70W/830	70	128	0.700	1764	1B	G13	3000	6000	25
<b>T8 LuxLine Plus White De Luxe (835)</b>										
0000580	F18W/835	18	57	0.370	590	1B	G13	3500	1350	25
0000578	F36W/835	36	103	0.430	1200	1B	G13	3500	3350	25
0001394	F58W/835	58	110	0.670	1500	1B	G13	3500	5200	25
0000581	F70W/835	70	128	0.700	1764	1B	G13	3500	6000	25
<b>T8 LuxLine Plus Cool White De Luxe (840)</b>										
0001500	F18W/840	18	57	0.370	590	1B	G13	4000	1350	25
0001510	F36W/840	36	103	0.430	1200	1B	G13	4000	3500	25
0001530	F58W/840	58	110	0.670	1500	1B	G13	4000	5200	25
0001094	F70W/840	70	128	0.700	1764	1B	G13	4000	6000	25
<b>T8 LuxLine Plus Daylight De Luxe (865)</b>										
0001502	F18W/865	18	57	0.370	590	1B	G13	6500	1300	25
0001512	F36W/865	36	103	0.430	1200	1B	G13	6500	3250	25
0001532	F58W/865	58	110	0.670	1500	1B	G13	6500	5000	25
0001095	F70W/865	70	128	0.700	1764	1B	G13	6500	5700	25

	A max	B min	B max	C max	D nom
18W	589.8	594.5	596.9	604.0	26
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26
70W	1763.8	1768.5	1770.9	1778.0	26



Dimensions (mm)



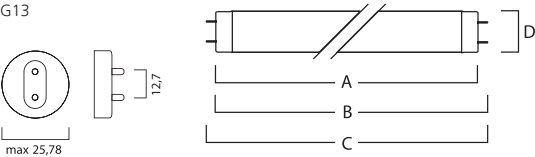
- Multi-phosphor coating for highest colour rendering
- Make colours look natural and vibrant
- Particularly useful in applications where colour rendering is a benefit - eg shops to help make merchandise look more attractive
- Excellent colour rendering (CRI=90-99 / class 1A)
- Average lifetime of 20,000 hours with pre-heating ballast)



T8 Luxline® SuperColour

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
T8 Luxline Supercolour Cool White De Luxe (940)										
0001580	F18W/940	18	57	0.370	590	1A	G13	4000	1200	25
0001581	F36W/940	36	103	0.430	1200	1A	G13	4000	2900	25
0001582	F58W/940	58	110	0.670	1500	1A	G13	4000	4600	25

	A max	B min	B max	C max	D nom
18W	589.8	594.5	596.9	604.0	26
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26



Dimensions (mm)



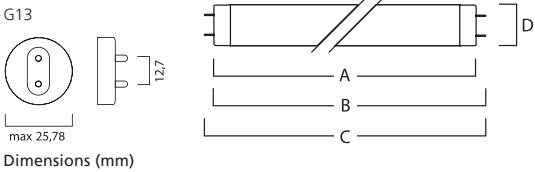
- Luxline Plus ShatterProof lamps provide protection against lamp breakages, where broken lamps could cause significant problem (e.g. clean rooms, kitchens, schools)
- Protection against splinters and other lamp parts
- Sleeve is made of FEP - which can easily withstand high ambient temperature, suitable for open and enclosed fixtures
- Excellent light transmission with no reductions in light output
- Average lifetime of 20,000 hours with pre-heating ballast)



Luxline® Plus ShatterProof

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
001493	F36W/840 ShatterProof FEP	36	103	0.430	1200	1A	G13	4000	2900	25
001494	F36W/840 ShatterProof FEP	58	110	0.670	1500	1A	G13	4000	4600	25

	A max	B min	B max	C max	D nom
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26







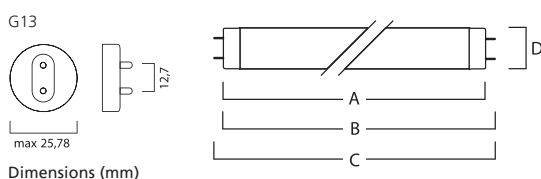
- Standard T8 fluorescent lamps with a wide range of special wattages in standard colours
- Colour rendering: (CRI=50-79/Class 3-2A)
- Suitable for areas where people are not engaged in work for long periods of time (EN 12464-1)
- For new installations or replacements we recommend T8 Luxline Plus where possible
- Not intended for use in general lighting applications. Intended for special applications including furniture, electrical distribution cabinets, signage and train carriages



## T8 Special Length Standard

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T8 Special Length Warm White (29-530)</b>										
0000040	F14W/29-530	14	38	0.395	361	3	G13	3000	700	25
<b>T8 Special Length Cool White (33-640)</b>										
0000039	F14W/33-640	14	38	0.395	361	2B	G13	4000	700	25
<b>T8 Special Length Daylight (54-765)</b>										
0000037	F14W/54-765	14	38	0.395	361	2A	G13	6500	650	25

	A max	B min	B max	C max	D nom
14W	361.2	365.8	368.3	375.4	26
36W/1m	970.0	974.1	977.1	984.2	26



Dimensions (mm)



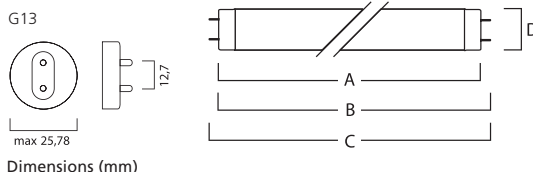
- Standard T8 fluorescent lamps with a wide range of special wattages in standard colours
- Colour rendering: (CRI=50-79/Class 3-2A)
- Suitable for areas where people are not engaged in work for long periods of time (EN 12464-1)
- For new installations or replacements we recommend T8 Luxline Plus where possible
- Not intended for use in general lighting applications. Intended for special applications including furniture, electrical distribution cabinets, signage and train carriages
- Average lifetime of 20,000 hours with pre-heating ballast).



### T8 Luxline® Plus Special Length

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI	Cap Group	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T8 Luxline Plus Special Length Warm White Deluxe (830)</b>										
0001853	F15W/830	15	55	0.310	438	1B	G13	3000	950	25
0000870	F16W/830	16	95	0.200	720	1B	G13	3000	1200	25
0001079	F30W/830	30	96	0.365	895	1B	G13	3000	2400	25
<b>T8 Luxline Plus Special Length White Deluxe (835)</b>										
0000566	F15W/835	15	55	0.310	438	1B	G13	3500	950	25
0000872	F16W/835	16	95	0.200	720	1B	G13	3500	1200	25
0001077	F30W/835	30	96	0.365	895	1B	G13	3500	2400	25
<b>T8 Luxline Plus Special Length Cool White Deluxe (840)</b>										
0000567	F15W/840	15	55	0.310	438	1B	G13	4000	950	25
0000871	F16W/840	16	95	0.200	720	1B	G13	4000	1200	25
0000874	F25W/28"/840	25	80	0.380	691/28	1B	G13	4000	2000	25
0000877	F25W/30"/840	25	84	0.360	742/30	1B	G13	4000	2200	25
0000878	F25W/33"/840	25	90	0.340	818/33	1B	G13	4000	2300	25
0001080	F30W/840	30	96	0.365	895	1B	G13	4000	2400	25
0001504	F36W/1M/840	36	80	0.560	970	1B	G13	4000	3200	25
0001520	F38W/840	38	104	0.430	1047	1B	G13	4000	3200	25
<b>T8 Luxline Special Length Daylight Deluxe (865)</b>										
0000947	F15W/865	15	55	0.310	438	1B	G13	6500	900	25
<b>T8 Luxline Plus Special Length Daylight Deluxe (865)</b>										
0000875	F25W/28"/865	25	80	0.380	691/28	1B	G13	6500	1800	25
0000879	F25W/33"/865	25	90	0.340	818/33	1B	G13	6500	2100	25
0001078	F30W/865	30	96	0.365	895	1B	G13	6500	2300	25

	A max	B min	B max	C max	D nom
15W	437.4	442.1	444.5	451.6	26
16W	720.0	724.7	727.1	734.2	26
25W 28"	720.0	724.7	727.1	734.2	26
25W 30"	742.2	746.9	749.3	756.4	26
25W 33"	818.4	823.1	825.5	832.6	26
30W	894.6	899.3	901.7	908.8	26
36W	970.0	974.1	977.1	984.2	26
38W	1047.0	1051.7	1054.1	1061.2	26



Dimensions (mm)

T8 Luxline® Plus Reflector



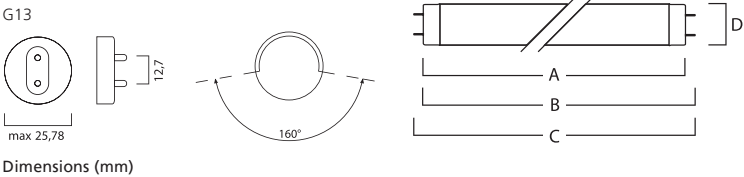
- T8 fluorescent lamp with a 200° internal reflector
- Directional control of light
- Approximately 75% of light is directed through a beam angle of 160°
- For optimising existing luminaires with no reflector
- High colour rendering due to Luxline Plus triphosphor (Class 1B)
- Average lifetime of 20,000 hours with pre-heating ballast



T8 Luxline® Plus Reflector

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Colour	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T8 LuxLine Plus Reflector</b>										
0001537	FR58W/840	58	110	0.700	Cool White Deluxe	1B	G13	4000	5200	25

	A max	B min	B max	C max	D nom
58W	1500.0	1504.7	1507.1	1514.2	26



Dimensions (mm)



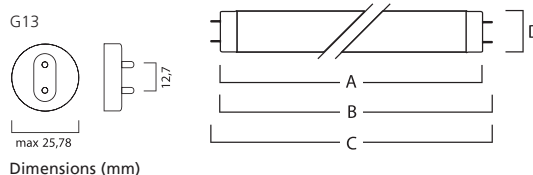
- Range of T8 fluorescent lamps with a coloured phosphor coating
- Available in red, yellow, green and blue colours
- Used to create special lighting effects in shop windows, bars, fairground attractions, dance halls and discotheques



### T8 Coloured

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	Colour	Cap	Luminous Flux (lm)	Packing Qty
<b>T8 Coloured</b>									
0002572	F18W/T8/R	18	57	0.370	590	Red	G13	30	25
0002573	F36W/T8/R	36	103	0.430	1200	Red	G13	70	25
0002574	F58W/T8/R	58	110	0.670	1500	Red	G13	100	25
0002561	F18W/T8/Y	18	57	0.370	590	Yellow	G13	750	25
0002565	F36W/T8/Y	36	103	0.430	1200	Yellow	G13	1550	25
0002569	F58W/T8/Y	58	110	0.670	1500	Yellow	G13	2500	25
0002562	F18W/T8/G	18	57	0.370	590	Green	G13	1200	25
0002566	F36W/T8/G	36	103	0.430	1200	Green	G13	2800	25
0002570	F58W/T8/G	58	110	0.670	1500	Green	G13	4000	25
0002563	F18W/T8/B	18	57	0.370	590	Blue	G13	300	25
0002567	F36W/T8/B	36	103	0.430	1200	Blue	G13	700	25
0002571	F58W/T8/B	58	110	0.670	1500	Blue	G13	1000	25

	A max	B min	B max	C max	D nom
18W	589.8	594.5	596.9	604.0	26
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26





- Wide range of standard T12 fluorescent lamps in various wattages and colours
- For use in luminaires and installations where T8 Standard is not suitable
- RS: Rapid Start in accordance with EN 60081



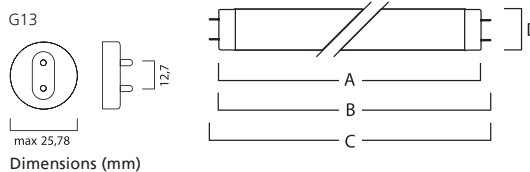
### T12 Standard

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T12 Standard Warm White (29-530)</b>										
0001551	F20W/29-530 RS	20	57	0.370	590	3	G13	3000	1200	25
0001554	F40W/29-530 RS	40	103	0.430	1200	3	G13	3000	3000	25
0001557	F65W/29-530	65	110	0.670	1500	3	G13	3000	4800	25

### T12 / Luxline® Plus

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T12 Standard Cool White (33-640)</b>										
0001550	F20W/33-640 RS	20	57	0.370	590	2B	G13	4000	1200	25
0001553	F40W/33-640 RS	40	103	0.430	1200	2B	G13	4000	3000	25
0001556	F65W/33-640 RS	65	110	0.670	1500	2B	G13	4000	4800	25
<b>T12 Standard Daylight (54-765)</b>										
0001559	F20W/54-765 RS	20	57	0.370	590	2A	G13	6500	1050	25
0001560	F40W/54-765 RS	40	103	0.430	1200	2A	G13	6500	2500	25

	A max	B min	B max	C max	D nom
20W	589.8	594.5	596.9	604.0	38
25W/1m	970.0	974.7	977.1	984.2	38
40W/1m	970.0	974.7	977.1	984.2	38
40W	1199.4	1204.1	1206.5	1213.6	38
65W	1500.0	1504.7	1507.1	1514.2	38
65/80W	1500.0	1504.7	1507.1	1514.2	38
75/85W	1763.8	1768.5	1770.9	1778.0	38
125W	2374.3	2379.0	2381.4	2388.5	38
125W	2374.3	2379.0	2381.4	2388.5	38





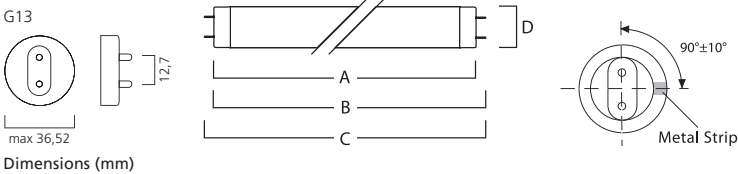
- T12 fluorescent lamp with a resistor cap, 3.6V electrodes and an external ignition stripe
- Instant and flicker-free start
- For rapid start or semi-resonant ballast
- Dimmable T12 lamp



T12 IRS

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T12 IRS Warm White (29-530)</b>										
0000424	F20W/29-530-IRS	20	57	0.370	590	3	G13	3000	1200	25
0000431	F40W/29-530-IRS	40	103	0.430	1200	3	G13	3000	3000	25
<b>T12 IRS Cool White (33-640)</b>										
0000423	F20W/33-640-IRS	20	57	0.370	590	2B	G13	4000	1200	25
0000430	F40W/33-640-IRS	40	103	0.430	1200	2B	G13	4000	3000	25
0000438	F65W/33-640-IRS	65	110	0.670	1500	2B	G13	4000	4800	25

	A max	B min	B max	C max	D nom
20W	589.8	594.5	596.9	604.0	38
40W	1199.4	1204.1	1206.5	1213.6	38
65W	1500.0	1504.7	1507.1	1514.2	38







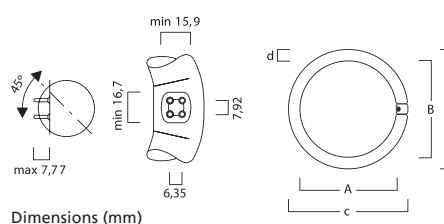
- T9 circular fluorescent lamps
- Suitable in a wide range of round and square shaped luminaires for various purposes
- For commercial and domestic lighting
- Good colour rendering (CRI=80-89 / class 1B)
- High luminous efficacy



## T9 Circline Plus

Code	Description	Watt (W)	Nominal Lamp Volt (V)	Current (A)	Cap to Cap Lamp Length (mm)	CRI Group	Cap	Luminous Colour Temp (K)	Luminous Flux (lm)	Packing Qty
<b>T9 Circline Plus Warm White De Luxe (830)</b>										
0001960	FC22/830	22	62	0.400	216 Ø	1B	G10q	3000	1300	12
0001963	FC32/830	22	84	0.450	305 Ø	1B	G10q	3000	2300	12
0001966	FC40/830	22	115	0.415	406 Ø	1B	G10q	3000	3000	12
<b>T9 Circline Plus Cool White De Luxe (840)</b>										
0001961	FC22/840	32	62	0.400	216 Ø	1B	G10q	4000	1300	12
0001964	FC32/840	32	84	0.450	305 Ø	1B	G10q	4000	2300	12
0001967	FC40/840	32	115	0.415	406 Ø	1B	G10q	4000	3000	12
<b>T9 Circline Plus Daylight De Luxe (865)</b>										
0001962	FC22/865	40	62	0.400	216 Ø	1B	G10q	6500	1250	12
0001965	FC32/865	40	84	0.450	305 Ø	1B	G10q	6500	2300	12
0001968	FC40/865	40	115	0.415	406 Ø	1B	G10q	6500	2900	12

	A max	A min	B max	B min	C or D min	C or D max	D min	D max
22W	149.1	155.6	147.6	157.2	203.2	215.9	26.2	30.9
32W	239.7	246.1	236.5	246.1	292.1	304.8	26.2	30.9
40W	341.3	347.7	338.1	347.7	393.7	406.4	26.2	30.9



Dimensions (mm)



- Quick-start without increasing the starting current
- Immediate switch off in case of flickering or defective lamp (end of life)
- Prevents overheating of the ballast
- Extended life compared to standard starters
- Reduced maintenance cost due to longer life time
- For single lamp operation
- Testhouse approved and ENEC/VDE marked



COP Safety Starters

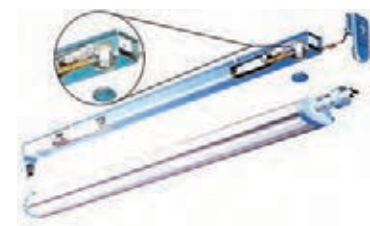
Code	Description	Watt (W)	Volt (V)	Lamp Type	Circuit	Packing Qty
0024471	COP-11A	36,58	220-240	T8	Single	25/100/1000
		40, 65	220-240	T12	Single	
		32,40, 60	220-240	Circline	Single	
		18, 24, 36	220-240	CF-L	Single	



- Reliable and fast starting
- Suitable for temperatures from -20°C to +80°C
- For single and twin lamp operation
- Testhouse approved and ENEC/VDE marked



## FS Starter Starters



Starter in Fluorescent Lamp Circuit

Code	Description	Watt (W)	Volt (V)	Lamp Type	Circuit	Packing Qty
<b>FS Standard Starters</b>						
<b>0024434</b>	FS-11	4, 6, 8, 13	220-240	T5	Single	25/500/100
		14, 15, 16, 18, 25, 36, 38, 58	220-240	T8	Single	Single
		20, 40, 65	220-240	T12	Single	
		22, 32	220-240	Circline	Single	
		18, 24, 36	220-240	CF-L	Single	
<b>0024440</b>	FS-11	As Above	As Above	As Above	Single/Industrial Pack	500/1000
<b>0024433</b>	FS-22	4, 6, 8	120	T12	Single	25/500/1000
		4, 6, 8	230	T12	Twin	
		14, 15, 18	120	T8	Single	
		14, 15, 18	230	T8	Twin	
		20	120	T12	Single	
		20	230	T12	Twin	
		22	120	Circline	Single	
		22	230	Circline	Twin	
		18	120	CF-L	Single	
		18	230	CF-L	Twin	
		18	120	CF-F	Single	
		18	230	CF-F	Twin	
<b>0024437</b>	FS-22	As Above	As Above	As Above	Single/Industrial Pack	500/1000
<b>0024441</b>	FS-11	70	220-240	T8	Single	5/20/1500







# COMPACT FLUORESCENT

83 Mini-Lynx® Sticks



86 Mini-Lynx® Spirals



88 Power-Lynx



89 Mini-Lynx® Classico



90 Mini-Lynx® Compact GLS



91 Mini-Lynx® Compact Ball



92 Mini-Lynx® Candle



93 Mini-Lynx® Globe



94 Mini-Lynx® Reflectors



96 Mini-Lynx® PAR 30 & 38



97 Micro-Lynx®



99 Lynx®





### Compact Fluorescent Lamps

Sylvania's Compact Fluorescent Lamps are available in a wide range of shapes and formats to meet the growing need for compact, energy efficient and long lasting lamps, coupled with excellent colour rendering. They are the result of traditional fluorescent lamp making skills which, when combined with an integral state-of-the-art electronic ballast and starter circuit create a range of retrofit lamps that replace incandescent mains voltage filament lamps. Compact fluorescent lamps are also available without integral ballast, for use in traditional magnetic ballast fixtures or in the new generation of high efficiency, electronic ballast, downlights and luminaires.

As the phasing out of incandescent lamps progresses across Europe, alternatives are required. Sylvania's CFLi range, which meets – or exceeds – all relevant regulations, can be trusted to offer consumers affordable, efficient and effective lamps in a wide variety of sizes, shapes, outputs and designs.

#### Mini-Lynx Fast-Start

Mini-Lynx Fast-Start energy savers are different. These exceptionally compact fluorescent lamps have no unpleasant flicker or switch delay. They illuminate in less than two seconds, achieve full luminous flux in under 30 seconds and are available in a wide range of wattages and colours. Furthermore, with a rated lifetime of 10,000 hours, they are easy to fit...and forget.

#### Mini-Lynx Classico

Mini-Lynx Classico 7W & 11W are exact size replacements for A55 & A60 incandescent GLS lamps. As today's decorative fittings are getting smaller and more compact, the Mini-Lynx Classico's smaller sizes make it ideal for residential environments. The improved cover design of this lamp removes the unsightly plastic base of previous models, ensuring all around illumination with no dark areas. Furthermore, being shatter resistant, applications such as childcare and food preparation areas are particularly relevant due to safety concerns.





- Up to 80% energy saving compared to incandescent lamps
- Compact, fast-start energy saving lamps
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 30 seconds
- No liquid mercury (<2.5mg pill)
- 20,000 switching cycles
- Good colour rendering CRI=80)
- Available in Homelight (2700K), Cool White (4000K) and Daylight (6000K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



### Mini-Lynx® Fast-Start

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Mini-Lynx Fast-Start 10K Homelight (827)</b>								
0031143	8W/E14	8	230-240	E14	2700	450	10000	10
0031146	8W/E27	8	230-240	E27	2700	450	10000	10
0031147	8W/B22	8	230-240	B22	2700	450	10000	10
0031151	11W/E14	11	230-240	E14	2700	600	10000	10
0031155	11W/E27	11	230-240	E27	2700	600	10000	10
0031159	11W/B22	11	230-240	B22	2700	600	10000	10
0031161	15W/E27	15	230-240	E27	2700	900	10000	10
0031165	15W/B22	15	230-240	B22	2700	900	10000	10
0031167	20W/E27	15	230-240	E27	2700	1200	10000	10
0031171	20W/B22	20	230-240	B22	2700	1200	10000	10
0031173	23W/E27	23	230-240	E27	2700	1450	10000	10
0031176	23W/B22	23	230-240	B22	2700	1450	10000	10
<b>Mini-Lynx Fast-Start Cool White (840)</b>								
0031144	8W/E14	8	230-240	E14	4000	450	10000	10
0031148	8W/E27	8	230-240	E27	4000	450	10000	10
0031152	11W/E14	11	230-240	E14	4000	600	10000	10
0031156	11W/E27	11	230-240	E27	4000	600	10000	10
0031162	15W/E27	15	230-240	E27	4000	900	10000	10
0031168	20W/E27	20	230-240	E27	4000	1200	10000	10
0031174	23W/E27	23	230-240	E27	4000	1450	10000	10
<b>Mini-Lynx Fast-Start Daylight (860)</b>								
0031153	11W/E14	11	230-240	E14	6000	585	10000	10
0031157	11W/E27	11	230-240	E27	6000	585	10000	10
0031163	15W/E27	15	230-240	E27	6000	875	10000	10
0031169	20W/E27	20	230-240	E27	6000	875	10000	10
0031175	23W/E27	23	230-240	E27	6000	1380	10000	10

E14	5W	8W	11W	15W	20W	23W
L	106	109	102	-	-	-
D	38	44	48	-	-	-
E27	5W	8W	11W	15W	20W	23W
L	104	106	100	112	134	150
D	38	44	48	48	48	48
B22	5W	8W	11W	15W	20W	23W
L	-	104	98	100	132	148
D	-	44	48	48	48	48





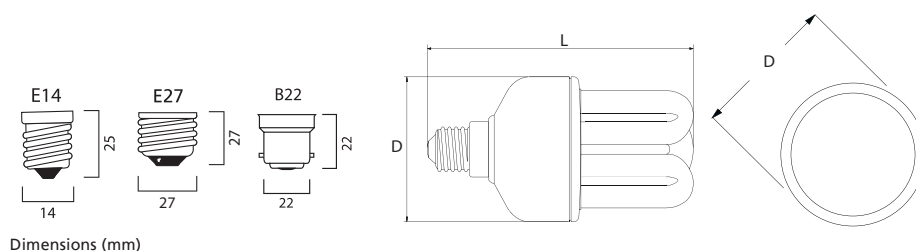
- Up to 80% energy saving compared to incandescent lamps
- Instant flicker free start (<0.3 seconds)
- Delivers 60% light in less than 30 seconds
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K), Cool White (4000K) and Daylight (6500K)
- Average rated life 8,000 hrs
- To be used in dry applications or fully enclosed fixtures



## Mini-Lynx® Fast-Start Home

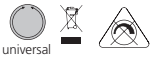
Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Pack Qty
<b>Mini-Lynx Fast-Start Home (827)</b>								
0031509	9W E14	9	220-240	E14	2700	450	8000	10
0031510	9W E27	9	220-240	E27	2700	450	8000	10
0031511	11W E27	11	220-240	E27	2700	649	8000	10
0031581	11W B22	11	220-240	B22	2700	649	8000	10
0031512	15W E27	15	220-240	E27	2700	850	8000	10
0031582	15W B22	15	220-240	B22	2700	850	8000	10
0031513	20W E27	20	220-240	E27	2700	1200	8000	10
0031583	20W B22	20	220-240	B22	2700	1200	8000	10
0031514	23W E27	23	220-240	E27	2700	1400	8000	10
<b>Mini-Lynx Fast-Start Home (840)</b>								
0031562	9W E14	9	220-240	E14	4000	450	8000	10
0031564	9W E27	9	220-240	E27	4000	450	8000	10
0031566	11W E27	11	220-240	E27	4000	650	8000	10
0031568	15W E27	15	220-240	E27	4000	850	8000	10
0031570	20W E27	20	220-240	E27	4000	1200	8000	10
0031572	23W E27	23	220-240	E27	4000	1400	8000	10
<b>Mini-Lynx Fast-Start Home (860)</b>								
0031563	9W E14	9	220-240	E14	6500	420	8000	10
0031565	9W E27	9	220-240	E27	6500	420	8000	10
0031567	11W E27	11	220-240	E27	6500	600	8000	10
0031569	15W E27	15	220-240	E27	6500	800	8000	10
0031571	20W E27	20	220-240	E27	6500	1152	8000	10
0031573	23W E27	23	220-240	E27	6500	1371	8000	10

E14	9W				
L	113				
D	45				
E27/B22	9W	11W	15W	20W	23W
L	111	123	136	156	174
D	45	45	45	45	45





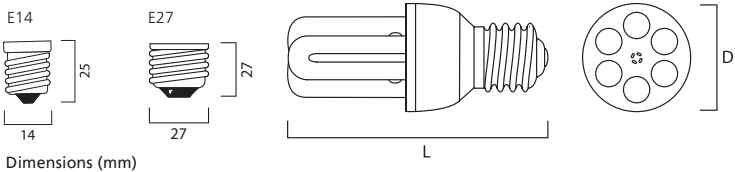
- Up to 77% energy saving compared to incandescent lamps
- Sylvania's smallest fast-start energy saving lamps
- Compact dimensions
- Instant flicker-free start
- Delivers 60% light in less than 1 minute - no waiting
- No liquid mercury (<3.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700)
- Average rated life 6,000 hrs
- To be used in dry applications or fully enclosed fixtures



Mini-Lynx® Compact Fast-Start

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0031001	5W/E14	5	230-240	E14	2700	180	6000	10
0031003	5W/E27	5	230-240	E27	2700	180	6000	10
0031019	7W/E14	7	230-240	E14	2700	286	6000	10
0031021	7W/E27	7	230-240	E27	2700	286	6000	10
0031023	9W/E14	9	230-240	E14	2700	405	6000	10
0031025	9W/E27	9	230-240	E27	2700	405	6000	10
0031029	11W/E27	11	230-240	E27	2700	540	6000	10
0031037	15W/E27	15	230-240	E27	2700	800	6000	10

E14	5W	7W	9W		
L	86	92	102		
D	38	38	38		
E27	5W	7W	9W	11W	15W
L	84	90	100	108	120
D	37	38	38	38	43





- Up to 82% energy saving compared to incandescent lamps
- Compact, fast-start energy saving lamps
- Spiral design for better light distribution
- Instant flicker free start (<0.3 seconds)
- Delivers 60% light in less than 40 seconds
- No liquid mercury (<1.6mg pill)
- 10,000 switching cycles
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 6,000 hrs
- To be used in dry applications or fully enclosed fixtures



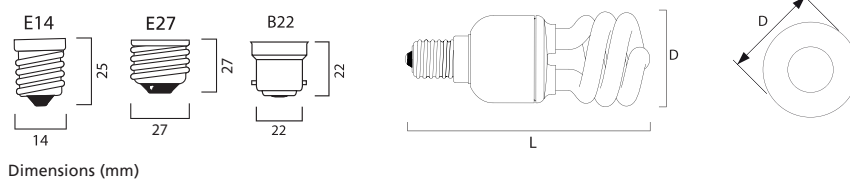
## Mini-Lynx® Spiro Superior

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0031441	5W E14	5	230-240	E14	2700	300	15000	10
0031443	7W E14	7	230-240	E14	2700	430	15000	10
0031445	7W E27	7	230-240	E27	2700	430	15000	10
0031446	12W E14	12	230-240	E14	2700	730	15000	10
0031448	12W E27	12	230-240	E27	2700	730	15000	10
0031452	15W E27	15	230-240	E27	2700	1030	15000	10
0031458	20W E27	20	230-240	E27	2700	1350	15000	10
0031462	23W E27	23	230-240	E27	2700	1550	15000	10

E14	7W	12W
L	106	110
D	35	46

E27	7W	12W	15W	20W	23W
L	100	104	114	123	127
D	35	46	54	54	54

B22	12W	15W	20W
L	103	113	122
D	46	54	54





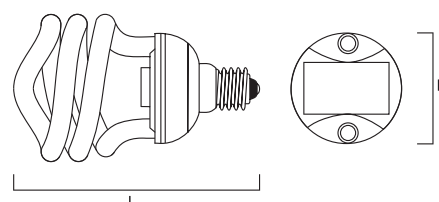
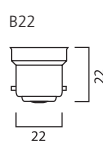
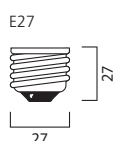
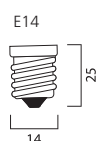
- Up to 81% energy saving compared to incandescent lamps
- Compact dimensions
- Spiral design for maximum light dispersal
- Instant flicker-free start
- Delivers 60% light in less than 1 minute – no waiting
- No liquid mercury (<2.5pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K) and Cool White (4000K)
- Average rated life 10,000 hrs
- To be used in dry applications



### Mini-Lynx® Spiro

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Mini-Lynx Spiro Homelight (827)</b>								
<b>0031005</b>	8W/E14	8	230-240	E14	2700	405	10000	10
<b>0031007</b>	8W/E27	8	230-240	E27	2700	405	10000	10
<b>0031123</b>	12W/E14	12	230-240	E14	2700	630	10000	10
<b>0031009</b>	12W/E27	12	230-240	E27	2700	630	10000	10
<b>0031011</b>	12W/B22	12	230-240	B22	2700	630	10000	10
<b>0031013</b>	15W/E27	15	230-240	E27	2700	845	10000	10
<b>0031015</b>	15W/B22	15	230-240	B22	2700	845	10000	10
<b>0031249</b>	20W/E27	20	230-240	E27	2700	1200	10000	10
<b>0031139</b>	20W/B22	20	230-240	B22	2700	1200	10000	10
<b>0031518</b>	23W/E27	23	230-240	E27	2700	1400	10000	10
<b>Mini-Lynx Spiro Cool White (840)</b>								
<b>0031017</b>	15W/E27	15	230-240	E27	4000	845	10000	10
<b>0031250</b>	20W/E27	20	230-240	E27	4000	1200	10000	10

E14	8W	12W	15W	20W	
L	89	94	-	-	
D	46	46	-	-	
E27	8W	12W	15W	20W	23W
L	84	88	99	108	123
D	46	46	50	54	55
B22	8W	12W	15W	20W	
L	-	86	97	106	
D	-	46	50	54	







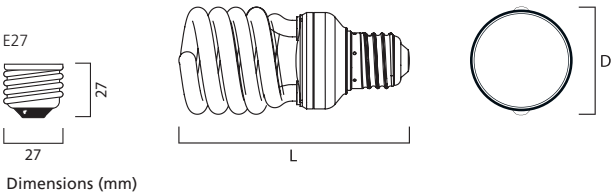
- Up to 78% energy saving compared to incandescent lamps
- Energy saving alternative to high wattage incandescent in professional and semi-professional applications
- Spiral design for better light distribution
- Instant flicker free start (<0.3 seconds)
- Delivers 60% light in less than 1 minute
- No liquid mercury (<3.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K) and Cool White (4000K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



Power-Lynx Fast-Start

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Power-Lynx Fast-Start Homelight (827)</b>								
0031326	40W/E27	40	230-240	E27	2700	2720	10000	10
<b>Power-Lynx Fast-Start Cool White (840)</b>								
0031328	40W/E27	40	230-240	E27	4000	2720	10000	10

E27	40W
L	188
D	67





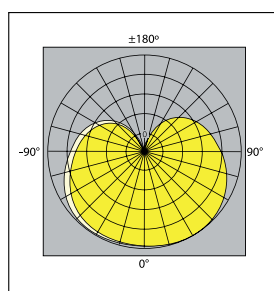
Classico E27

- Up to 78% energy saving compared to incandescent lamps
- Shatter-resistant cover
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 120 seconds
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures

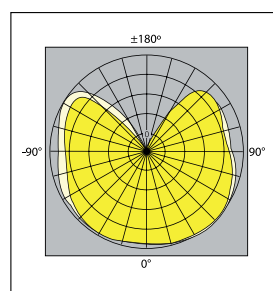

**Mini-Lynx® Compact GLS Classico**

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Pack Qty
0031496	7W E27	7	230-240	E27	2700	286	8000	10
0031500	11W E27	11	230-240	E27	2700	531	8000	10
0031505	13W E27	13	230-240	E27	2700	700	8000	10

Classico has the similar distribution to incandescent bulbs, but light is much more stable.

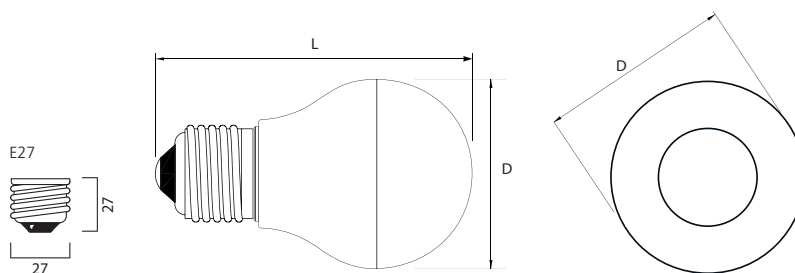


Classico



Incandescent

E27	7W	11W	13W
L	93	99	112
D	56	60	69



Dimensions (mm)



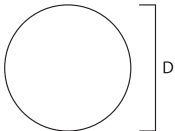
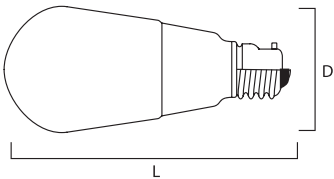
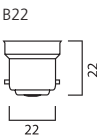
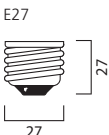
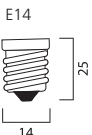
- Up to 78% energy saving compared to incandescent lamps
- Opal housing delivers all-round illumination whilst hiding burner design
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 1 minute
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



Mini-Lynx® Compact GLS

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0031073	15W/E27	15	230-240	E27	2700	810	10000	10
0031075	15W/B22	15	230-240	B22	2700	810	10000	10
0031213	20W/E27	20	230-240	E27	2700	1152	10000	10
0031211	20W/B22	20	230-240	B22	2700	1152	10000	10

E27	15W	20W
L	130	149
D	64	75
B22	15W	20W
L	128	147
D	64	75





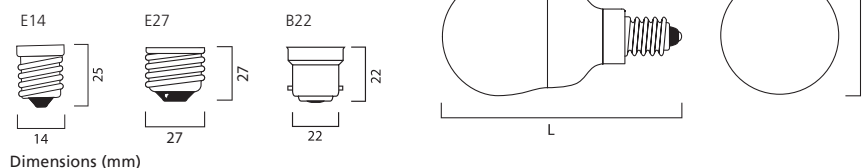
- Up to 80% energy saving compared to incandescent lamps
- Opal housing delivers all-round illumination whilst hiding burner design
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 1 minute
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



### Mini-Lynx® Compact Ball

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Mini-Lynx Ball Homelight (827)</b>								
0031118	7W/E14	7	230-240	E14	2700	286	10000	10
0031057	7W/E27	7	230-240	E27	2700	286	10000	10
0031061	9W/E14	9	230-240	E14	2700	405	10000	10
0031063	9W/E27	9	230-240	E27	2700	405	10000	10
0031065	9W/B22	9	230-240	B22	2700	405	10000	10
<b>Mini-Lynx Ball Cool White (840)</b>								
0031116	9W/E14	9	230-240	E14	4000	405	10000	10

E14	7W	9W
L	96	103
D	50	50
E27	7W	9W
L	91	98
D	50	50
B22	9W	
L	96	
D	50	





- Up to 81% energy saving compared to incandescent lamps
- Opal housing delivers all-round illumination whilst hiding burner design
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 120 seconds
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



## Mini-Lynx® Candle

Code	Description	Watt (W)	Volt (V)	Cap	Colour	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Pack Qty
0031477	7W E14	7	230-240	E14	827	2700	300	10000	10
0031479	7W E27	7	230-240	E27	827	2700	300	10000	10
0031483	9W E14	9	230-240	E14	827	2700	405	10000	10
0031490	9W B22	9	230-240	B22	827	2700	405	10000	10
0031485	9W E27	9	230-240	E27	827	2700	405	10000	10
0031488	9W E14	9	230-240	E14	840	2700	405	10000	10

## Mini-Lynx® Bent-Tip

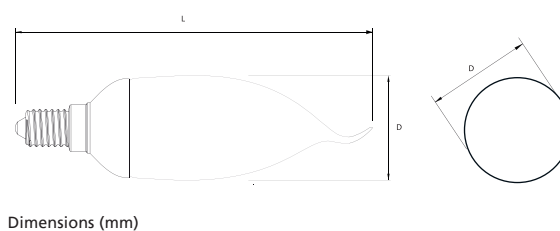
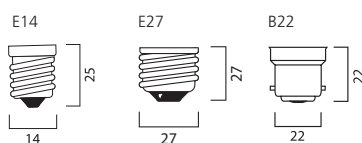
Code	Description	Watt (W)	Volt (V)	Cap	Colour	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Pack Qty
0031494	9W E14	9	230-240	E14	827	2700	405	10000	10

E14	7W	9W
L	106	111
D	39	39

E27	7W	9W
L	105	110
D	39	39

B22	9W
L	110
D	39

Bent Tipped	
E14	9W
L	132
D	39





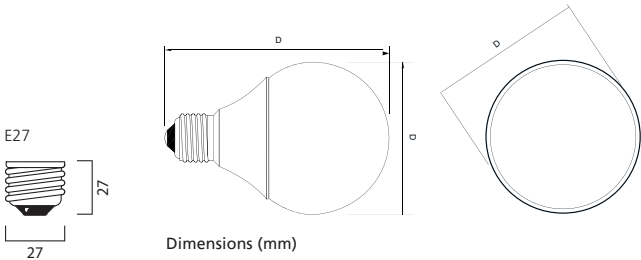
- Up to 81% energy saving compared to incandescent lamps
- Opal housing delivers all-round illumination whilst hiding burner design
- Provides flicker-free light in under 2 seconds
- Delivers 60% light output in less than 60 seconds
- No liquid mercury (<2.5mg pill)
- Good colour rendering
- Available in Homelight (2700K)
- Average rated life of 10,000 hours
- To be used in dry application or fully enclosed fixtures



Mini-Lynx® Globe

Code	Description	Watt (W)	Cap	Colour Temp (K)	Lumens (lm)	Average Rated Life (Hrs)	Volt (V)
0031464	20W E27	20	E27	2700	1152	10000	230
0031466	23W E27	23	E27	2700	1420	10000	230-240

E27	20W	23W
L	140	170
D	95	120





# Mini-Lynx® Reflector GU10



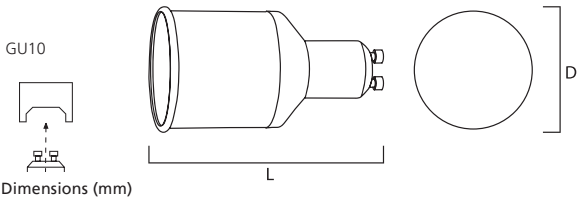
- Up to 81% energy saving compared to incandescent lamps
- Energy saving alternative to standard halogen lamps
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 1 minute
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K) and Cool White (4000K)
- Average rated life 8,000 hrs
- To be used in dry applications or fully enclosed fixtures



## Mini-Lynx® Reflector GU10

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>GU10 Homelight (827)</b>								
0031049	9W/GU10	9	230-240	GU10	2700	235	8000	10
0031051	11W/GU10	11	230-240	GU10	2700	265	8000	10
<b>GU10 Cool White (840)</b>								
0031053	11W/GU10	11	230-240	GU10	4000	265	8000	10

GU10	9W	11W
L	82	90
D	50	50





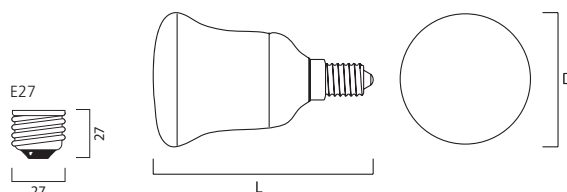
- Up to 80% energy saving compared to incandescent reflector lamps
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 1 minute
- No liquid mercury (<2.5mg pill)
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



Mini-Lynx® R50 - R80 Reflector

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0031109	9W/E27	9	230-240	E27	2700	270	10000	10
0031113	15W/E27	15	230-240	E27	2700	645	10000	10
0031115	20W/E27	20	230-240	E27	2700	675	10000	10

E27	9W	15W	20W
L	105	122	132
D	63	80	80



Dimensions (mm)

Mini-Lynx® PAR 30 & 38



PAR 30



PAR 38

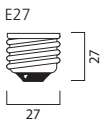
- Up to 80% energy saving compared to incandescent lamps
- Low heat emissions compared to halogen and incandescent
- Provides a flicker-free start in under 1 second
- Delivers 60% light in less than 100 seconds
- No liquid mercury (<2.5mg pill)
- 10,000 switching cycles
- Good colour rendering (CRI=80)
- Available in Homelight (2700K)
- Average rated life 10,000 hrs



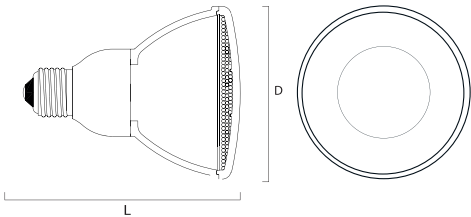
Mini-Lynx® PAR 30 & 38

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Lumens (lm)	Average Rated Life (Hrs)	Pack Qty
0031468	15W E27	20	230-240	E27	2700	700	10000	10
0031470	20W E27	23	230-240	E27	2700	1200	10000	10

	PAR30	PAR38
L	90	136
D	85	124

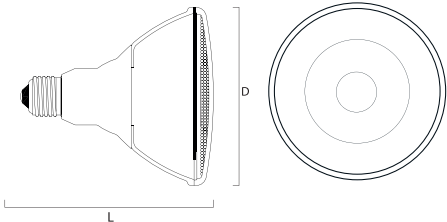


PAR 30



Dimensions (mm)

PAR 38



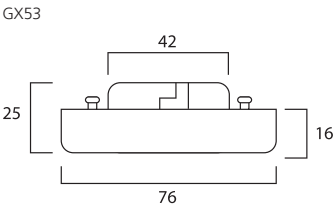


- Integrated twist and lock safety key
- Provides a flicker-free start within 2 seconds
- Delivers 60% light in less than 30 seconds
- Mercury content <2.5mg
- High switching cycle - 30,000 times over the life of the lamp
- Good colour rendering (CRI=80)
- Available in Warm White (3000K) and Cool White (4000K)
- Average rated life 10,000 hrs
- To be used in dry applications or fully enclosed fixtures



Micro-Lynx® Luna

Code	Description	Watt (W)	Volt (V)	Cap	Colour	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Micro-Lynx Luna Warm White (830)</b>									
0025477	Micro-Lynx Luna	6	230-240	GX53	White	3000	235	10000	20
<b>Micro-Lynx Luna Cool White (840)</b>									
0025478	Micro-Lynx Luna	6	230-240	GX53	White	4000	235	10000	20



Dimensions (mm)

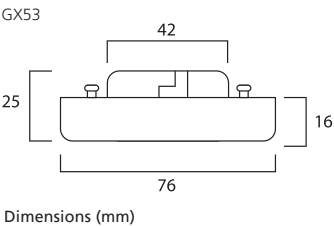


- Integrated twist and lock safety key
- Instant flicker free start (<0.3 seconds)
- Mercury content <2.5mg
- Good colour rendering (CRI=80)
- Average rated life 8,000 hrs
- Available in Homelight (2700K) Warm White (3000K) and Cool White (4000K)
- To be used in dry applications or fully enclosed fixtures



Micro-Lynx® F

Code	Description	Watt (W)	Volt (V)	Cap	Colour	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Micro-Lynx F Homelight (827)</b>									
0025214	Micro-Lynx F	6	230-240	GX53	White	2700	230	8000	20
<b>Micro-Lynx F Warm White (830)</b>									
0025218	Micro-Lynx F	6	230-240	GX53	White	3000	230	8000	20
<b>Micro-Lynx F Cool White (840)</b>									
0025219	Micro-Lynx F	6	230-240	GX53	White	4000	230	8000	20





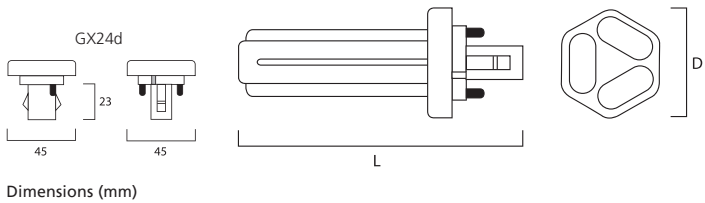
- Triple bend compact pin-base lamps
- Suitable for operation on conventional control gear
- Excellent colour rendering (CRI=85)
- Available in Warm White (3000K) and Cool white (4000K)
- Average rated life: 15000 hours



Lynx®-T

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
Lynx-T Warm White Deluxe (830)								
0027801	18W/830	18	230-240	GX24d-2	3000	1200	15000	10
0027811	26W/830	26	230-240	GX24d-3	3000	1800	15000	10
Lynx-T Cool White Deluxe (840)								
0027802	18W/840	18	230-240	GX24d-2	4000	1200	15000	10
0027812	26W/840	26	230-240	GX24d-3	4000	1800	15000	10

GX24d	18W	26W
L	97	112
D	49	49





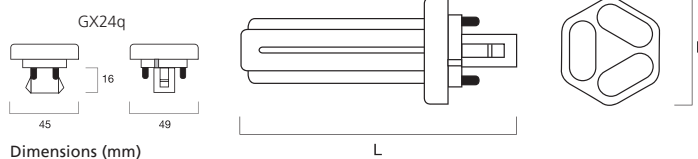
- Excellent luminous flux at high and low ambient temperatures
- Particularly suitable for use in the new generation of ultra compact fluorescent downlights and luminaires
- Amalgam technology designed for high temperature applications
- Excellent colour rendering - (CRI=80-89)
- To be operated on electronic ballasts only
- Dimmable with suitable dimmer
- Available in Warm White (3000K and Cool White (4000K)
- Average rated life: 15000 hours



## Lynx® - TE Amalgam

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (hrs)	Packing Qty
<b>Lynx-TE Warm White (830)</b>								
<b>0027817</b>	18W/830	18	230-240	GX24q-2	3000	1200	15000	10
<b>0027822</b>	26W/830	26	230-240	GX24q-3	3000	1800	15000	10
<b>0027842</b>	32W/830	32	230-240	GX24q-3	3000	2400	15000	10
<b>0027844</b>	42W/830	42	230-240	GX24q-4	3000	3200	15000	10
<b>Lynx-TE Cool White (840)</b>								
<b>0027816</b>	18W/840	18	230-240	GX24q-2	4000	1200	15000	10
<b>0027821</b>	26W/840	26	230-240	GX24q-3	4000	1800	15000	10
<b>0027840</b>	32W/840	32	230-240	GX24q-3	4000	2400	15000	10
<b>0027845</b>	42W/840	42	230-240	GX24q-4	4000	3200	15000	10

GX24q	18W	26W	32W	42W
L	97	112	128	149
D	49	49	49	49







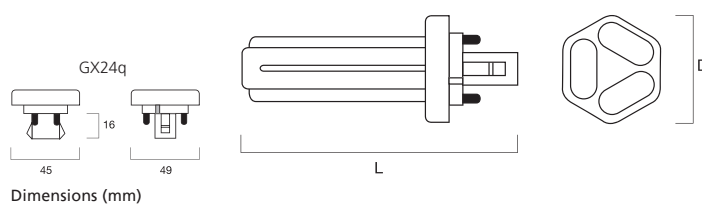
- Triple pin-base lamps for traditional fixtures, new installations and downlights
- Suitable for operation on electronic control gear
- Excellent colour rendering - (CRI= 80-89)
- Rapid Run-up
- Dimmable with suitable dimmer
- Available in Warm White (3000K and Cool White (4000K)
- Average Rated Life 15000 hrs



## Lynx® - TE FSD

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-TE FSD Warm White (830)</b>								
0027851	18W/830	18	230-240	GX24q-2	3000	1200	15000	10
0027854	26W/830	26	230-240	GX24q-3	3000	1800	15000	10
0027857	32W/830	32	230-240	GX24q-3	3000	2400	15000	10
0027860	42W/830	42	230-240	GX24q-4	3000	3200	15000	10
<b>Lynx-TE FSD Cool White (840)</b>								
0027852	18W/840	18	230-240	GX24q-2	4000	1200	15000	10
0027855	26W/840	26	230-240	GX24q-3	4000	1800	15000	10
0027858	32W/840	32	230-240	GX24q-3	4000	2400	15000	10
0027861	42W/840	42	230-240	GX24q-4	4000	3200	15000	10

GX24q	18W	26W	32W	42W
L	97	112	128	149
D	49	49	49	49



Dimensions (mm)



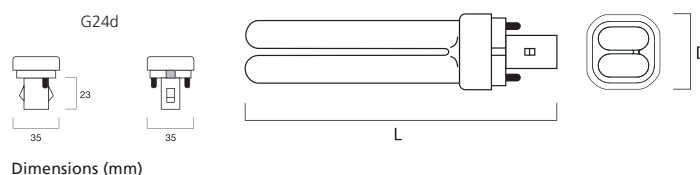
- Compact and high performance double bend pin base lamp
- Suitable for operation on conventional control gear
- Excellent luminous flux
- Excellent colour rendering – (CRI=85)
- Available in Homelight (2700K), Warm White (3000K), White (3500K) Cool White (4000K) and Daylight (6500K)
- Average rated life: 10000 hours



### Lynx®-D

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-D Homelight (827)</b>								
0025904	10W/827	10	230-240	G24d-1	2700	600	10000	10
0025905	13W/827	13	230-240	G24d-1	2700	900	10000	10
0025906	18W/827	18	230-240	G24d-2	2700	1200	10000	10
0025907	26W/827	26	230-240	G24d-3	2700	1800	10000	10
<b>Lynx-D Warm White (830)</b>								
0025908	10W/830	10	230-240	G24d-1	3000	600	10000	10
0025909	13W/830	13	230-240	G24d-1	3000	900	10000	10
0025910	18W/830	18	230-240	G24d-2	3000	1200	10000	10
0025911	26W/830	26	230-240	G24d-3	3000	1800	10000	10
<b>Lynx-D White (835)</b>								
0025941	13W/835	13	230-240	G24d-1	3500	900	10000	10
0025942	18W/835	18	230-240	G24d-2	3500	1200	10000	10
0025943	26W/835	26	230-240	G24d-3	3500	1800	10000	10
<b>Lynx-D Cool White (840)</b>								
0025912	10W/840	10	230-240	G24d-1	4000	600	10000	10
0025913	13W/840	13	230-240	G24d-1	4000	900	10000	10
0025914	18W/840	18	230-240	G24d-2	4000	1200	10000	10
0025915	26W/840	26	230-240	G24d-2	4000	1800	10000	10
<b>Lynx-D Daylight (860)</b>								
0028323	13W/865	13	230-240	G24d-1	6500	900	10000	10
0028324	18W/865	18	230-240	G24d-2	6500	1200	10000	10
0028325	26W/865	26	230-240	G24d-3	6500	1800	10000	10

G24d	10W	13W	18W	26W
L	87	115	129	147
D	35	35	35	35





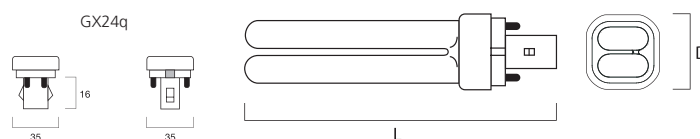
- Compact and high performance pin-base lamp for new and existing installations
- Suitable for operation on electronic control gear
- To be operated on electronic ballast only
- Suitable for emergency lighting
- Excellent luminous flux
- Excellent colour rendering – (CRI=85)
- Dimmable with suitable dimmer
- Available in Homelight (2700K), Warm White (3000K), white (3500K), Cool White (4000K) and Daylight (6500K)
- Average rated life: 12000 hours



## Lynx® - DE

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-DE Homelight (827)</b>								
0025916	10W/827	10	230-240	G24q-1	2700	600	12000	10
0025917	13W/827	13	230-240	G24q-1	2700	900	12000	10
0025918	18W/827	18	230-240	G24q-2	2700	1200	12000	10
0025919	26W/827	26	230-240	G24q-3	2700	1800	12000	10
<b>Lynx-DE Warm White (830)</b>								
0025920	10W/830	10	230-240	G24q-1	3000	600	12000	10
0025921	13W/830	13	230-240	G24q-1	3000	900	12000	10
0025922	18W/830	18	230-240	G24q-2	3000	900	12000	10
0025923	26W/830	26	230-240	G24q-3	3000	1800	12000	10
<b>Lynx-DE White (835)</b>								
0025945	13W/835	13	230-240	G24q-1	3500	900	12000	10
0025946	18W/835	18	230-240	G24q-2	3500	1200	12000	10
0025947	26W/835	26	230-240	G24q-3	3500	1800	12000	10
<b>Lynx-DE Cool White (840)</b>								
0025924	10W/840	10	230-240	G24q-1	4000	600	12000	10
0025925	13W/840	13	230-240	G24q-1	4000	900	12000	10
0025926	18W/840	18	230-240	G24q-2	4000	1200	12000	10
0025927	26W/840	26	230-240	G24q-3	4000	1800	12000	10
<b>Lynx-DE Daylight (860)</b>								
0025949	13W/860	13	230-240	G24q-1	6000	900	12000	10
0025950	18W/860	18	230-240	G24q-2	6000	1200	12000	10
0025951	26W/860	26	230-240	G24q-3	6000	1800	12000	10

G24d	10W	13W	18W	26W
L	87	115	129	147
D	35	35	35	35



Dimensions (mm)



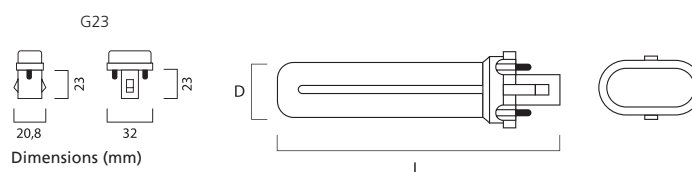
- Single pin-base compact lamps, suitable for wide range of applications
- Excellent colour rendering - (CRI=85)
- For use with magnetic ballast
- Available in Homelight (2700K), Warm White (3000K) and Cool white (4000K)
- Average rated life: 10000 hours



### Lynx® - S

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-S Homelight (827)</b>								
0025881	7W/827	7	230-240	G23	2700	420	10000	10
0025882	9W/827	9	230-240	G23	2700	600	10000	10
0025883	11W/827	11	230-240	G23	2700	900	10000	10
<b>Lynx-S Warm White (830)</b>								
0025884	5W/830	5	230-240	G23	3000	250	10000	10
0025885	7W/830	7	230-240	G23	3000	420	10000	10
0025886	9W/830	9	230-240	G23	3000	600	10000	10
0025887	11W/830	11	230-240	G23	3000	900	10000	10
<b>Lynx-S Cool White (840)</b>								
0025888	5W/840	5	230-240	G23	4000	250	10000	10
0025889	7W/840	7	230-240	G23	4000	420	10000	10
0025890	9W/840	9	230-240	G23	4000	600	10000	10
0025891	11W/840	11	230-240	G23	4000	900	10000	10

G23	5W	7W	9W	11W
L	105	134	165	233
D	28	28	28	28





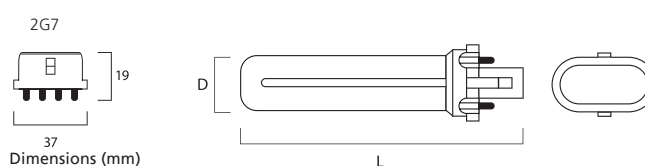
- Single-bend pin base compact lamp: Suitable for wide range of use
- Suitable for operation on electronic control gear
- Dimmable
- Extremely low profile
- Excellent colour rendering – (CRI=85)
- Suitable for emergency lighting
- Dimmable with suitable ballast
- Available in Homelight (2700K), Warm White (3000K) and Cool White (4000K)
- Average rated life: 10000 hours



## Lynx®-SE

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-SE Homelight (827)</b>								
0025892	5W/827	5	230-240	2G7	2700	250	10000	10
0025893	7W/827	7	230-240	2G7	2700	420	10000	10
0025894	9W/827	9	230-240	2G7	2700	600	10000	10
0025895	11W/827	11	230-240	2G7	2700	900	10000	10
<b>Lynx-SE Warm White (830)</b>								
0025897	7W/830	7	230-240	2G7	3000	420	10000	10
0025898	9W/830	9	230-240	2G7	3000	600	10000	10
0025899	11W/830	11	230-240	2G7	3000	900	10000	10
<b>Lynx-SE Cool White (840)</b>								
0025900	5W/840	5	230-240	2G7	4000	250	10000	10
0025901	7W/840	7	230-240	2G7	4000	420	10000	10
0025902	9W/840	9	230-240	2G7	4000	600	10000	10
0025903	11W/840	11	230-240	2G7	4000	900	10000	10

2G7	5W	7W	9W	11W
L	85	115	145	215
D	28	28	28	28





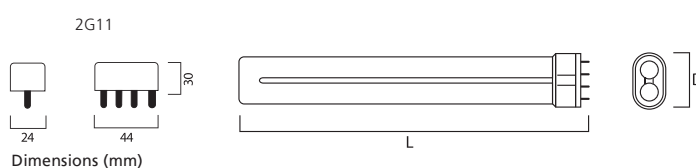
- Compact size alternative for tubular fluorescent lamps
- Suitable for operation on electronic and electromagnet control gears
- Excellent colour rendering - (CRI=85)
- 4-pin 2G11 cap without starter or capacitor
- Suitable for use in modular ceiling luminaires 300 x 300mm or 600 x 600mm
- Dimmable with suitable ballast
- Available in Warm White (3000K), Cool White (4000K) and Daylight (6000K)
- Average rated life: 20000 hours



## Lynx®-L

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-L Warm White (830)</b>								
0925233	18W/830	18	230-240	2G11	3000	1200	15000	10
0925235	24W/830	24	230-240	2G11	3000	1800	15000	10
0925237	36W/830	36	230-240	2G11	3000	2900	15000	10
<b>Lynx-L Cool White (840)</b>								
0925234	18W/840	18	230-240	2G11	4000	1200	15000	10
0925236	24W/840	24	230-240	2G11	4000	1800	15000	10
0925238	36W/840	36	230-240	2G11	4000	2900	15000	10
<b>Lynx-L Daylight (860)</b>								
0025685	18W/865	18	230-240	2G11	6000	100	15000	10

2G11	18W	24W	36W
L	225	320	415
D	38	38	38



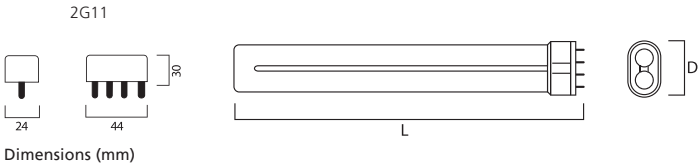


- Compact size alternative for tubular fluorescent lamps
- Suitable for operation on electronic control gears
- Excellent colour rendering – (CRI=85)
- 4-pin 2G11 cap without starter or capacitor
- Suitable for use in modular ceiling luminaires – 600 x 600mm
- Dimmable with suitable ballast
- Available in Warm White (3000K) and Cool White (4000K)
- Average rated life: 20000 hours



Lynx® - LE

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
Lynx-LE Warm White Deluxe (830)								
0925461	40W/830	40	230-240	2G11	3000	3500	15000	10
0925464	55W/830	55	230-240	2G11	3000	4800	15000	10
Lynx-LE Cool White Deluxe (840)								
0925462	40W/840	40	230-240	2G11	4000	3500	15000	10
0925465	55W/840	55	230-240	2G11	4000	4800	15000	10







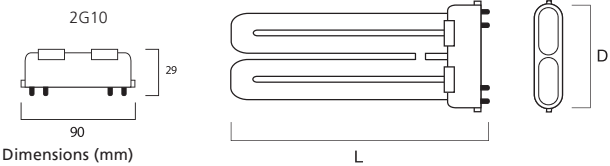
- Flat profile double bend pin-base lamp
- Suitable for operation on electronic and conventional control gears
- Very good colour rendering – (CRI=80)
- Ideal for small, flat luminaires for wall and ceiling mounting
- To be used with conventional magnetic or electronic ballast
- Dimmable with suitable ballast
- Available in Warm White (3000K) and Cool White (4000K)
- Average rated life: 10000 hours



Lynx®-F

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
Lynx-F Warm White Deluxe (830)								
0027830	24W/830	24	230-240	2G10	3000	1700	15000	10
0027835	36W/830	36	230-240	2G10	3000	2800	15000	10
Lynx-F Cool White Deluxe (840)								
0027826	18W/840	18	230-240	2G10	4000	110	15000	10
0027831	24W/840	24	230-240	2G10	4000	1700	15000	10
0027836	36W/840	36	230-240	2G10	4000	2800	15000	10

2G10	18W	24W	36W
L	122	165	217
D	79	79	79





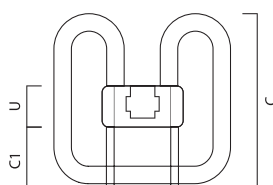
- Uniform distribution of light
- Suitable for operation on conventional control gears
- Flat profile, slim, high output lamps
- Excellent colour rendering - (CRI=85)
- 2-pin GR8 cap incorporate starter
- Available in Homelight (2700K), white (3500K) and Cool White (4000K)
- Average rated life 10000 hours



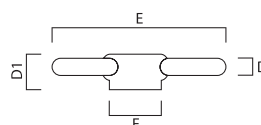
## Lynx®-Q

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>Lynx-Q Homelight (827)</b>								
0024944	Lynx Q	16	230-240	GR8	2700	1050	10000	10
<b>Lynx-Q White (835)</b>								
0024946	Lynx Q	16	230-240	GR8	3500	1050	10000	10
<b>Lynx-Q Cool White (840)</b>								
0024947	Lynx Q	16	230-240	GR8	4000	1050	10000	10

Lynx-Q	C max.	C1 max.	D max.	D1 max.	E max.	F max.	U max.
16W	141	51	15	27.5	138	41	40



Dimensions (mm)





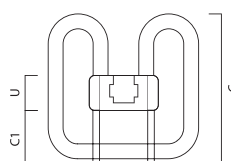
- Flat profile, slim, high output lamps
- Excellent colour rendering - (CRI=85)
- 4-pin GR10q cap without starter
- To be used with electronic ballast
- Dimmable with suitable ballast
- Available in Homelight (2700K), White (3500K) and Cool White (4000K)
- Average rated life 10000 hours



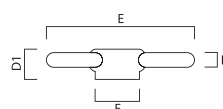
## Lynx® - QE

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (hrs)	Packing Qty
<b>Lynx-QE Homelight Deluxe (827)</b>								
0024989	Lynx QE	16	-	GR10q	2700	1050	10000	10
0024997	Lynx QE	28	-	GR10q	2700	2050	10000	10
0025001	Lynx QE	38	-	GR10q	2700	2850	10000	10
<b>Lynx-QE White Deluxe (835)</b>								
0024991	Lynx QE	16	-	GR10q	3500	1050	10000	10
0024999	Lynx QE	28	-	GR10q	3500	2050	10000	10
0025003	Lynx QE	38	-	GR10q	3500	2850	10000	10
<b>Lynx-QE Cool White Deluxe (840)</b>								
0024992	Lynx QE	16	-	GR10q	4000	1050	10000	10
0025000	Lynx QE	28	-	GR10q	4000	2050	10000	10
0025004	Lynx QE	38	-	GR10q	4000	2850	10000	10

Lynx-Q	C max.	C1 max.	D max.	D1 max.	E max.	F max.	U max.
16W	141	51	15	27.5	138	41	40
28W	207	77	24	33.0	205	41	49
38W	207	77	24	33.0	205	41	49



Dimensions (mm)









115 Superia EcoPlus



118 Low Pressure Capsule



120 MR16 Cool Beam Eco



121 Superia 35



122 Dichroic 35/50



123 Coolfit 50



124 SA111



125 Classic ECO



131 High-Pin



132 High Spot®



142 Linear Double Ended Eco



### Halogen lamps

Halogen lamps are known for excellent colour rendering (CRI=100) and for dazzling crisp light. This makes it the preferred light source for decorative, accent and general Lighting. We offer an attractive range of halogen lamps in mains voltage (230V-240V) and low voltage (12V) categories. Save on energy, not on light quality



#### Halogen EcoPlus

Sylvania's new Halogen EcoPlus technology captures and reuses energy to make lamps more efficient than conventional alternatives. EcoPlus' innovative recycling burner allows a more efficient use of energy without sacrificing quality or quantity of light.

Superia EcoPlus series offers a comprehensive range of light source solutions for a wide range of applications, including hotels, restaurants and cafes, retail and the residential sector. EcoPlus lamps save money, are environmentally friendly, produce an unbeatable quality of light and are 100% dimmable. What's more it's very easy to switch from conventional sources, with no installation issues, allowing a reduction in both energy costs and carbon emissions quickly and easily with low capital investment just by changing the lamps.

#### Classic Eco

Halogen Classic ECO are fully interchangeable with conventional incandescent lamps having no compatibility issues such as size, share or with electronic control gear. Two times longer average life and excellent colour rendering makes it an ideal replacement lamp. All Halogen Classic ECO lamp are 100% dimmable, which means their light output can be modified according to the required ambience – from maximum brightness to comfortably dimmed.





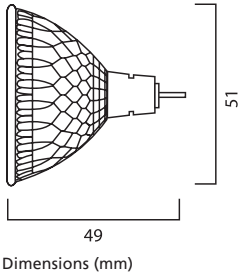
- Up to 40% energy savings
- Hard coated glass ensures stable light appearance throughout its life
- No loss in light intensity compared with standard MR16 dichroic lamps
- Unbeatable light quality (Ra=100)
- Attractive back light - preferred by Architects
- 100% Dimmable works in virtually every installation
- Average rated life of 5000hrs - 2.5 times longer compared to standard MR16 dichroic lamps



Superia 50 EcoPlus

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021697	Superia 50 EcoPlus 20W	20	12	10	GU5.3	3000	6000	5000	10
0021698	Superia 50 EcoPlus 20W	20	12	36	GU5.3	3000	1000	5000	10
0021699	Superia 50 EcoPlus 35W	35	12	10	GU5.3	3000	11000	5000	10
0021700	Superia 50 EcoPlus 35W	35	12	24	GU5.3	3000	4100	5000	10
0021701	Superia 50 EcoPlus 35W	35	12	36	GU5.3	3000	2000	5000	10
0021702	Superia 50 EcoPlus 35W	35	12	60	GU5.3	3000	1000	5000	10
0021703	Superia 50 EcoPlus 45W	45	12	10	GU5.3	3000	15000	5000	10
0021704	Superia 50 EcoPlus 45W	45	12	24	GU5.3	3000	5450	5000	10
0021705	Superia 50 EcoPlus 45W	45	12	36	GU5.3	3000	2850	5000	10
0021706	Superia 50 EcoPlus 45W	45	12	60	GU5.3	3000	1300	5000	10

GX/GU5.3



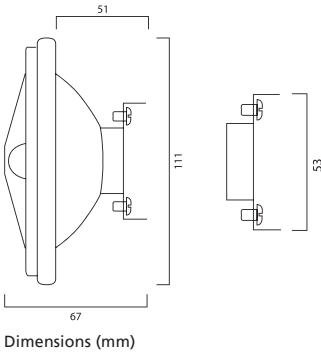


- Excellent beam control - minimum glare
- Up to 40% energy savings
- High light intensity
- 100% Dimmable works in virtually every installation
- Average rated life 4000hrs - 33% longer average life than standard AR111



Superia 111 EcoPlus

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021875	Superia 111 Ecoplus 35W	35	12	6	G53	3000	22500	4000	50
0021876	Superia 111 Ecoplus 35W	35	12	24	G53	3000	4200	4000	50
0021877	Superia 111 Ecoplus 50W	50	12	6	G53	3000	33000	4000	50
0021878	Superia 111 Ecoplus 50W	50	12	24	G53	3000	5500	4000	50
0021879	Superia 111 Ecoplus 50W	50	12	40	G53	3000	2000	4000	50
0021880	Superia 111 Ecoplus 60W	60	12	6	G53	3000	42000	4000	50
0021881	Superia 111 Ecoplus 60W	60	12	24	G53	3000	7000	4000	50
0021882	Superia 111 Ecoplus 60W	60	12	40	G53	3000	2800	4000	50



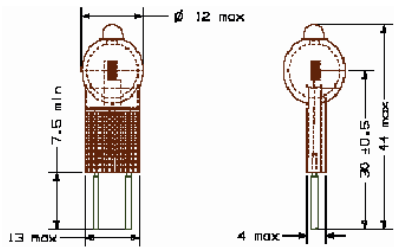


- Same light output as standard capsules
- Up to 40% energy savings
- 100% Dimmable works in virtually every installation
- EcoPlus lamps provide unbeatable light quality making everything look its best
- High luminosity efficacy means more light for your money
- Average rated life 4000hrs - 2 times longer average life compared to standard LV capsules



Superia Capsule EcoPlus

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021800	Superia Capsule 25W	25	12	GY6.35	3000	500	4000	6
0021801	Superia Capsule 35W	35	12	GY6.35	3000	860	4000	6
0021802	Superia Capsule 50W	50	12	GY6.35	3000	1180	4000	6
0021803	Superia Capsule 60W	60	12	GY6.35	3000	1650	4000	6



Dimensions (mm)

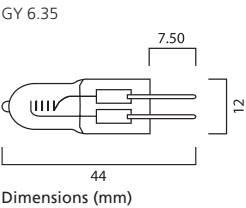


- Xenon technology
- Compact size for optimum luminaire design
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- UV protected
- Suitable for interior display, shop windows, restaurants, etc
- Less CO<sub>2</sub> emissions - ECO Friendly
- Less heat generation than standard halogen capsules- more design freedom for luminaire manufacturers
- Excellent colour rendering (CRI=100)
- Average rated life 2000hrs - 20% energy saving with same light output compared to standard capsules



Low Pressure Capsules Eco

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0021320	12V LP CAPS GY6.35 ECO	28	12	GY6.35	2800	500	2000	10
0021321	12V LP CAPS GY6.35 ECO	40	12	GY6.35	2800	900	2000	10





G4 5/10W



GY6.35



G4 20/35W

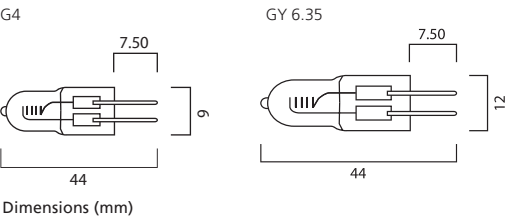
- Compact size for optimum luminaire design
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- 5W/10W/20W/35W/50W capsules are suitable for use in open luminaires following Luminaire Standard EN 60598-1
- 75W/100W capsules are suitable for operating only in the Luminaire provided with a protective shield
- Suitable for interior display, shop windows, restaurants, etc
- Precision task lighting
- Excellent colour rendering (CRI=100)
- Average rated life 2000hrs or 3000hrs



Low Pressure Capsule

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0022165	12V/5W LP	5	12	G4	2800	40	2000	100
0022241	12V/10W LP	10	12	G4	2800	100	2000	100
0022242	12V/20W LP	20	12	G4	2800	250	2000	100
0022246	12V/35W LP	35	12	G4	2800	500	2000	100
0021021	12V/35W LP	35	12	GY 6.35	2800	520	2000	100
0021022	12V/50W LP	50	12	GY 6.35	2800	900	2000	100
0021994*	12V/75W HP	75	12	GY 6.35	3050	1600	3000	50
0021995*	12V/100W HP	100	12	GY 6.35	3050	2300	3000	50

\*High performance - pressure





- 10% energy saving compared with standard MR16 lamp
- Same light intensity as standard MR16 lamps.
- Cool beam - 66% of the heat produced is radiated through the back of the lamp
- Less CO<sub>2</sub> emissions - ECO Friendly
- Less heat generation
- Dimmable using a suitable dimmer for operation with a transformer
- Constant colour and light output throughout lamp life
- Accent and decorative lighting in retail, commercial and domestic applications
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- Excellent colour rendering (CRI=100)
- Average rated life 2000hrs

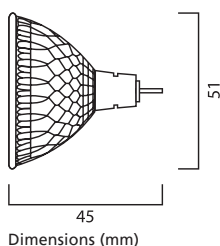


## MR16 Cool Beam Eco

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>MR16 Cool Beam ECO</b>									
<b>0021807</b>	ESX 16W SP10°	16	12	10	GU5.3	2925	3600	2000	10
<b>0021808</b>	BAB 16W WFL38°	16	12	38	GU5.3	2925	660	2000	10
<b>0021809</b>	FMT 28W SP10°	28	12	10	GU5.3	3000	5000	2000	10
<b>0021810</b>	FMW 28W WFL38°	28	12	38	GU5.3	3000	1200	2000	10
<b>0021811</b>	EXT 40W SP10°	40	12	10	GU5.3	3050	6000	2000	10
<b>0021812</b>	EXN 40W WFL38°	40	12	38	GU5.3	3050	1950	2000	10
<b>0021813</b>	FNV 40W WFL60°	40	12	60	GU5.3	3050	900	2000	10

10°				38°				60°				
		16W	28W	40W			16W	28W	40W			40W
175mmØ	1m	3600lx	5000lx	6000lx	689mmØ	1m	660lx	1200lx	1950lx	1155mmØ	1m	900lx
350mmØ	2m	900lx	1250lx	1500lx	1377mmØ	2m	165lx	300lx	490lx	2309mmØ	2m	225lx
525mmØ	3m	400lx	555lx	666lx	2066mmØ	3m	75lx	135lx	215lx	3464mmØ	3m	100lx
700mmØ	4m	225lx	312lx	375lx	2755mmØ	4m	40lx	75lx	120lx	4619mmØ	4m	55lx

GU5.3



Dimensions (mm)

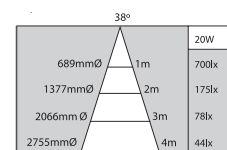


- 25% higher light output compared with standard dichroic lamps
- Cool Beam – 66% of the heat produced is radiated through the back of the lamp
- Spiral reflector, uniform beam pattern, patented design
- Constant colour and light output throughout lamp life
- No colour variation between lamps
- Professional lighting of objects and displays sensitive to heat
- Whiter light output
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- Excellent colour rendering (CRI=100)
- Average rated life 4000hrs - (33% longer life standard MR16 lamps)



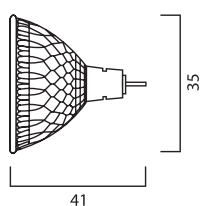
### Superia 35

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0022338	FTD 12V 20W WFL38°	20	12	38	GU4	2925	700	4000	10
0022341	FTH 12V 35W WFL38°	35	12	38	GU4	3000	1350	4000	10



Superia 35

GZ4/GU4



Dimensions (mm)





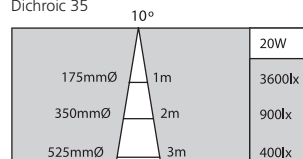
- Cool beam – 66% of the heat produced is radiated through the back of the lamp
- Dimmable using a suitable dimmer for operation with a transformer
- Constant colour and light output throughout lamp life
- Universal burning position
- Accent and decorative lighting in retail, commercial and domestic applications
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- Excellent colour rendering (CRI=100)
- Average rated life 4000hrs



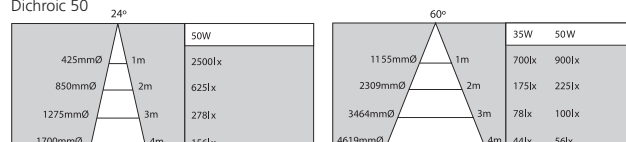
## Dichroic 35/50

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Dichroic 35</b>									
<b>0022336</b>	FTB 12V/20W SP10°	20	12	10	GU4	2900	3600	1500	10
<b>0022339</b>	FTE 12V/35W SP10°	35	12	10	GU4	2900	5700	1500	10
<b>Dichroic 50</b>									
<b>0022580</b>	ESX 20W/12V SP10°	20	12	10	GU5.3	2925	3600	4000	10
<b>0021765</b>	BAB 20W/12V WFL38°	20	12	38	GU5.3	2925	660	4000	10
<b>0022581</b>	FMT 35W/12V SP10°	35	12	10	GU5.3	3000	5000	4000	10
<b>0021766</b>	FMW 35W/12V WFL38°	35	12	38	GU5.3	3000	1200	4000	10
<b>0022391</b>	35W/12V VWFL60°	35	12	60	GU5.3	3000	700	4000	10
<b>0022582</b>	EXT 50W/12V SP10°	50	12	10	GU5.3	3050	8000	4000	10
<b>0022348</b>	EXZ 50W/12V FL24°	50	12	24	GU5.3	3050	2500	4000	10
<b>0021767</b>	EXN 50W/12V WFL38°	50	12	38	GU5.3	3050	1950	4000	10
<b>0022390</b>	FNV 50W/12V VWFL60°	50	12	60	GU5.3	3050	900	4000	10

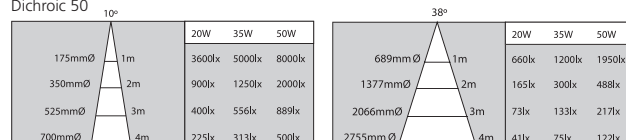
Dichroic 35



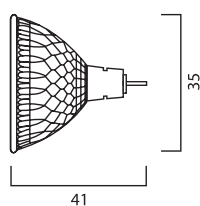
Dichroic 50



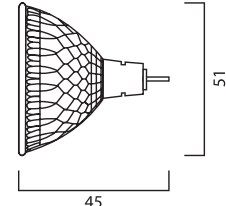
Dichroic 50



GZ4/GU4



GX/GU5.3



Dimensions (mm)



- Virtually all heat and light dissipated away from back of the lamp keeping fixture cool
- Wear resistant aluminium reflector for constant output and colour throughout life
- Easily recognisable by blue cement in lamp cap
- Can replace any 12V 50mmØ dichroic low voltage lamp
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- Excellent colour rendering (CRI=100)
- Average rated life 5000hrs (66% longer life than standard MR16 lamps)

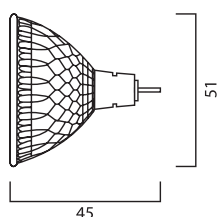


### Coolfit 50

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Coolfit 50</b>									
<b>0022516</b>	BAB/AL 20W 12V WFL38°	20	12	38	GU5.3	3000	660	5000	10
<b>0022517</b>	FMW/AL 35W 12V WFL38°	35	12	38	GU5.3	3000	1200	5000	10
<b>0022519</b>	EXN/AL 50W 12V WFL38°	50	12	38	GU5.3	3000	1950	5000	10
<b>0022520</b>	FNV/AL 50W 12V VWFL60°	50	12	60	GU5.3	3000	900	5000	10

Coolfit 50				Coolfit 50			
38°				60°			
20W	35W	50W		20W	35W	50W	
689mm Ø	1377mm Ø	2066mm Ø	2755mm Ø	1155mm Ø	2309mm Ø	3464mm Ø	4619mm Ø
1m	2m	3m	4m	1m	2m	3m	4m
660lx	1200lx	1950lx	411lx	900lx	2251lx	1001lx	56lx

GX/GU5.3



Dimensions (mm)



- Aluminium reflector dissipates heat and light forward
- Dimmable using a suitable dimmer for operation with a transformer
- Even light distribution and constant colour throughout lamp life
- Integrated anti-glare shield
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- For accent and decorative lighting in retail, commercial and domestic applications
- Excellent colour rendering (CRI=100)
- Average rated life 3000hrs



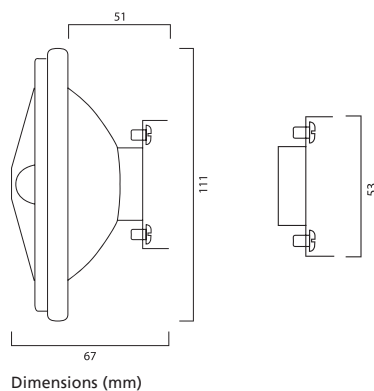
## SA111

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>SA111</b>									
<b>0021850</b>	SA111 SP8°	50	12	8	G53	2900	23000	3000	6
<b>0021853</b>	SA111 SP24°	50	12	24	G53	2900	4000	3000	6
<b>0021856</b>	SA111 WFL45°	50	12	45	G53	2900	1200	3000	6
<b>0021851</b>	SA111 SP8°	75	12	8	G53	2900	30000	3000	6
<b>0021854</b>	SA111 SP24°	75	12	24	G53	2900	5300	3000	6
<b>0021857</b>	SA111 WFL45°	75	12	45	G53	2900	1700	3000	6
<b>0021852</b>	SA111 SP8°	100	12	8	G53	2900	48000	3000	6
<b>0021855</b>	SA111 SP24°	100	12	24	G53	2900	8500	3000	6
<b>0021858</b>	SA111 WFL45°	100	12	45	G53	2900	2800	3000	6

8°		50W	75W	100W
140mmØ	1m	2300lx	30000lx	48000lx
280mmØ	2m	5750lx	7500lx	12000lx
420mmØ	3m	2556lx	3333lx	5333lx
559mmØ	4m	1438lx	1875lx	3000lx

24°		50W	75W	100W
425mmØ	1m	4000lx	5300lx	8500lx
850mmØ	2m	1000lx	1325lx	2125lx
1275mmØ	3m	444lx	589lx	944lx
1700mmØ	4m	250lx	331lx	531lx

45°		20W	35W	50W
828mmØ	1m	1200lx	1700lx	2800lx
1657mmØ	2m	300lx	425lx	700lx
2485mmØ	3m	133lx	189lx	311lx
3314mmØ	4m	75lx	106lx	175lx





Classic ECO A55



Classic ECO A60 E27



Classic ECO A60 B22

- 1:1 replacement of Incandescent A55 lamp
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Sparkling light output
- Less heat generation than incandescent lamp
- Less CO<sub>2</sub> emissions
- Identical shape as standard incandescent lamp
- Commercial and domestic application
- 100% dimmable
- Average rated life 1500hrs or 2000hrs - up to two times more average life compared to incandescent lamps

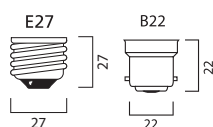
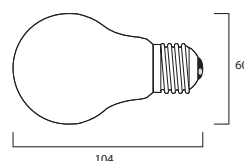
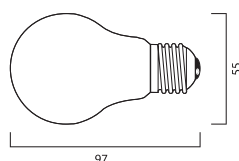


### Classic Eco A55/A60

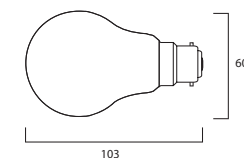
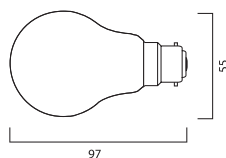
Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0023733	Classic ECO A55 18W E27	18	230	E27	2800	210	2000	10
0023715	Classic ECO A55 18W B22	18	230	B22	2800	210	2000	10
0023713	Classic ECO A55 18W E27 240V	18	240	E27	2800	210	1500	10
0023711	Classic ECO A55 18W B22 240V	18	240	B22	2800	210	1500	10
0023724	Classic ECO A55 28W E27	28	230	E27	2800	370	2000	10
0023745	Classic ECO A55 28W B22	28	230	B22	2800	370	2000	10
0023767	Classic ECO A55 42W E27 240V	42	240	E27	2800	630	1500	10
0023481	Classic ECO A55 28W E27 240V	28	240	E27	2800	370	2000	10
0023480	Classic ECO A55 28W B22 240V	28	240	B22	2800	370	2000	10
0023768	Classic ECO A55 42W B22 240V	42	240	B22	2800	630	1500	10
0023732	Classic ECO A55 53W E27	53	230	E27	2800	350	2000	20
0023765	Classic ECO A55 42W E27	42	230	E27	2800	630	2000	10
0023766	Classic ECO A55 42W E27 230V	42	230	B22	2800	630	2000	10
0023133	Classic ECO A55 53W B22	53	230	B22	2800	850	2000	10
0023134	Classic ECO A55 53W E27 240V	53	240	E27	2800	850	2000	10
0023135	Classic ECO A55 53W B22 240V	53	240	B22	2800	850	2000	10
0023136	Classic ECO A55 70W E27	70	230	E27	2800	1200	2000	10
0023137	Classic ECO A55 70W B22	70	230	B22	2800	1200	2000	10
0023138	Classic ECO A55 70W E27 240V	70	240	E27	2800	1200	2000	10
0023139	Classic ECO A55 70W B22 240V	70	240	B22	2800	1200	2000	10
0022118	Classic ECO A60 105W E27	105	230	E27	2900	1900	2000	10
0022119	Classic ECO A60 105W E27 240V	105	240	E27	2900	1900	2000	10
0022120	Classic ECO A60 105W B22 240V	105	240	B22	2900	1900	2000	10

Classic ECO A55

Classic ECO A60



Dimensions (mm)



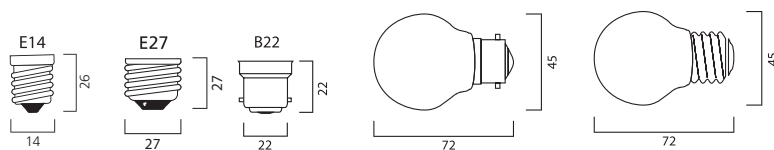


- 1:1 replacement of Incandescent Ball lamp
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Sparkling light output
- Less heat generation than incandescent lamp
- Less CO<sub>2</sub> emissions
- Identical shape as standard incandescent lamp
- Commercial and domestic application
- 100% dimmable
- Average rated life 1500 hrs or 2000 hrs - up to two times more average life compared to incandescent lamps



## Classic Eco Ball

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>0023737</b>	Classic ECO Ball 18W E14	18	230	E14	2800	210	2000	10
<b>0023716</b>	Classic ECO Ball 18W E27	18	230	E27	2800	210	2000	10
<b>0023490</b>	Classic ECO Ball 18W E14 240V	18	240	E14	2800	210	1500	10
<b>0023717</b>	Classic ECO Ball 18W E27 240V	18	240	E27	2800	210	1500	10
<b>0023719</b>	Classic ECO Ball 18W B22 240V	18	240	B22	2800	210	1500	10
<b>0023744</b>	Classic ECO Ball 28W E14	28	230	E14	2800	370	2000	10
<b>0023485</b>	Classic ECO Ball 28W E14 240V	28	240	E14	2800	370	2000	10
<b>0023746</b>	Classic ECO Ball 28W E27	28	230	E27	2800	370	2000	10
<b>0023486</b>	Classic ECO Ball 28W E27 240V	28	240	E27	2800	370	2000	10
<b>0023488</b>	Classic ECO Ball 28W B22 240V	28	240	B22	2800	370	2000	10
<b>0023776</b>	Classic ECO Ball 42W E14	42	230	E14	2800	630	2000	10
<b>0023777</b>	Classic ECO Ball 42W E14 240V	42	240	E14	2800	630	2000	10
<b>0023778</b>	Classic ECO Ball 42W E27	42	230	E27	2800	630	2000	10
<b>0023779</b>	Classic ECO Ball 42W E27 240V	42	240	E27	2800	630	2000	10
<b>0023780</b>	Classic ECO Ball 42W B22 240V	42	240	B22	2800	630	2000	10



Dimensions (mm)

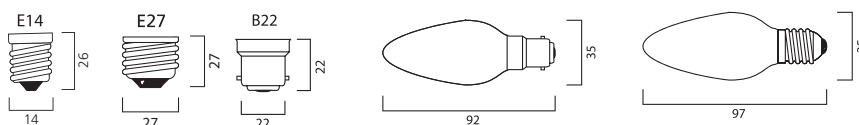


- 1:1 replacement of Incandescent Candle lamp
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Sparkling light output
- Less heat generation than incandescent lamp
- Less CO2 emissions
- Identical shape as standard incandescent lamp
- Commercial and domestic application
- 100% dimmable
- Average rated life 1500hrs or 2000hrs - up to two times more average life compared to incandescent lamps



### Classic Eco Candle

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0023720	Classic ECO Candle 18W E14 Single Blister	18	230	E14	2800	210	2000	20
0023743	Classic ECO Candle 28W E14	28	230	E14	2800	370	2000	20
0023775	Classic ECO Candle 42W E14 Single Blister	42	230	E14	2800	630	2000	20
0023739	Classic ECO Candle 18W E14	18	230	E14	2800	210	2000	10
0023714	Classic ECO Candle 18W E27	18	230	E27	2800	210	2000	10
0023483	Classic ECO Candle 18W E14 240V	18	240	E14	2800	210	1500	10
0023726	Classic ECO Candle 18W E27 240V	18	240	E27	2800	210	1500	10
0023723	Classic ECO Candle 18W B22 240V	18	240	B22	2800	210	1500	10
0023740	Classic ECO Candle 28W E14	28	230	E14	2800	370	2000	10
0023484	Classic ECO Candle 28W E14 240V	28	240	E14	2800	370	2000	10
0023482	Classic ECO Candle 28W E27 240V	28	240	E27	2800	370	2000	10
0023738	Classic ECO Candle 28W B22 240V	28	240	B22	2800	370	2000	10
0023771	Classic ECO Candle 42W E14	42	230	E14	2800	630	2000	10
0023772	Classic ECO Candle 42W E14 240V	42	240	E14	2800	630	2000	10
0023773	Classic ECO Candle 42W E27	42	240	E27	2800	630	2000	10
0023774	Classic ECO Candle 42W B22	42	240	B22	2800	630	2000	10



Dimensions (mm)

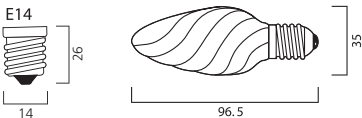


- Decorative halogen candle twisted lamp
- 1:1 replacement of Incandescent lamp
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Sparkling light output
- Less heat generation than incandescent lamp
- Less CO2 emissions
- Identical shape as standard incandescent lamp
- For chandeliers and decorative fixtures in domestic and commercial application
- 100% dimmable
- Average rated life 1500 hrs or 2000 hrs - up to two times more average life compared to incandescent lamps



Classic Eco Candle Twisted

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0023742	Classic ECO Twisted Candle 18W E14	18	230	E14	2800	210	2000	10
0023718	Classic ECO Twisted Candle 18W E14 240V	18	240	E14	2800	210	1500	10
0023735	Classic ECO Twisted Candle 28W E14	28	230	E14	2800	370	2000	10
0023722	Classic ECO Twisted Candle 28W E14 240V	28	240	E14	2800	370	2000	10
0023455	Classic ECO Twisted Candle 42W E14	42	230	E14	2800	630	2000	10
0023456	Classic ECO Twisted Candle 42W E14 240V	42	240	E14	2800	630	2000	10



Dimensions (mm)



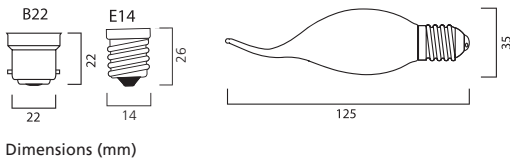


- Decorative halogen candle Bent Tip lamp
- 1:1 replacement of Incandescent lamp
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Sparkling light output
- Less heat generation than incandescent lamp
- Less CO2 emissions
- Identical shape as standard incandescent lamp
- For chandeliers and decorative fixtures in domestic and commercial application
- 100% dimmable
- Average rated life 1500hrs or 2000hrs - up to two times more average life compared to incandescent lamps



Classic Eco Candle Bent Tip

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0023734	Classic ECO Bent-tip 18W E14	18	230	E14	2800	210	2000	10
0023728	Classic ECO Bent-tip 18W E14 240V	18	240	E14	2800	210	1500	10
0023712	Classic ECO Bent-tip 18W B22 240V	18	240	B22	2800	210	1500	10
0023729	Classic ECO Bent-tip 28W E14	28	230	E14	2800	370	2000	10
0023731	Classic ECO Bent-tip 28W E14 240V	28	240	E14	2800	370	2000	10
0023727	Classic ECO Bent-tip 28W B22 240V	28	240	B22	2800	370	2000	10





R50



R63



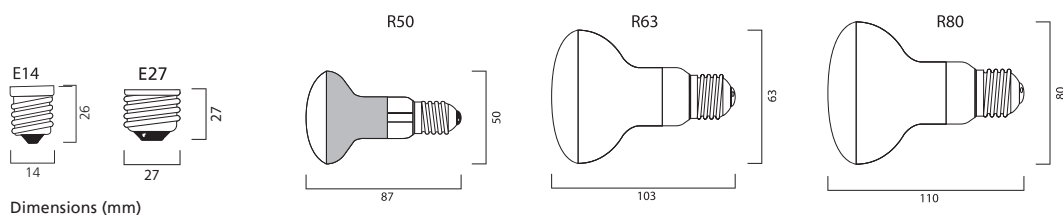
R80

- 1:1 replacement of Incandescent reflector lamps
- More efficient - more savings
- Excellent colour rendering (CRI = 100)
- Instant illumination
- Crisp light output
- Less heat generation than incandescent lamp
- Less CO<sub>2</sub> emissions
- Identical shape as standard incandescent lamp
- Commercial and domestic application
- Suitable for shop windows, displays, discos and clubs as well in the home
- For use in track or surface mounted spotlights or in recessed down lights
- 100% dimmable
- Average rated life 2000 hrs - two times more average life compared to incandescent lamps



### Classic Eco R50/R63/R80

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Classic ECO R50</b>									
0023102	R50 18W 230V E14 FL30°	18	230	30	E14	2800	200	2000	10
0023103	R50 18W 240V E14 FL30°	18	240	30	E14	2800	200	2000	10
0023120	R50 28W 230V E14 FL30°	28	230	30	E14	2800	335	2000	10
0023121	R50 28W 240V E14 FL30°	28	240	30	E14	2800	335	2000	10
<b>Classic ECO R63</b>									
0023124	R63 28W 230V E27 FL30°	28	230	30	E27	2800	335	2000	10
0023125	R63 28W 240V E27 FL30°	28	240	30	E27	2800	335	2000	10
0023122	R63 42W 230V E27 FL30°	42	230	30	E27	2800	570	2000	10
0023123	R63 42W 240V E27 FL30°	42	240	30	E27	2800	570	2000	10
<b>Classic ECO R80</b>									
0023127	R80 28W 240V E27 FL30°	28	240	30	E27	2800	335	2000	10
0023126	R80 42W 240V E27 FL30°	42	240	30	E27	2800	570	2000	10
0023147	R80 53W 240V E27 FL30°	53	240	30	E27	2800	750	2000	10
0023148	R80 70W 240V E27 FL30°	70	240	30	E27	2800	1080	2000	10
<b>Classic ECO R95</b>									
0022116	R90 42W 240V E27 FL30°	42	240	30	E27	2800	690	2000	10
0022117	R90 70W 240V E27 FL30°	70	240	30	E27	2800	1500	2000	10



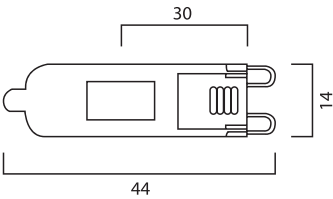


- Xenon technology
- Less CO2 emissions - ECO Friendly
- Less heat generation than standard G9 capsules - more design freedom for luminaire manufacturers
- Compact size
- Integral safety fuse
- Suitable for use in open luminaires following Luminaire Standard EN 60598-1
- Easy installation with G9 plug-in base
- Transformer free operation
- 100% dimmable
- Average life of 1000hrs or 2000hrs



Hi-Pin G9 Eco

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0023754	HI-PIN ECO 18W 230V G9	18	230	G9	2800	210	2000	10
0023755	HI-PIN ECO 18W 240V G9	18	240	G9	2800	210	1500	10
0023756	HI-PIN ECO 28W 230V G9	28	230	G9	2800	370	2000	10
0023493	HI-PIN ECO 28W 240V G9	28	240	G9	2800	370	2000	10
0022844	HI-PIN ECO 42W 230V G9	42	230	G9	2800	630	1500	10
0022845	HI-PIN ECO 42W 240V G9	42	240	G9	2800	630	1500	10
0022846	HI-PIN ECO 53W 230V G9	53	230	G9	2800	850	2000	10
0022847	HI-PIN ECO 53W 240V G9	53	240	G9	2800	850	2000	10



Dimensions (mm)

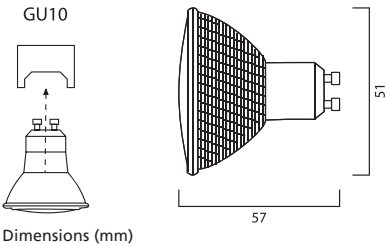
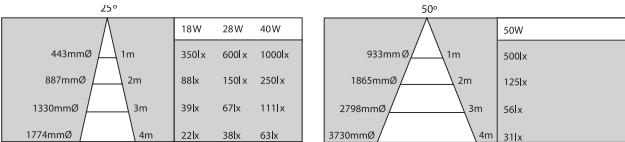


- Xenon technology
- High light intensity
- Unique, patented, spiral faceted reflector
- 100% dimmable
- Integral safety fuse
- For accent or decorative lighting in retail, commercial and domestic applications
- Transformer free operation
- Average rated life of 2000hrs



Hi-Spot® ES50 Eco

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
Hi-Spot ES50 ECO									
0022717	Hi-Spot ES50 ECO 18W FL25°	18	230	25	GU10	2700	350	2000	10
0022718	Hi-Spot ES50 ECO 18W FL25°	18	240	25	GU10	2700	350	2000	10
0022719	Hi-Spot ES50 ECO 28W FL25°	28	230	25	GU10	2800	600	2000	10
0022720	Hi-Spot ES50 ECO 28W FL25°	28	240	25	GU10	2800	600	2000	10
0022721	Hi-Spot ES50 ECO 40W FL25°	40	230	25	GU10	2800	1000	2000	10
0022722	Hi-Spot ES50 ECO 40W FL25°	40	240	25	GU10	2800	1000	2000	10
0022723	Hi-Spot ES50 ECO 40W WFL50°	40	230	50	GU10	2800	500	2000	10
0022724	Hi-Spot ES50 ECO 40W WFL50°	40	240	50	GU10	2800	500	2000	10





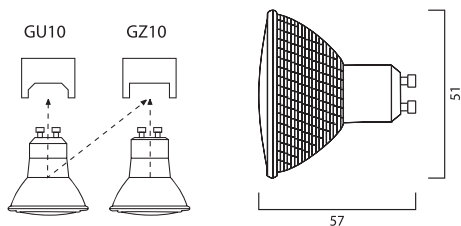
- Unique long life filament
- Xenon gas filling for increased light output
- Unique, patented, spiral faceted aluminised reflector
- For accent or decorative lighting in retail, commercial and domestic applications
- Ceramic base, brass contacts for a robust fitting
- For use in mains voltage GU10/GZ10 downlights, spotlights and luminaires
- Transformer free halogen
- 100% dimmable
- Integral Safety fuse
- Average rated life 4000 hrs



### Hi-Spot® ES50/ESD50 Superia

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Hi-Spot ES50 Superia</b>									
<b>0022900</b>	ES50 Superia 35W FL25°	35	230	25	GU10	2700	850	4000	10
<b>0022902</b>	ES50 Superia 50W FL25°	50	230	25	GU10	2750	1360	4000	10
<b>0022906</b>	ES50 Superia 50W WFL50°	50	230	50	GU10	2750	550	4000	10
<b>0022901</b>	ES50 Superia 35W FL25°	35	240	25	GU10	2700	850	4000	10
<b>0022903</b>	ES50 Superia 50W FL25°	50	240	25	GU10	2750	1360	4000	10
<b>0022907</b>	ES50 Superia 50W WFL50°	50	240	50	GU10	2750	550	4000	10
<b>Hi-Spot ESD50 Dichroic Superia</b>									
<b>0022904</b>	ESD50 Superia 50W FL25°	50	230	25	GZ10	2800	1360	4000	10
<b>0022908</b>	ESD50 Superia 50W WFL50°	50	230	50	GZ10	2800	550	4000	10
<b>0022905</b>	ESD50 Superia 50W FL25°	50	240	25	GZ10	2800	1360	4000	10
<b>0022909</b>	ESD50 Superia 50W WFL50°	50	240	50	GZ10	2800	550	4000	10

25°				50°			
		35W	50W			50W	
443mmØ	1m	850lx	1360lx	933mmØ	1m	550lx	
887mmØ	2m	213lx	340lx	1865mmØ	2m	138lx	
1330mmØ	3m	94lx	151lx	2798mmØ	3m	61lx	
1774mmØ	4m	53lx	85lx	3730mmØ	4m	34lx	



Dimensions (mm)

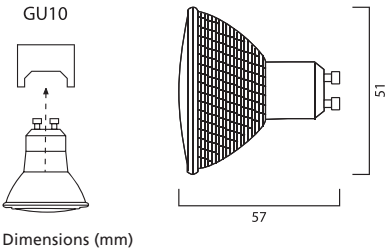
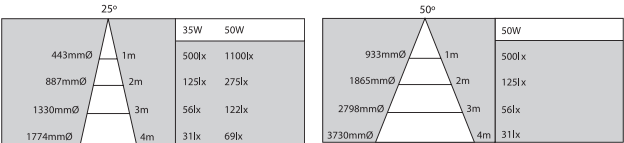


- Unique, patented, spiral faceted aluminised reflector
- Clear front lens for crisp sparkling light
- Integral safety fuse
- Ceramic base
- For use in mains voltage GU10 downlights, spotlights and luminaires
- Transformer free operation
- Average rated life 2500hrs



Hi-Spot® ES50 Home

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
Hi-Spot ES50 Home									
0021254	Hi-Spot ES50 35W FL25°	35	230-240	25	GU10	2700	500	2500	10
0021256	Hi-Spot ES50 50W FL25°	50	230-240	25	GU10	2700	1100	2500	10
0021261	Hi-Spot ES50 50W WFL50°	50	230-240	50	GU10	2700	500	2500	10





- Halogen light without the need for a transformer
- Installing and changing lamps made easier with the 'twist and lock' GU10 and GZ10 caps
- Unique patented, computer designed spiral faceted reflector
- 100% dimmable
- For accent or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from contact with water
- Average rated life 2500hrs



UV STOP

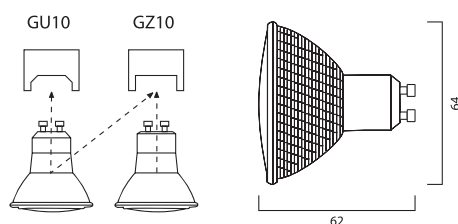

COOL  
BEAM  
GZ10/ESD  
versions

### Hi-Spot® ES63/ESD63

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Hi-Spot ES63</b>									
0022266	Hi-Spot ES63 50W FL25°	50	230	25	GU10	2750	1500	2500	15
0022271	Hi-Spot ES63 75W FL25°	75	230	25	GU10	2800	2500	2500	15
0022261	Hi-Spot ES63 75W WFL50°	75	230	50	GU10	2800	1000	2500	15
0022268	Hi-Spot ES63 50W FL25°	50	240	25	GU10	2750	1500	2500	15
0022274	Hi-Spot ES63 75W FL25°	75	240	25	GU10	2800	2500	2500	15
0022264	Hi-Spot ES63 75W WFL50°	75	240	50	GU10	2800	1000	2500	15
<b>Hi-Spot ESD63 Dichroic</b>									
0022281	Hi-Spot ESD63 75W FL25°	75	230	25	GZ10	2850	2500	2500	15
0022291	Hi-Spot ESD63 75W WFL50°	75	230	50	GZ10	2850	1000	2500	15
0022284	Hi-Spot ESD63 75W FL25°	75	240	25	GZ10	2850	2500	2500	15

25°		50W	75W
443mmØ	1m	1500lx	2500lx
887mmØ	2m	325lx	625lx
1330mmØ	3m	167lx	278lx
1774mmØ	4m	94lx	156lx

50°		75W
933mmØ	1m	1000lx
1865mmØ	2m	250lx
2798mmØ	3m	111lx
3730mmØ	4m	63lx



Dimensions (mm)



- Mains voltage alternative to Sylvania SA111 aluminium reflector lamp
- With integral anti-glare shield option
- Halogen light without the need for a transformer
- Installing and changing lamps made easier with the 'twist and lock' GU10 and GZ10 caps
- For accent or decorative lighting in retail, commercial and domestic applications
- Average rated life 2000hrs



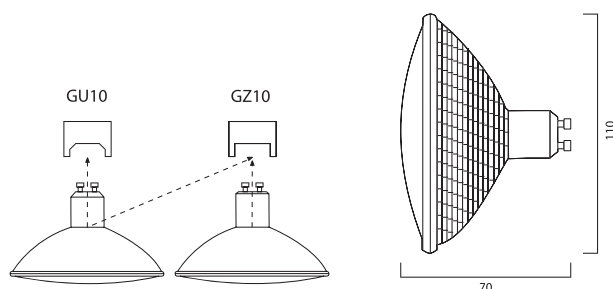
UV STOP



## Hi-Spot® ES111/ESD111 AG

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Hi-Spot ES111 without anti-glare</b>									
0022221	Hi-Spot ES111 75W FL24°	75	230	24	GU10	2800	3000	2000	15
0022223	Hi-Spot ES111 75W FL24°	75	240	24	GU10	2800	3000	2000	15
<b>Hi-Spot ES111 with anti-glare</b>									
0022224	Hi-Spot ES111 75W FL24°	75	230	24	GU10	2800	3500	2000	15
0022225	Hi-Spot ES111 75W FL24°	75	240	24	GU10	2800	3500	2000	15
<b>Hi-Spot ESD111 Dichroic with anti-glare</b>									
0022227	Hi-Spot ES111 100W FL24°	100	230	24	GZ10	2900	5000	2000	15
0022226	Hi-Spot ES111 100W FL24°	100	240	24	GZ10	2900	5000	2000	15

		24°	75W	100W
425mmØ	1m		3500lx	5000lx
850mmØ	2m		875lx	125lx
1275mmØ	3m		389lx	556lx
1700mmØ	4m		219lx	313lx



Dimensions (mm)



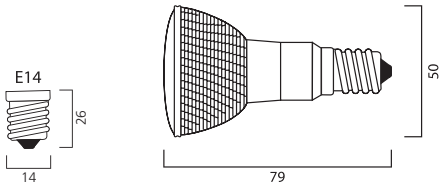
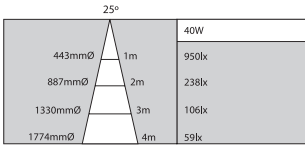


- Retrofit solution for E14 incandescent R50 lamps
- Halogen light without the need for a transformer
- Unique, patented spiral reflector design for uniform beam pattern
- 100% dimmable
- For use in mains voltage E14 cap downlights, spotlights and luminaires
- Average rated life 2000 hrs



Hi-Spot® 50

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
Hi-Spot 50									
0021081	Hi-Spot 50 40W FL25°	40	230	25	E14	2700	950	2000	15
0021084	Hi-Spot 50 40W FL25°	40	240	25	E14	2700	950	2000	15



Dimensions (mm)

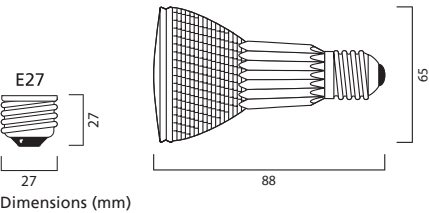
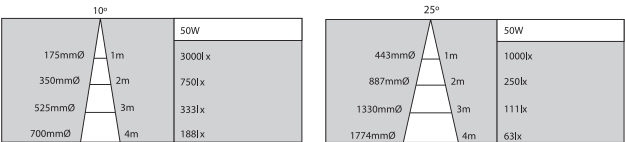


- Halogen light without the need for a transformer
- Unique, patented, spiral faceted aluminised reflector
- 100% dimmable
- For use in mains voltage E27 cap downlights, spotlights and luminaires
- For accent or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water
- Average rated life 2500hrs - 25% longer life than conventional PAR halogen lamps



Hi-Spot® 63

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021125	Hi-Spot 63 50W SP10°	50	230	10	E27	2900	3000	2500	15
0021126	Hi-Spot 63 50W FL25°	50	230	25	E27	2900	1000	2500	15
0021127	Hi-Spot 63 50W SP10°	50	240	10	E27	2900	3000	2500	15
0021128	Hi-Spot 63 50W FL25°	50	240	25	E27	2900	1000	2500	15





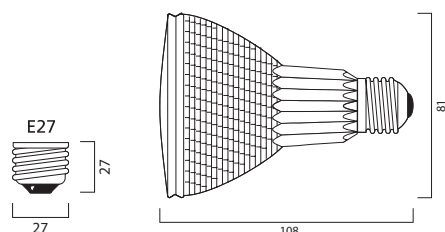
- Halogen light without the need for a transformer
- Unique, patented, spiral faceted aluminised reflector
- 100% dimmable
- For use in mains voltage E27 cap downlights, spotlights and luminaires
- For accent or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water
- Average rated life 2500hrs or 3000hrs - up to 50% longer than conventional halogen PAR lamps



### Hi-Spot® 80 Superia Extralife

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021131	Hi-Spot 80 50W SP10°	50	230	10	E27	2900	4000	2500	15
0021132	Hi-Spot 80 50W FL25°	50	230	25	E27	2900	1100	2500	15
0021133	Hi-Spot 80 75W SP10°	75	230	10	E27	2900	5500	3000	15
0021134	Hi-Spot 80 75W FL25°	75	230	25	E27	2900	1300	3000	15
0021161	Hi-Spot 80 50W SP10°	50	240	10	E27	2900	4000	2500	15
0021162	Hi-Spot 80 50W FL25°	50	240	25	E27	2900	1100	2500	15
0021163	Hi-Spot 80 75W SP10°	75	240	10	E27	2900	5500	3000	15
0021164	Hi-Spot 80 75W FL25°	75	240	25	E27	2900	1300	3000	15

10°		25°	
50W	75W	50W	75W
175mmØ	1m	4000lx	5500lx
350mmØ	2m	1000lx	1375lx
525mmØ	3m	444lx	611lx
700mmØ	4m	250lx	344lx
443mmØ	1m	1100lx	1300lx
887mmØ	2m	275lx	325lx
1330mmØ	3m	122lx	144lx
1774mmØ	4m	69lx	81lx



Dimensions (mm)



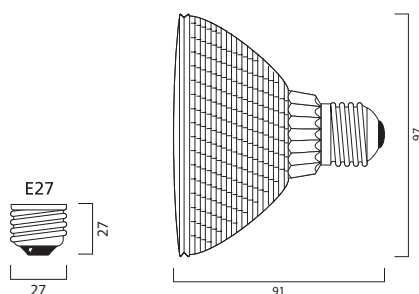
- Halogen light without the need for a transformer
- Unique, patented, spiral faceted aluminised reflector
- 100% dimmable
- For use in mains voltage E27 cap downlights, spotlights and luminaires
- Use dichroic lamps for lighting food, textiles and other objects sensitive to heat
- Suitable for outdoor use when protected from direct contact with water
- Average rated life 3000 hrs - 50% longer life than conventional halogen PAR lamps



## Hi-Spot® 95 Superia Extralife

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
<b>Hi-Spot 95</b>									
0021230	Hi-Spot 95 75W SP10°	75	230	10	E27	2900	6900	3000	15
0021231	Hi-Spot 95 75W FL30°	75	230	30	E27	2900	2200	3000	15
0021234	Hi-Spot 95 100W SP10°	100	230	10	E27	2900	10000	3000	15
0021235	Hi-Spot 95 100W FL30°	100	230	30	E27	2900	3500	3000	15
0021232	Hi-Spot 95 75W SP10°	75	240	10	E27	2900	6900	3000	15
0021233	Hi-Spot 95 75W FL30°	75	240	30	E27	2900	2200	3000	15
0021236	Hi-Spot 95 100W SP10°	100	240	10	E27	2900	10000	3000	15
0021237	Hi-Spot 95 100W FL30°	100	240	30	E27	2900	3500	3000	15
<b>Hi-Spot 95 Dichroic</b>									
0021291	Hi-Spot 95 75W FL30° D	75	230	30	E27	2900	2400	3000	15
0021293	Hi-Spot 95 75W FL30° D	75	240	30	E27	2900	2400	3000	15
<b>Hi-Spot 95 Reinforced</b>									
0021274	Hi-Spot 95 75W SO 10° Reinforced	75	240	10	E27	2900	8000	3000	15
0021275	Hi-Spot 95 75W FL 30° Reinforced	75	240	30	E27	2900	2600	3000	15

10°			30°		
175mmØ	1m	75W 100W	536mmØ	1m	75W 75W DIC 100W
350mmØ	2m	6900lx 10000lx	1072mmØ	2m	2200lx 2400lx 3500lx
525mmØ	3m	1725lx 2500lx	1608mmØ	3m	550lx 600lx 875lx
700mmØ	4m	767lx 1111lx	2144mmØ	4m	244lx 267lx 389lx
		431lx 625lx			138lx 150lx 219lx



Dimensions (mm)



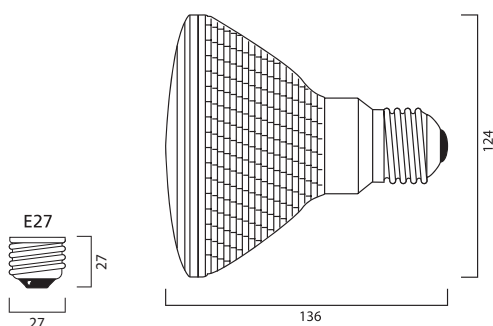
- Halogen light without the need for a transformer
- Unique, patented, spiral faceted aluminised reflector
- 100% dimmable
- For use in mains voltage E27 cap downlights, spotlights and luminaires
- For accent or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water
- Average rated life 3000hrs - 50% longer than conventional halogen lamps



### Hi-Spot® 120

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Colour Temp (K)	Luminous Intensity (cd)	Average Rated Life (Hrs)	Packing Qty
0021141	Hi-Spot 120 75W FL30°	75	230	30	E27	2900	2200	3000	15
0021144	Hi-Spot 120 100W SP10°	100	230	10	E27	2900	10000	3000	15
0021145	Hi-Spot 120 100W FL30°	100	230	30	E27	2900	3500	3000	15
0021142	Hi-Spot 120 75W SP10°	75	240	10	E27	2900	6900	3000	15
0021143	Hi-Spot 120 75W FL30°	75	240	30	E27	2900	2200	3000	15
0021146	Hi-Spot 120 100W SP10°	100	240	10	E27	2900	10000	3000	15
0021147	Hi-Spot 120 100W FL30°	100	240	30	E27	2900	3500	3000	15

10°				30°			
		75W	100W			75W	100W
175mmØ	1m	6900lx	10000lx	536mmØ	1m	2200lx	3500lx
350mmØ	2m	1725lx	2500lx	1072mmØ	2m	550lx	875lx
525mmØ	3m	767lx	1111lx	1608mmØ	3m	244lx	389lx
700mmØ	4m	431lx	625lx	2144mmØ	4m	138lx	219lx



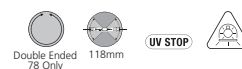
Dimensions (mm)

## Linear Double Ended 78mm/118mm Eco

**SYLVANIA**



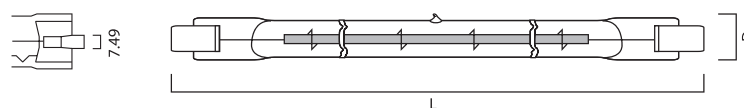
- Xenon technology
- Sparkling light output
- Less CO<sub>2</sub> emissions
- Less heat generation
- Transformer free operation
- Filament support method patented
- Average rated life 1000hrs or 2000hrs - 20% energy savings compared to standard halogen double ended lamps with same light output



### Linear Double Ended Eco

Code	Description	Watt (W)	Volt (V)	Cap	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
<b>0021529</b>	DE ECO 78mm 230V 48W	48	230	R7s	2900	750	1000	10
<b>0021530</b>	DE ECO 78mm 240V 48W	48	240	R7s	2900	750	1000	10
<b>0021531</b>	DE ECO 78mm 230V 80W	80	230	R7s	2900	1400	1000	10
<b>0021532</b>	DE ECO 78mm 240V 80W	80	240	R7s	2900	1400	1000	10
<b>0021533</b>	DE ECO 78mm 230V 120W	120	230	R7s	2950	2250	1000	10
<b>0021534</b>	DE ECO 78mm 240V 120W	120	240	R7s	2950	2250	1000	10
<b>0021713</b>	DE ECO 118mm 230V 120W	120	230	R7s	2950	2250	2000	10
<b>0021714</b>	DE ECO 118mm 240V 120W	120	240	R7s	2950	2250	2000	10
<b>0021715</b>	DE ECO 118mm 230V 160W	160	230	R7s	3000	3100	2000	10
<b>0021716</b>	DE ECO 118mm 240V 160W	160	240	R7s	3000	3100	2000	10
<b>0021717</b>	DE ECO 118mm 230V 230W	230	230	R7s	3000	4800	2000	10
<b>0021718</b>	DE ECO 118mm 240V 230W	230	240	R7s	3000	4800	2000	10
<b>0021719</b>	DE ECO 118mm 230V 400W	400	230	R7s	3000	9000	2000	10
<b>0021720</b>	DE ECO 118mm 240V 400W	400	240	R7s	3000	9000	2000	10

R7s	Double Ended 78
L	78
D	10
R7s	Double Ended 118
L	118
D	8



Dimensions (mm)











# INCANDESCENT

147 GLS



150 Candle Lamps



151 Ball Lamps



152 Reflector Lamps



154 Par Lamps



155 Tubular Lamps



156 Pygmy Lamps



157 Striplights/Linear Lamps



### Incandescent Lamps

In many countries, incandescent lamps remain the most popular lamps, especially in the home, where they act as the work-horse lighting source. Even in countries where incandescent lamps are no longer available for household non illumination, types are available for special applications such as appliances, low voltages and rough service installation.

#### Rough Service

A range of conventional shaped main voltage lamps designed for use where high vibration or physical shock are more common.

#### Oven

A family of "pygmy" shaped lamps intended for use in high temperature ovens.



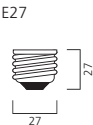


- Standard 'A' shaped incandescent lamp with a clear outer bulb
- Clear sparkling light
- Easy to operate
- Excellent colour reproduction
- Commercial and domestic lighting applications

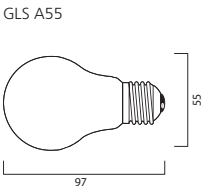


GLS Clear A55

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
0004447	A55 Clear 60W 230V E27	60	230	E27	Clear	710	10
0004448	A55 Clear 75W 230V E27	75	230	E27	Clear	1200	10
0004446	A55 Satin 40W 230V E27	40	230	E27	Clear	415	10
0004450	A55 Clear 40W 230V E27	40	230	E27	Clear	415	10
0004451	A55 Satin 60W 230V E27	60	230	E27	Clear	710	10
0004452	A55 Satin 75W 230V E27	75	230	E27	Clear	1200	10



Dimensions (mm)



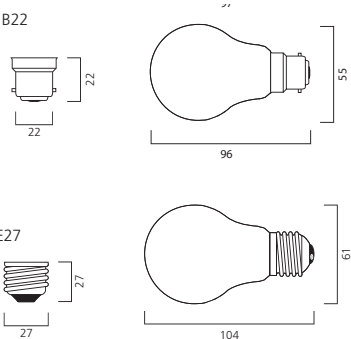


- “A” shaped incandescent lamp for operating on low voltage circuits
- Clear outer bulb
- Suitable for operation on low voltage circuits (24-25V)
- Extended lifetime of 2500 hours for 25W and 40W versions
- 1000 hour lifetime for 60W and 100W versions
- Suitable for emergency lighting, machines, signs and signal panels



GLS

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
GLS Extra Low Voltage Clear							
0009668	25W 24-25V E27 Clear	25	24-25	E27	Clear	380	100
0009696	40W 24-25V E27 Clear	40	24-25	E27	Clear	600	100
0009694	40W 24-25V B22 Clear	40	24-25	B22	Clear	600	100
0009728	60W 24-25V E27 Clear	60	24-25	E27	Clear	960	100
0009780	100W 24-25V E27 Clear	100	24-25	E27	Clear	1800	100



Dimensions (mm)

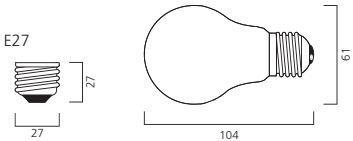


- Extra durable lamp resistant to vibrations
- Ideal for use in industrial and working environments like garages etc
- Available in pearl finish outer bulb
- Extended 1500 hour service life
- Not suitable for household room illumination
- Intended for use in rough service applications



GLS

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
GLS Rough Service							
0029345	Rough Serv 25W 230V Pearl	25	240	E27	Pearl	170	100
0029364	Rough Serv 40W 240V Pearl	40	240	E27	Pearl	285	100
0029385	Rough Serv 60W 240V Pearl	60	240	E27	Pearl	560	100
0029405	Rough Serv 100W 240V Pearl	100	240	E27	Pearl	1110	100





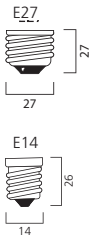
- Candle shaped incandescent lamps
- Lamps have a crystal clear envelope for added sparkle
- Unbeatable colour rendering, Ra=100
- Commercial and domestic decorative lighting applications



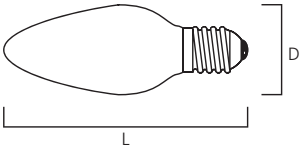
Candle

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
0004454	Candle Clear 40W E14	40	230	E14	Clear	415	10
0004455	Candle Clear 60W E14	60	230	E14	Clear	700	10
0004457	Candle Satin 40W E14	40	230	E14	Clear	415	10
0004458	Candle Satin 60W E14	60	230	E27	Clear	700	10
0004460	Candle Clear 40W E27	40	230	E27	Clear	415	10
0004461	Candle Clear 60W E27	60	230	E27	Clear	700	10
0004463	Candle Satin 40W E27	40	230	E27	Clear	415	10
0004464	Candle Satin 60W E27	60	230	E27	Clear	700	10

E14	40W	60W
L	97	97
D	35	35
E27	40W	60W
L	92	92
D	35	35



Dimensions (mm)





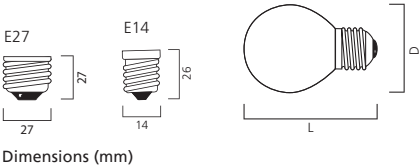
- Round lamp envelope
- Clear finish for sparkling crystal clear light
- E14 and E27 cap
- Suitable for commercial and domestic decorative lighting



**Ball**

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
0004466	Ball Clear 40W E14	25	230	E14	Clear	415	10
0004467	Ball Clear 60W E14	60	230	E14	Clear	700	10
0004469	Ball Satin 40W E14	40	230	E14	Clear	415	10
0004470	Ball Satin 60W E14	60	230	E14	Clear	700	10
0004472	Ball Clear 40W E27	40	230	E27	Clear	415	10
0004473	Ball Clear 60W E27	60	230	E27	Clear	700	10
0004474	Ball Satin 60W E27	60	230	E27	Clear	700	10
0004475	Ball Satin 40W E27	40	230	E27	Clear	415	10

E14	40W	60W
L	73	73
D	45	45
E27	40W	60W
L	71	71
D	45	45







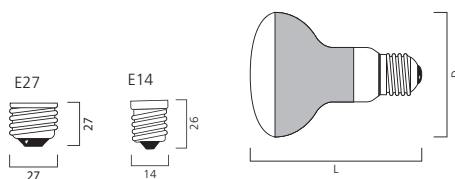
- Blown glass reflector lamps
- Pearl crown and integral aluminium reflector
- Available in 6 diameters
- Ideal for accent lighting in commercial and domestic applications
- Suitable for shop windows, displays, discos and clubs as well as in the home
- For use in track or surface mounted spotlights or in recessed downlights



## Reflector

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Luminous Intensity (cd)	Packing Qty
<b>Reflector Standard R39 39mmØ</b>							
0015908	30W 240V R39 Pearl	30	240	40	E14	120	100
<b>Reflector Standard R50 50mmØ</b>							
0015535	25W 240V R50 Pearl	25	240	35	E14	175	100
<b>Reflector Standard R50 50mmØ</b>							
0015537	40W 240V R50 Pearl	40	240	35	E14	325	100
<b>Reflector Standard R63 63mmØ</b>							
0015550	40W 240V R63 Pearl	40	240	35	E27	325	100
<b>Reflector Standard R63 63mmØ</b>							
0015560	60W 240V R63 Pearl	60	240	35	E27	560	100
<b>Reflector Standard R80 80mmØ</b>							
0015570	40W 240V R80 Pearl	40	240	80	E27	160	100
<b>Reflector Standard R80 80mmØ</b>							
0015580	60W 240V R80 Pearl	60	240	80	E27	260	100
0015584	75W 240V R80 Pearl	75	240	80	E27	345	100
0015585	100W 240V R80 Pearl	100	240	80	E27	500	100
<b>Reflector Standard R95 95mmØ</b>							
0015600	75W 240V R95 Pearl	75	240	35	E27	750	20
<b>Reflector Standard R95 95mmØ</b>							
0015620	100W 240V R95 Pearl	100	240	35	E27	1060	20

E14	R39	R50	
L	65	85	
D	39	50	
E27	R63	R80	R95
L	103	110	132
D	63	80	95



Dimensions (mm)



- GLS or round shaped incandescent lamps
- Silvered or gold crown and clear finish envelope
- Delivers an extremely well controlled beam with practically zero glare
- E14 or E27 cap
- Not suitable for household room illumination
- Intended for mirror lighting

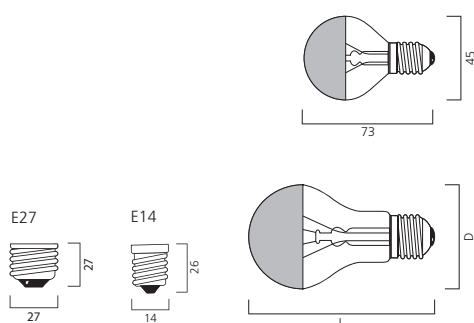


universal

### Crown

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
<b>Crown Silvered</b>							
<b>0017743</b>	Ball 25W 240V E14 Clear	25	240	E14	Clear	185	100
<b>0017744</b>	Ball 40W 240V E14 Clear	40	240	E14	Clear	360	100
<b>0017739</b>	GLS 40W 240V E27 Clear	40	240	E27	Clear	360	100
<b>0017740</b>	GLS 60W 240V E27 Clear	60	240	E27	Clear	620	100
<b>0017741</b>	GLS 75W 240V E27 Clear	75	240	E27	Clear	800	100
<b>0017742</b>	GLS 100W 240V E27 Clear	100	240	E27	Clear	1170	100
<b>Crown Gold</b>							
<b>0017870</b>	Ball 25W 240V E14	25	240	E14	Clear	185	100
<b>0017871</b>	Ball 40W 240V E14	40	240	E14	Clear	360	100

E27	40W	60W	75W	100W
L	104	104	104	128
D	60	60	60	65



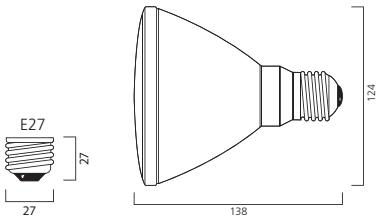


- Incandescent PAR lamps made from heat-resistant borosilicate glass
- Cool Beam version with integral dichroic reflector
- Pressed glass reflector delivers significantly improved efficiency over blown reflector types
- Suitable for exterior lighting
- Weather-resistant



PAR38

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	Crown Finish	Packing Qty
0019691	60W/FL/30° PAR38 Clear	60	230-240	30	E27	Clear	10
0019710	80W/SP/12° PAR38 Clear	80	230-240	12	E27	Clear	10
0019711	80W/FL/30° PAR38 Clear	80	230-240	30	E27	Clear	10
0019720	120W/SP/12° PAR38 Clear	120	230-240	12	E27	Clear	10
0019721	120W/FL/30° PAR38 Clear	120	230-240	30	E27	Clear	10



Dimensions (mm)

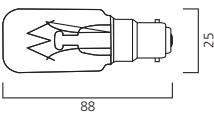
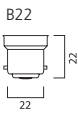
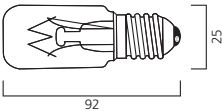


- Krypton gas filling offering more light versus standard clear lamps
- E14 or B22 cap
- Not suitable for household room illumination
- Intended for use in special applications including ovens and refrigerators



Tubular Clear

Code	Description	Watt (W)	Volt (V)	Cap	Crown Finish	Luminous Intensity (cd)	Packing Qty
0007352	25W 230V E14 Clear	25	230	E14	Clear	230	100
0007360	40W 230V E14 Clear	40	230	E14	Clear	415	100
0007362	40W 230V B22 Clear	40	230	B22	Clear	415	100



Dimensions (mm)



- Small compact incandescent lamps, high temperature resistant
- Clear or pearl finish
- E14 cap
- Not suitable for household room illumination
- Intended for use in special applications including ovens, refrigerators and other household appliances



Pygmy

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
Pygmy Special Application							
0008100	15W 240V E14 Clear	15	240	E14	Clear	100	100
0008120	25W 240V E14 Clear	25	240	E14	Clear	225	100
Pygmy Oven till 300°C							
0008072	15W 240V E14 22mm Ø Oven	15	240	E14	Clear	80	100
Pygmy Refrigerator							
0007339	15W 230V E14 Clear	15	230	E14	Clear	85	100

Pygmy	15W	25W
L	63	63
D	28	28
Pygmy Oven	15W	
L	63	
D	28	
Pygmy Refrigerator	15W	
L	55	
D	25	



Dimensions (mm)



S15s	30W	60W	
L	221	284	
D	25	25	
S19	40W	60W	75W
L	310	310	310
D	38	38	38

- Double-ended linear incandescent lamps
- Clear or opal finish
- Available in three lengths - 221mm, 284mm and 310mm
- S15s and S19 cap
- Bathroom, bedroom and kitchen luminaires. Cupboard lighting and over mirrors



### Striplights

Code	Description	Watt (W)	Volt (V)	Cap	Length (mm)	Lamp Finish	Luminous Flux (lm)	Packing Qty
<b>9007550</b>	30W 240-250V S15s Clear	30	240-250	S15s	221	Clear	270	50
<b>9007597</b>	60W 240-250V S15s Clear	60	240-250	S15s	284	Clear	500	25
<b>9007565</b>	40W 220-235V S19 Frosted	40	230	S19	310	Frosted	335	25
<b>9007590</b>	60W 220-235V S19 Frosted	60	230	S19	310	Frosted	530	25
<b>9007607</b>	75W 220-235V S19 Frosted	75	230	S19	310	Frosted	680	25



Dimensions (mm)

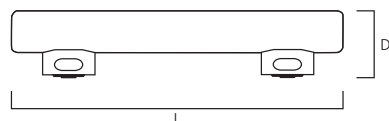


- Double-ended linear incandescent lamps
- Opal finish
- Available in three lengths - 300mm, 500mm and 999mm
- S14d and S14s cap
- Bathroom, bedroom and kitchen luminaires. Cupboard lighting and over mirrors



### Linear Architectural

Code	Description	Watt (W)	Volt (V)	Cap	Lamp Finish	Luminous Flux (lm)	Packing Qty
<b>0007433</b>	35W 220-235V S14d Opal	35	230-240	S14d	Opal	270	25
<b>0007435</b>	35W 220-235V S14s Opal	35	230-240	S14s	Opal	270	25
<b>0007448</b>	60W 220-235V S14d Opal	60	230-240	S14d	Opal	420	25
<b>0007450</b>	60W 220-235V S14s Opal	60	230-240	S14s	Opal	420	25
<b>0007463</b>	120W 220-235V S14s Opal	120	230-240	S14s	Opal	840	16



Dimensions (mm)

S14d	35W	60W	120W
L	221	284	-
D	25	25	-
S14s	35W	60W	120W
L	300	500	999
D	26	26	26







# SPECIAL APPLICATIONS

**SYLVANIA**

161 Photo Optic



170 Petcare



182 Food Display



188 SAD



189 Infra Red



194 Blacklight



197 Germicidal



199 Bodycare



### Special Application Lamps

Sylvania offers a comprehensive range of lamps to meet a diverse range of specialist applications.

#### Photo Optic

Sylvania offers a wide and competitive range of lamps specifically designed for photo and projection applications.

Used by photographers and in film and slide projectors; photo labs and mini-labs are also an important application. The market for studio, stage, theatre and disco is rapidly growing with demand now shifting towards high pressure metal halide lamps. BriteArc is the ideal solution for these applications. With a small arc gap, it is ideal to optimally concentrate the light and produce a strong beam.

#### Petcare

If you need to replace natural light – whether for plants, aquariums or terrariums – Sylvania has an extensive collection of lighting solutions available for you. For example, Sylvania's GROLUX is a world leader in plant illumination. Proper light and UV-radiation is very important for fish and reptiles. Our lighting engineers have developed lamps with specific light spectra for the most diverse uses. Either independently or in combination, Sylvania Aquarium and Terrarium lamps deliver the best results for complex biological requirements. Whether for plants, fish, corals, reptiles, or the entire biotope of aquariums and terrariums - with Sylvania you'll find the appropriate lighting.

#### Insect Trapping and Disinfection

Flying insects such as the common house fly, wasps, midges etc. carry up to 4 million pathogenic bacteria. Their presence is totally unacceptable in areas where hygiene is paramount. Sylvania offer a wide range of UV-A lamps in various lengths and diameters to attract these insects. Sylvania lamps are utilised in many brands of insect traps. Micro-organisms such as bacteria, moulds, yeasts etc can be destroyed or removed by physical, biological, and chemical methods. UV-C radiation destroys or inactivates the micro organism so that it can no longer multiply. Our extensive range of germicidal and blacklight lamps are ideal for generating the right sterilising effect.





**Features**

- Transparent lens in real natural coloured glass
- Pure, saturated beam colours without the usual rainbow-effect halo
- Four colours available: red, yellow, green and blue
- Unique, patented, computer designed spiral facetted aluminised reflector
- Available in medium flood version: 25°



**Applications**

- To bring a touch of colour in a wide range of applications
- Architectural features
- Discos and clubs
- Decorative lighting

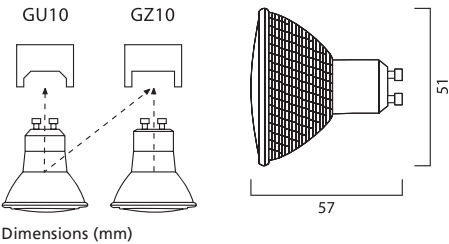
**Directions for use**

- For use in mains voltage fixtures with GU10 base
- Universal burning
- Suitable for exterior use in conjunction with waterproof fixtures
- Can be dimmed using standard dimming switches

**Hi-Spot ES50 GU10 Coloured**

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Luminous Intensity (cd)	Colour	Cap	Average Rated Life (Hrs)	Packing Qty
0021270	Hi-Spot ES50 50W Blue 240V	50	240	25	30	Blue	GU10	2500	10
0021271	Hi-Spot ES50 50W Green 240V	50	240	25	130	Green	GU10	2500	10
0021272	Hi-Spot ES50 50W Red 240V	50	240	25	225	Red	GU10	2500	10
0021273	Hi-Spot ES50 50W Yellow 240V	50	240	25	550	Yellow	GU10	2500	10

25°					
443mmØ	1m	30lx	130lx	225lx	550lx
887mmØ	2m	8lx	33lx	56lx	138lx
1330mmØ	3m	3lx	14lx	25lx	61lx
1774mmØ	4m	2lx	8lx	14lx	34lx





240V 80W Green



240V 80W Yellow



240V 80W Blue



240V 80W Red

Features

- Parabolic-shaped reflector made from hard glass
- Coloured front lens
- Choice of four colours: Blue, Green Red, and Yellow



Applications

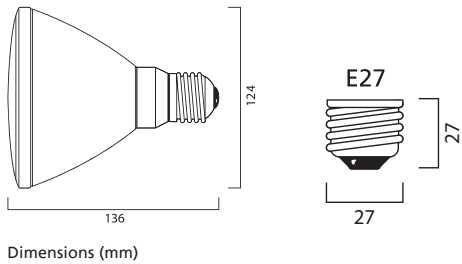
- Mainly used in commercial accent lighting
- To create special effects in bars, clubs and discos and in shop window displays

Directions for use

- For use in mains voltage fixtures with E27 base
- Universal burning
- E27 cap
- Can be dimmed using standard dimming switch

PAR 38 Coloured

Code	Description	Watt (W)	Volt (V)	Cap	Packing Qty
0019650	80W/FL30° PAR38 blue	80	24	E27	10
0019651	80W/FL30° PAR38 green	80	240	E27	10
0019652	80W/FL30° PAR38 red	80	240	E27	10
0019653	80W/FL30° PAR38 yellow	80	240	E27	10





F18 Red 18W



F18 Yellow 18W



F18 Green 18W



F18 Blue 18W



F18 Pink 18W

### Features

- High quality fluorescent tubes
- Long life
- Available in five colours: Blue, Green, Red, Pink and Yellow

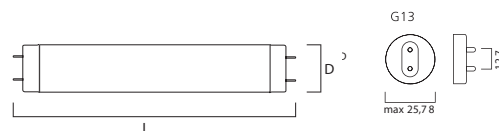
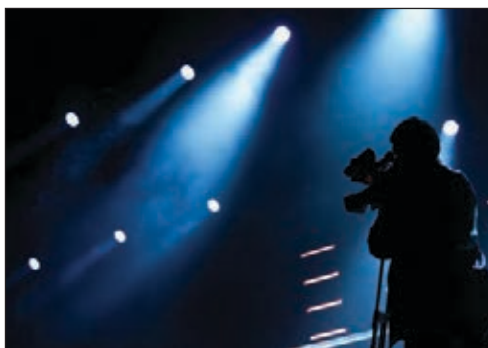
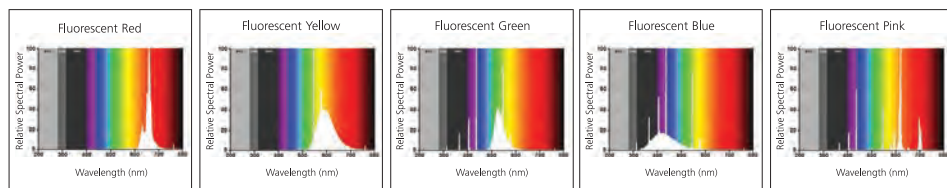


### Applications

- To create special lighting effects in shop windows, bars, fairground attractions, dance halls and discotheques

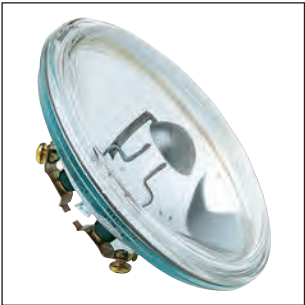
### T8 Coloured

Code	Description	Watt (W)	Colour	Cap	Luminous Flux (lm)	Packing Qty
0002572	F18W/T8/R	18	Red	G13	30	25
0002573	F36W/T8/R	36	Red	G13	70	25
0002574	F58W/T8/R	58	Red	G13	100	25
0002561	F18W/T8/Y	18	Yellow	G13	750	25
0002565	F36W/T8/Y	36	Yellow	G13	1550	25
0002569	F58W/T8/Y	58	Yellow	G13	2500	25
0002562	F18W/T8/G	18	Green	G13	1200	25
0002566	F36W/T8/G	36	Green	G13	2800	25
0002570	F58W/T8/G	58	Green	G13	4000	25
0002563	F18W/T8/B	18	Blue	G13	300	25
0002567	F36W/T8/B	36	Blue	G13	700	25
0002571	F58W/T8/B	58	Blue	G13	1000	25
0002560	F18W/T8/P	18	Pink	G13	750	25
0002564	F36W/T8/P	36	Pink	G13	1700	25
0002568	F58W/T8/P	58	Pink	G13	2600	25



Dimensions (mm)

	G13	18W	36W	58W
L		590	1200	1500
D		26	26	26



PAR 36

Features

- Pressed glass reflector lamps
- Beam patterns: from very narrow spot through wide angle floods
- Consistency from lamp to lamp
- Economical light source for effects
- Halogen version delivers maintained beam intensity throughout life

Applications

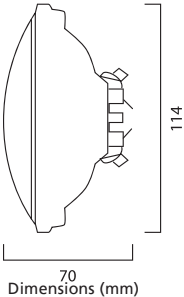
- Entertainment and Architectural applications
- Displays
- Museums
- Exhibitions
- Gardens
- Discos

Directions for use

- Easy handling
- Can be used with very economical fixtures (PAR cans)

PAR 36

Code	Description	ANSI	Watt (W)	Volt (V)	Beam	Approx Beam Spread 10% Peak CD (°)	Base	Peak Intensity (cd)	Colour Temp (K)	Average Rated Life (Hrs)	Burning Position	Packing Qty
0060500	PAR 36 6.4V 30W Disco	H4515	30	6.4	Very Narrow Spot	5x5	Screw Terminal	55000	3200	200	Any	12
9020167	PAR 36 12.8V 30W	H4405	30	12.8	Very Narrow Spot	6x5	Screw Terminal	50000	3200	100	Any	12
0060508	PAR 36 12V 50W VN5P	-	50	12	Very Narrow Spot	6x6	Screw Terminal	19000	3000	2000	Any	12
0060503	PAR 36 120V 650W	DWE	650	120	Medium Flood	40x30	Screw Terminal	24000	3200	100	H15	12







PAR 36 12V 100W

Features

- Pressed glass reflector lamps
- Beam patterns : from very narrow spot through wide angle floods
- Consistency from lamp to lamp
- Instant replaceability without the need to re-focus and re-aim fixtures



Applications

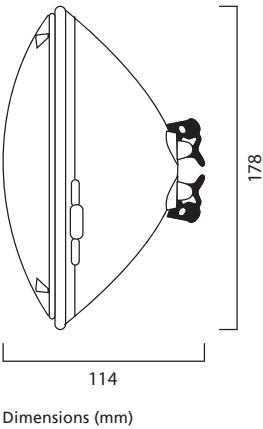
- Theatre lighting
- TV and studio
- Entertainment and Architectural applications
- Displays
- Museums
- Churches
- Towers
- Exhibitions
- Gardens
- Discos

Directions for use

- Easy handling
- Can be used with very economical fixtures (PAR cans)

PAR 56 Low Voltage

Code	Description	ANSI	Watt (W)	Volt (V)	Beam	Approx Beam Spread 10% Peak CD (°)	Base	Peak Intensity (cd)	Colour Temp (K)	Average Rated Life (Hrs)	Burning Position	Packing Qty
0060509	PAR 56 12V 100W	H4545	100	12	Spot	9x5	Screw Terminal	225000	3200	100	Any	12





PAR56 300W NSP



PAR56 300W MFL



PAR56 300W WFL

## Features

- Pressed glass reflector lamps
- Beam patterns: from very narrow spot through wide angle floods
- Consistency from lamp to lamp
- Instant replaceability without the need to re-focus and re-aim fixtures

## Applications

- Theatre lighting
- TV and studio
- Entertainment and Architectural applications
- Displays
- Museums
- Churches
- Towers
- Exhibitions
- Gardens
- Discos

## Directions for use

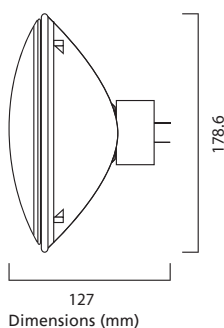
- Easy handling
- Can be used with very economical fixtures (PAR cans)



universal

## PAR 56 Mains Voltage

Code	Description	Watt (W)	Volt (V)	Beam Type	Approx Beam Spread 10% Peak CD (°)	Approx Beam Spread 50% Peak CD (°)	Base	Peak Intensity (cd)	Colour Temp (K)	Average Rated Life (Hrs)	Burning Position	Packing Qty
0060513	PAR 56 300W NSP 240V	300	240	Narrow Spot	20x14	10x8	GX16d	70000	2750	2000	Any	12
0060514	PAR 56 300W MFL 240V	300	240	Medium Flood	34x19	23x11	GX16d	30000	2750	2000	Any	12
0060515	PAR 56 300W WFL 240V	300	240	Wide Flood	57x27	37x18	GX16d	10000	2750	2000	Any	12







PAR56 12V 300 Swimming Pool

Features

- Low voltage (12V) for safety reasons
- Heat resistant glass
- Sturdily constructed lamp absorbs mechanical shocks
- Wide beam



Applications

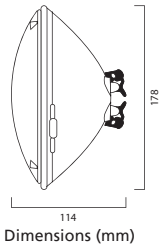
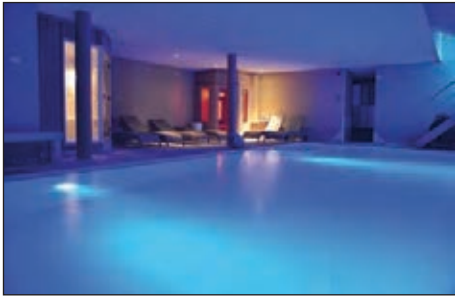
- Swimming Pools
- Fountains

Directions for use

- High running current (25A)

PAR 56 12V Swimming Pool

Code	Description	Watt (W)	Volt (V)	Approx Beam Spread Hor. x Vert Degrees (°)	Base	Peak Intensity (cd)	Colour Temp (K)	Average Rated Life (Hrs)	Burning Position	Packing Qty
9061532	PAR 56 12V 300W Swimming Pool	300	12	50 x 25	Screw	12000	2850	100	S45	12





Remote Control

Receiver

## Features

- Choice between RGB or fixed white version
- High power LED retrofit for incandescent PAR lamps
- Produces full spectrum of rich colours or white (multi colours)
- Sylvania patent pending colour control technology
- Simple on/off switching sets colour changing or fixed mode (can be achieved by using a standard switch)
- Optional Sylvania remote control and receiver available
- Identical shape to incandescent PAR56 = easy retrofit
- Unique sealing method guarantees IP68 water-tightness
- Die cast aluminium housing cools LEDs for high output
- Chlorine-resistant materials permits use in swimming pools
- Long lamp lifetime > 25.000 hours
- Low heat generation

## Applications

- All retrofit PAR56 underwater
- Swimming Pools
- Fountains

## Directions for use

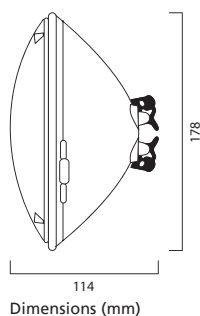
- Only for use with magnetic (no electronic) transformer
- For adequate cooling, lamp must be operated under water



## PAR 56 12V LED Swimming Pool

Code	Description	Watt (W)	Volt (V)	Current (A)	Peak Intensity (Hz)	Base	Average Rated Life (Hrs)	Packing Qty
0060527	PAR56 LED LAMP RGB + Multicolour (18 LED)	25	12	-	-	Screw lugs	25000	-
0060528	PAR56 LED LAMP White (12 LED)	20	12	-	-	Screw lugs	25000	-
0060523	PAR 56 LED Receiver	max. 250	100/250	max. 1A	50/60	Screw Terminals	-	6
0060522	PAR 56 LED Remote Control	-	12V Battery	-	-	-	-	6

The Sylvania PAR56 LED represents a top class professional development for underwater illumination of swimming pools, fountains etc. By combining high power LEDs of red, green and blue or fixed white colour, together with an internal microprocessor, it is capable of generating the full spectrum of colours. The lamp can be operated in a mode of continuous colour changing, or fixed at any desired colour by briefly switching off and back on again. This is facilitated by the optional Sylvania remote control and receiver.



Dimensions (mm)





PAR64 CP601000W NSP



PAR64 CP61 1000W SP



PAR64 CP62 1000W MFL

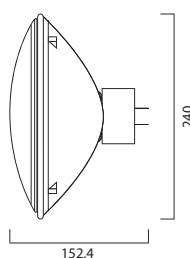
### Features

- Pressed glass reflector lamps
- Extremely powerful beam
- Halogen inner capsule, for 100% lumen maintenance through life
- Beam patterns: from very narrow spot through wide angle floods
- Consistency from lamp to lamp
- Instant replaceability without the need to re-focus and re-aim fixtures
- Double internal fused for end of life safety



### Applications

- Theatre lighting
- TV and studio
- Entertainment and Architectural applications
- Displays
- Museums
- Churches
- Towers
- Exhibitions
- Gardens
- Discos



Dimensions (mm)



### PAR 64 Mains Voltage

Code	Description	ANSI	LIF	Watt (W)	Volt (V)	Beam Type	Approx Beam Spread 10% Peak CD	Approx Beam Spread 50% Peak CD	Base	Peak Intensity (cd)	Colour Temp (K)	Average Rated Life (Hrs)	Burning Position	Packing Qty
9061146	PAR 64 CP86 240V 500W VNSP	-	CP86	500	240	Very Narrow Spot	16x13	10x7	Gx16d	240000	3200	300	Any	6
9061147	PAR 64 CP87 240V 500W NSP	-	CP87	500	240	Narrow Spot	19x16	11x9	Gx16d	140000	3200	300	Any	6
9061148	PAR 64 CP88 240V 500W MFL	-	CP88	500	240	Medium Flood	32x19	21x10	Gx16d	65000	3200	300	Any	6
9061109	PAR 64 CP60 240V 1000W NSP	EXC	CP60	1000	240	Narrow Spot	20x17	12x6	Gx16d	400000	3200	300	Any	6
9061127	PAR 64 CP61 240V 1000W SP	EXD	CP61	1000	240	Spot	23x20	14x7	Gx16d	275000	3200	300	Any	6
9061128	PAR 64 CP62 240V 1000W MFL	EXE	CP62	1000	240	Medium Flood	39x24	28x12	Gx16d	130000	3200	300	Any	6
9061129	PAR 64 CP95 240V 1000W XWFL	EXG	CP95	1000	240	Extra Wide Flood	125x95	70x70	Gx16d	15000	3200	300	Any	6



Packaging Note: The sleeve pictured is for the retail product

### Features

- High level of blue and red radiation helps promote healthy plant growth
- Strengthens the natural colours of aquatic plants and fish in aquariums
- Promotes the process of photo synthesis in plants
- Oldest, but most optimal light colour for plants and aquaria
- T5 - FHO: high output and lumen per watt in comparison to T8 versions
- New T5  $\ell 8$ : 50% more light output in comparison to the same length in T8. Ideal for the new generation of aquaria with T5 lamps, but in the length of T8 lamps. The ideal fit of the lamps in the aquarium results in a perfect illumination of the aquarium

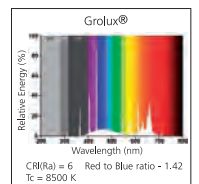
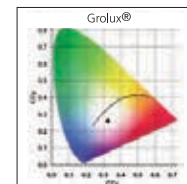


### Applications

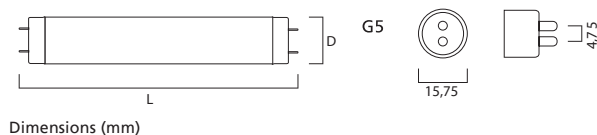
- For lighting of fresh water aquariums
- Complete or additional artificial lighting of plants
- Recommended also for use in greenhouses, indoor gardens, flower

### Grolux T5

Code	Description	Watt (W)	Colour	Cap	Diameter	Packing Qty
0000026	F8W/GRO	8	GroLux	G5	T5	25
0002740	FHO24W/GRO	24	GroLux	G5	T5	25
0002743	FHO39W/GRO	39	GroLux	G5	T5	25
0002746	FHO54W/GRO	54	GroLux	G5	T5	25
0002749	FHO80W/GRO	80	GroLux	G5	T5	25
0000728	FHO24W/GRO Retail	24	GroLux	G5	T5	10
0000729	FHO39W/GRO Retail	39	GroLux	G5	T5	10
0000730	FHO54W/GRO Retail	54	GroLux	G5	T5	10
0002821	F24W T5 $\ell 8$ Gro-Lux Retail	24	GroLux	G5	T5	10
0002823	F28W T5 $\ell 8$ Gro-Lux Retail	28	GroLux	G5	T5	10
0002825	F35W T5 $\ell 8$ Gro-Lux Retail	35	GroLux	G5	T5	10
0002827	F45W T5 $\ell 8$ Gro-Lux Retail	45	GroLux	G5	T5	10
0002829	F54W T5 $\ell 8$ Gro-Lux Retail	54	GroLux	G5	T5	10
0002831	F54W T5 $\ell 8$ Gro-Lux Retail	54	GroLux	G5	T5	10



T5 Standard	8W	24W	39W	54W	80W	
L	288	549	849	1149	1449	
D	16	16	16	16	16	
T5 $\ell 8$	24W	28W	35W	45W	54W	54W
L	438	590	742	895	1047	1200
D	16	16	16	16	16	16



Dimensions (mm)



Packaging Note: The sleeve pictured is for the retail product

### Features

- High level of blue and red radiation helps promote healthy plant growth
- Strengthens the natural colours of aquatic plants and fish in aquariums
- Promotes the process of photo-synthesis in plants
- Oldest, but most optimal light colour for plants and aquaria



universal

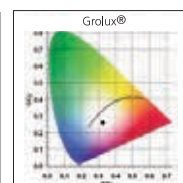
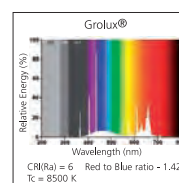


### Applications

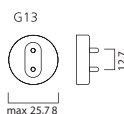
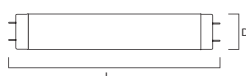
- For lighting of fresh water aquariums
- Complete or additional artificial lighting of plants
- Recommended for use in greenhouses, indoor gardens, flower shows and conservatories

### Grolux T8/Minilyn

Code	Description	Watt (W)	Colour	Cap	Diameter	Packing Qty
0000043	F14W/GRO	14	Gro-Lux	G13	T8	25
0000069	F15W/GRO	15	Gro-Lux	G13	T8	25
0001523	F18W/GRO	18	Gro-Lux	G13	T8	25
0001679	F25W/30"/GRO	25	Gro-Lux	G13	T8	25
0001150	F30W/GRO	30	Gro-Lux	G13	T8	25
0001524	F36W/GRO	36	Gro-Lux	G13	T8	25
0002213	F38W/GRO	38	Gro-Lux	G13	T8	25
0001525	F58W/GRO	58	Gro-Lux	G13	T8	25
0000707	F14W/GRO Retail	14	Gro-Lux	G13	T8	10
0000708	F15W/GRO Retail	15	Gro-Lux	G13	T8	10
0000709	F18W/GRO Retail	18	Gro-Lux	G13	T8	10
0000710	F25W/30"/GRO Retail	25	Gro-Lux	G13	T8	10
0000711	F30W/GRO Retail	30	Gro-Lux	G13	T8	10
0000712	F36W/GRO Retail	36	Gro-Lux	G13	T8	10
0000713	F38W/GRO Retail	38	Gro-Lux	G13	T8	10
0000714	F58W/GRO Retail	58	Gro-Lux	G13	T8	10



T8	14W	15W	18W	25W
L	361	438	590	742
D	26	26	26	26
T8	30W	36W	38W	58W
L	895	1200	1047	1500
D	26	26	26	26



Dimensions (mm)



Packaging Note: The sleeve pictured is for the retail product

## Features

- Light colour: 10000 Kelvin (simulating the tropical light spectrum)
- Promotes the growth of coral and aquatic plants through natural red and blue sections of the light spectrum
- Excellent lighting performance
- T5 - FHO: high output and lumen per watt in comparison to T8 versions
- New T5  $\ell 8$ : 50% more light output in comparison to the same length in T8. Ideal for the new generation of aquaria with T5 lamps, but in the length of T8 lamps. The ideal fit of the lamps in the aquarium results in a perfect illumination of the aquarium



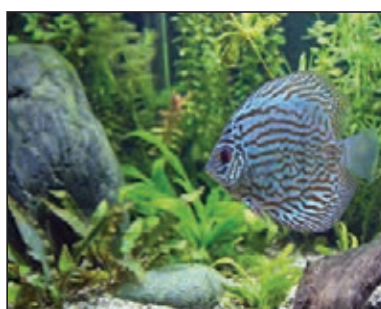
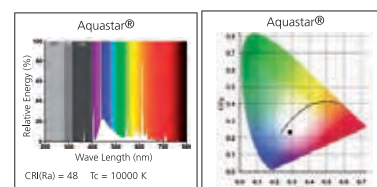
## Applications

- For all biological organisms in fresh and marine water aquariums
- Excellent results in combination with Daylightstar

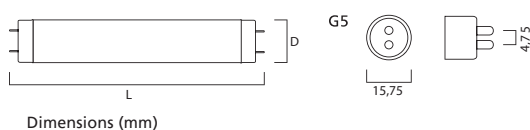
## Aquastar T5

Code	Description	Watt (W)	Colour Temp (K)	Light Output (lm)	Cap	Diameter	Packing Qty
0002741	FHO24W/Aquastar	24	10000	1120	G5	T5	25
0002744	FHO39W/Aquastar	39	10000	1960	G5	T5	25
0002747	FHO54W/Aquastar	54	10000	2800	G5	T5	25
0002750	FHO80W/Aquastar	80	10000	3500	G5	T5	25
0002752	FHO24W/Aquastar Retail	24	10000	1120	G5	T5	10
0002753	FHO39W/Aquastar Retail	39	10000	1960	G5	T5	10
0002754	FHO54W/Aquastar Retail	54	10000	2800	G5	T5	10
0002820	F24W T5 $\ell 8$ Aquastar Retail	24	10000	900	G5	T5	10
0002822	F28W T5 $\ell 8$ Aquastar Retail	28	10000	1200	G5	T5	10
0002824	F35W T5 $\ell 8$ Aquastar Retail	35	10000	1700	G5	T5	10
0002826	F45W T5 $\ell 8$ Aquastar Retail	45	10000	2100	G5	T5	10
0002828	F54W T5 $\ell 8$ Aquastar Retail	54	10000	2500	G5	T5	10
0002830	F54W T5 $\ell 8$ Aquastar Retail	54	10000	2900	G5	T5	10

Packing Note: The sleeve pictured is for retail sales



T5 Standard		24W	39W	54W	80W		
L		549	849	1149	1449		
D		16	16	16	16		
T5 $\ell 8$		24W	28W	35W	45W	54W	
L		438	590	742	895	1047	1200
D		16	16	16	16	16	16



Dimensions (mm)



Packaging Note: The sleeve pictured is for the retail product

## Features

- Light colour: 10000 Kelvin (simulating the tropical light spectrum)
- Promotes the growth of coral and aquatic plants through natural red and blue sections of the light spectrum
- Excellent lighting performance

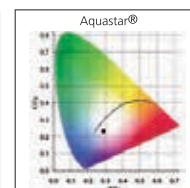
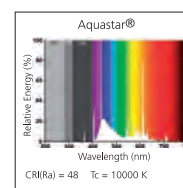


## Applications

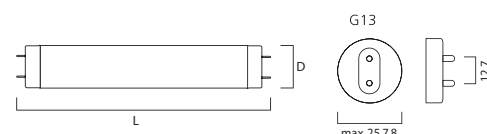
- For all biological organisms in fresh and marine water aquariums

## Aquastar T8

Code	Description	Watt (W)	Colour Temp (K)	Light Output (lm)	Cap	Diameter	Packing Qty
0002212	F14W/Aquastar	14	10000	525	G13	T8	25
0002224	F15W/Aquastar	15	10000	650	G13	T8	25
0002221	F18W/Aquastar	18	10000	900	G13	T8	25
0002226	F25W/30"/Aquastar	25	10000	1500	G13	T8	25
0002225	F30W/Aquastar	30	10000	1700	G13	T8	25
0002222	F36W/Aquastar	36	10000	2200	G13	T8	25
0002185	F38W/Aquastar	38	10000	2100	G13	T8	25
0002223	F58W/Aquastar	58	10000	3550	G13	T8	25
0000727	F14W/Aquastar Retail	14	10000	525	G13	T8	10
0000643	F15W/Aquastar Retail	15	10000	650	G13	T8	10
0000644	F18W/Aquastar Retail	18	10000	900	G13	T8	10
0000645	F25W/30"/Aquastar Retail	25	10000	1500	G13	T8	10
0000646	F30W/Aquastar Retail	30	10000	1700	G13	T8	10
0000647	F36W/Aquastar Retail	36	10000	2200	G13	T8	10
0000648	F38W/Aquastar Retail	38	10000	2100	G13	T8	10
0000649	F58W/Aquastar Retail	58	10000	3550	G13	T8	10



T8	14W	15W	18W	25W
L	361	438	590	742
D	26	26	26	26
T8	30W	36W	38W	58W
L	895	1200	1047	1500
D	26	26	26	26



Dimensions (mm)





Packaging Note: The sleeve pictured is for the retail product

## Features

- Reduces algae growth through a special UV-STOP protective sleeve
- Allows fish and plants to be seen in their true colours (high colour rendition)
- 5000K triphosphor lamp with a daylight character
- High colour rendition
- Long life

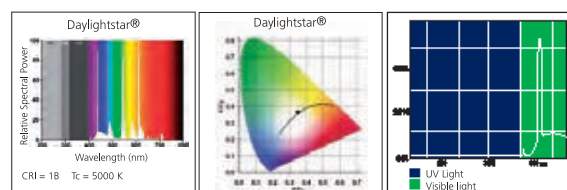
## Applications

- For use in fresh water aquariums
- In combination with Grolux® it produces a well balanced and optimal aquarium life

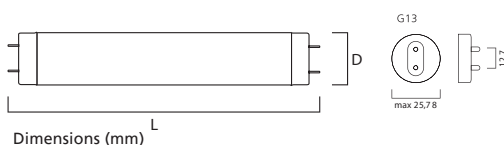


## Daylightstar T8

Code	Description	Watt (W)	Colour	Cap	Diameter	Packing Qty
0000715	F15W/Daylightstar Retail	15	Daylightstar	G13	T8	10
0000716	F18W/Daylightstar Retail	18	Daylightstar	G13	T8	10
0000717	F30W/Daylightstar Retail	30	Daylightstar	G13	T8	10
0000718	F36W/Daylightstar Retail	36	Daylightstar	G13	T8	10



T8	15W	18W	30W	36W
L	438	590	895	1200
D	26	26	26	26







Packaging Note: The sleeve pictured is for the retail product

### Features

- Reproduces light conditions found at coral reefs through actinic blue light
- Promotes the growth of coral and invertebrates by supporting the growth of zooxanthellae
- See coral in its true colour(s)
- T5 - FHO: high output and lumen per watt in comparison to T8 versions
- New 5 l8: 50% more light output in comparison to the same length in T8. Ideal for the new generation of aquaria with T5 lamps, but in the length of T8 lamps. The ideal fit of the lamps in the aquarium results in a perfect illumination of the aquarium

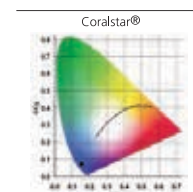
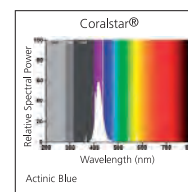


### Applications

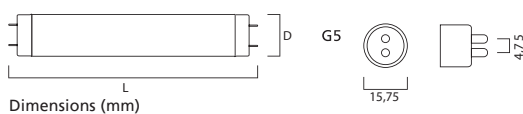
- Lighting to promote growth of coral and invertebrates in marine water aquariums

### Coralstar T5

Code	Description	Watt (W)	Colour	Cap	Diameter	Packing Qty
0002742	FHO24W/Coralstar	24	Actinic	G5	T5	25
0002745	FHO39W/Coralstar	39	Actinic	G5	T5	25
0002748	FHO54W/Coralstar	54	Actinic	G5	T5	25
0002751	FHO80W/Coralstar	80	Actinic	G5	T5	25
0002755	FHO39W/Coralstar Retail	28	Actinic	G5	T5	10
0002756	FHO54W/Coralstar Retail	45	Actinic	G5	T5	10
0002757	F28W T5 ø8 Coralstar Retail	54	Actinic	G5	T5	10
0002758	F45W T5 ø8 Coralstar Retail	45	Actinic	G5	T5	10
0002759	F54W T5 ø8 Coralstar Retail	54	Actinic	G5	T5	10



T5 Standard	24W	39W	54W	80W
L	549	849	1149	1449
D	16	16	16	16
T5 ø8	24W	45W	54W	
L	590	895	1200	
D	16	16	16	



Dimensions (mm)



Packaging Note: The sleeve pictured is for the retail product

Features

- Reproduces light conditions found at coral reefs through actinic blue light
- Promotes the growth of coral and invertebrates by supporting the growth of zooxanthellae
- See coral in its true colour(s)

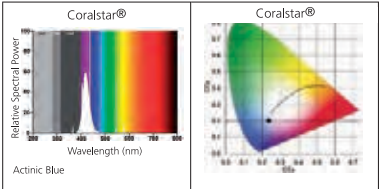


Applications

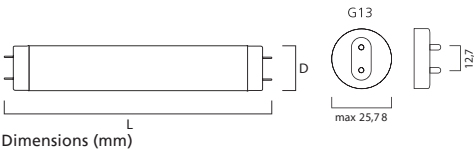
- Lighting to promote growth of coral and invertebrates in marine water aquariums

Coralstar T8

Code	Description	Watt (W)	Colour	Cap	Diameter	Packing Qty
0000719	F18W/Coralstar Retail	18	Actinic	G13	T8	10
0000725	F30W/Coralstar Retail	30	Actinic	G13	T8	10
0000726	F36W/Coralstar Retail	36	Actinic	G13	T8	10



T8	18W	30W	36W
L	590	895	1200
D	26	26	26





Packaging Note: The sleeve pictured is for the retail product

Features

- Ideal lamp for marine lighting.
- High colour rendering of the marine aquatic environment
- High colour temperature: 15000K
- Reproduces light conditions found at coral reefs through radiation in the 420-510 nm wavelength
- Promotes the growth of coral and invertebrates by supporting the growth of zooxanthellae
- Much bright light output than Coralstar and less blue



Applications

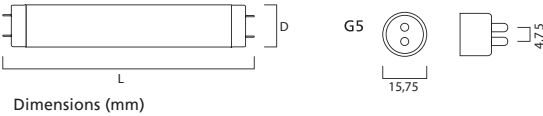
- Lighting of marine water aquaria

Marinestar T5 15000K

Code	Description	Watt (W)	Colour Temp (K)	Cap	Diameter	Packing Qty
0002720	FHO24W/Marinestar	24	15000	G5	T5	25
0002721	FHO39W/Marinestar	39	15000	G5	T5	25
0002722	FHO54W/Marinestar	54	15000	G5	T5	25
0002723	FHO80W/Marinestar	80	15000	G5	T5	25
0002725	F24W/Marinestar Retail	24	15000	G13	T5	10
0002726	F39W/Marinestar Retail	39	15000	G13	T5	10
0002727	F54W/Marinestar Retail	54	15000	G13	T5	10
0002728	F80W/Marinestar Retail	80	15000	G13	T5	10



T5 Standard	24W	39W	54W	80W
L	549	849	1149	1449
D	16	16	16	16





Packaging Note: The sleeve pictured is for the retail product

Features

- Promotes vitamin D3 production which aids good health, growth and the general well-being of reptiles in terrariums through a high content of UVB (up to 5%) and UVA (up to 30%)
- This full spectrum (6500 K) lamp improves the natural appearance of reptiles
- Shows reptiles in their true colours



Applications

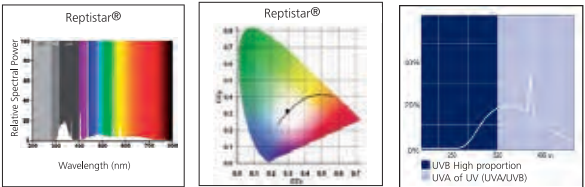
- For the artificial lighting of reptiles in terrariums

Directions for use

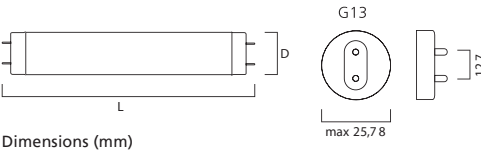
- This lamp emits UV-radiation. Avoid exposure to skin and eyes

Reptistar T8

Code	Description	Watt (W)	Colour	Cap	Light Output (lm)	Diameter	Packing Qty
0000731	F15W/Reptistar UV-B 5% Retail	15	Reptistar	G13	300	T8	10
0000732	F18W/Reptistar UV-B 5% Retail	18	Reptistar	G13	450	T8	10
0000733	F30W/Reptistar UV-B 5% Retail	30	Reptistar	G13	700	T8	10
0000734	F36W/Reptistar UV-B 5% Retail	36	Reptistar	G13	1000	T8	10
0000741	F15W/Reptistar UV-B 10% Retail	15	Reptistar	G13	300	T8	10
0000742	F18W/Reptistar UV-B 10% Retail	18	Reptistar	G13	450	T8	10
0000743	F30W/Reptistar UV-B 10% Retail	30	Reptistar	G13	700	T8	10
0000744	F36W/Reptistar UV-B 10% Retail	36	Reptistar	G13	1000	T8	10



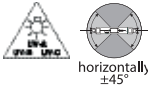
T8	15W	18W	30W	36W
L	361	438	895	1200
D	26	26	26	26





Features

- High light output and good efficiency
- High colour rendering
- Very high colour stability over the whole lamp life
- High colour temperature (10000K)
- Point-source of light creates attractive shadow effect of water ripples on the aquarium bed



Applications

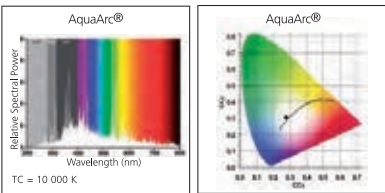
- For use in fresh and seawater aquaria
- Strong directional light which penetrates deep into large tanks
- Lifelike appearance of fish, corals and plants

Directions for use

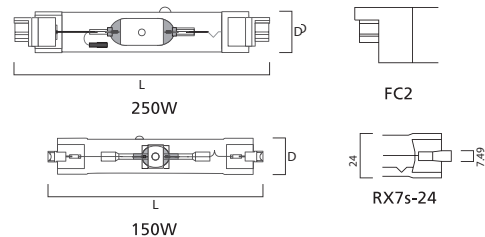
- Burning position: horizontal  $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with protective cover glass
- Ensure the lamp envelope is cleaned of finger prints before use
- Lamps should be operated with the arc tube tip-off pointing up-see instructions supplied with lamp
- This lamp emits UV-radiation. Avoid exposure to skin and eyes
- Not suitable for household room illumination

Aqua arc

Code	Description	Watt (W)	Volt (V)	Current (A)	Cap	Bulb Finish	Colour Temp (K)	Chromaticity Coordinate x	Chromaticity Coordinate y	Light Output (lm)	Packing Qty
0021049	HSI-TD 150W AquaArc	150	100	1.80	RX7s	clear	10000	0.277	0.311	9000	10
0021050	HSI-TD 250W AquaArc	250	100	3.00	FC2	clear	10000	0.275	0.323	14000	10



	150W	250W
L	135	162
D	25	28

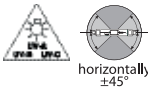


Dimensions (mm)



Features

- Very high colour temperature 20000K (bluish light)
- Very high colour stability over the entire lamp life
- Enhanced colour rendition
- Point-source of light creates attractive shadow effect of water ripples on the aquarium bed



Applications

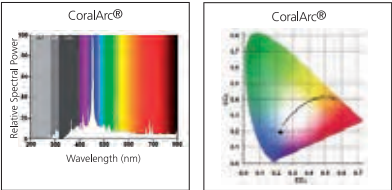
- For use in sea water aquaria
- Provides the specific spectrum (400-480 nm) necessary to achieve the blue chlorophyll absorption for zooxanthellae symbioses to develop

Directions for use

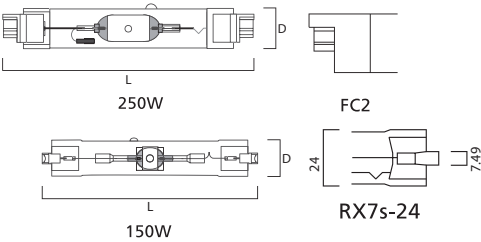
- Burning position: horizontal  $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with protective cover glass
- Ensure the lamp envelope is cleaned of finger prints before use
- Lamps should be operated with the arc tube tip-off up - see instructions supplied with lamp
- This lamp emits UV-radiation. Avoid exposure to skin and eyes
- Not suitable for household room illumination

CoralArc

Code	Description	Watt (W)	Volt (V)	Current (A)	Cap	Bulb Finish	Colour	Chromaticity Coordinate x	Chromaticity Coordinate y	Light Output (lm)	Packing Qty
0021028	HSI-TD 150W CoralArc	150	100	1.80	Rx7s	Clear	Blue	0.261	0.257	5400	10
0021029	HSI-TD 250W CoralArc	250	100	3.00	FC2	Clear	Blue	0.257	0.243	8000	10



	150W	250W
L	135	162
D	25	28



Dimensions (mm)



Features

- Converts electric current into infrared radiation



Applications

- Provides the necessary infrared radiation for reptiles in terrariums and for other pets like hamsters, mice etc

Directions for use

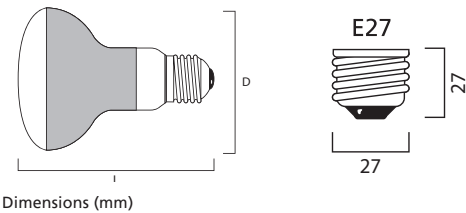
- Not suitable for household room illumination

Infrared Reflector

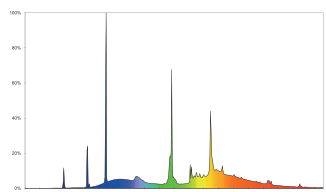
Code	Description	Watt (W)	Volt (V)	Type	Cap	Average Rated Life (Hrs)	Packing Qty
0033005	IR R63 50W	50	230	Infrared	E27	5000	10
0033006	IR R63 75W	75	230	Infrared	E27	5000	10
0033007	IR R80 100W	100	230	Infrared	E27	5000	10



	50W	75W	100W
L	103	103	110
D	63	63	80







- Features a specially tailored spectrum that complements the natural colours of meats
- Illuminates meat and charcuterie in their optimum colours for an irresistible presentation
- The truthful colour rendering does not disturb the natural colours of the products
- Manufactured in compliance with the DIN 10504 standard
- Available in Toughcoat–version (shatter proof). The protective FEP coating meets the IEC600682-75 pendulum hammer test (5 Joule) and 4m drop test demonstrating excellent glass retention in the event of accidental lamp breakage



Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001854	FHE 14W T5 176 FoodStar Meat	14	86	0.165	549	2A	G5	3000	650	25
0001819	FHE 21W T5 176 FoodStar Meat	21	126	0.165	849	2A	G5	3000	1050	25
0001820	FHE 28W T5 176 FoodStar Meat	28	166	0.170	1449	2A	G5	3000	1500	25
0001821	FHE 35W T5 176 FoodStar Meat	35	205	0.175	1449	2A	G5	3000	1850	25
0001855	F18W T8 176 FoodStar Meat	18	57	0.370	590	2A	G13	3000	700	25
0001856	F30W T8 176 FoodStar Meat	30	96	0.365	895	2A	G13	3000	1250	25
0001816	F36W T8 176 FoodStar Meat	36	103	0.430	1200	2A	G13	3000	1800	25
0001817	F36W T8 1M 176 FoodStar Meat	36	80	0.560	970	2A	G13	3000	1600	25
0001818	F58W T8 176 FoodStar Meat	58	110	0.670	1500	2A	G13	3000	2850	25
0001857	F70W T8 176 FoodStar Meat	70	128	0.700	1764	2A	G13	3000	3250	25

Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001787	FHE 14W T5 176 FoodStar Meat TC	14	86	0.165	549	2A	G5	3000	650	25
0001788	FHE 21W T5 176 FoodStar Meat TC	21	126	0.165	849	2A	G5	3000	1050	25
0001789	FHE 28W T5 176 FoodStar Meat TC	28	166	0.170	1149	2A	G5	3000	1500	25
0001790	FHE 35W T5 176 FoodStar Meat TC	35	205	0.175	1449	2A	G5	3000	1850	25
0001791	F18W T8 176 FoodStar Meat TC	18	57	0.370	590	2A	G13	3000	700	25
0001792	F30W T8 176 FoodStar Meat TC	30	96	0.365	895	2A	G13	3000	1250	25
0001793	F36W T8 176 FoodStar Meat TC	36	103	0.430	1200	2A	G13	3000	1800	25
0001794	F36W T8 1M 176 FoodStar Meat TC	36	80	0.560	970	2A	G13	3000	1600	25
0001795	F58W T8 176 FoodStar Meat TC	58	110	0.670	1500	2A	G13	3000	2850	25
0001796	F70W T8 176 FoodStar Meat TC	70	128	0.700	1764	2A	G13	3000	3250	25

	A	B	B	C	D
T8	max	min	max	max	nom
18W	589.8	594.5	596.9	604.0	26
30W	894.6	899.3	901.7	908.8	26
36W	1199.4	1204.1	1206.5	1213.6	26
36W 1M	970.0	974.1	977.1	984.2	26
58W	1500.0	1504.7	1507.1	1514.2	26
70W	1763.8	1768.5	1770.9	1778.0	26

	A	B	B	C	D
T5	max	min	max	max	nom
14W	549	553.7	556.1	563.2	16
21W	849	853.7	856.1	863.2	16
28W	1149	1153.7	1156.1	1163.2	16
35W	1449	1453.7	1456.1	1463.2	16



Dimensions (mm)

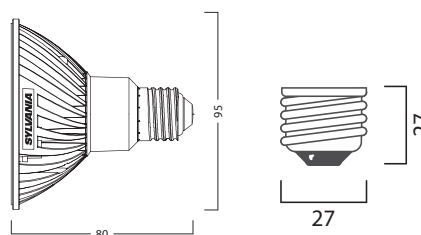
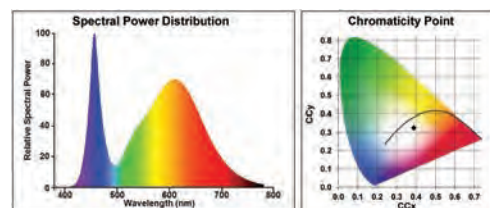


- Full retrofit LED for standard halogen lamps
- High energy saving: Compared to special colour halogen lamps
- Very long life: 25000hrs with more than 100000 switches
- Features a specially tailored spectrum that complements the natural colours of meats illuminates meat and charcuterie in their optimum colours for irresistible presentation
- The truthful colour rendering does not disturb the natural colours of the products
- Integrated electrical isolating transformer for highest safety, even in humid conditions



**foodstar Meat - RefLED**

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	CRI	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0001774	Hi-Spot 95 RefLED 9W 25° Foodstar Meat	10	220-240	25	E27	85	3500	350	25000	10



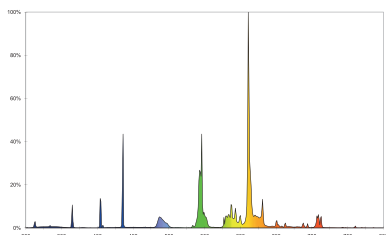
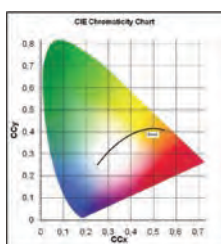
Dimensions (mm)



T8



T5



- FoodStar bread lamps have a radiation concentrated in the yellowish part of the spectrum
- Truthful colour rendering does not disturb the natural colours of the products
- Reduced warm up of the goods illuminated
- Available in Toughcoat-version (shatter proof). The protective FEP coating meets the IEC600682-75 pendulum hammer test (5 Joule) and 4m drop test demonstrating excellent glass retention in the event of accidental lamp breakage



## foodstar Bread - Fluorescent

Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001858	FHE 21W T5 FoodStar Bread	21	126	0.165	849	2A	G5	2300	1650	25
0001859	FHE 28W T5 FoodStar Bread	28	166	0.170	1149	2A	G5	2300	2250	25
0001860	FHE 35W T5 FoodStar Bread	35	205	0.175	1449	2A	G5	2300	2850	25
0001861	F18W T8 FoodStar Bread	18	57	0.370	590	2A	G13	2300	1100	25
0001862	F30W T8 FoodStar Bread	30	96	0.365	895	2A	G13	2300	2100	25
0001863	F36W T8 FoodStar Bread	36	103	0.430	1200	2A	G13	2300	3000	25
0001864	F58W T8 FoodStar Bread	58	110	0.670	1500	2A	G13	2300	4500	25

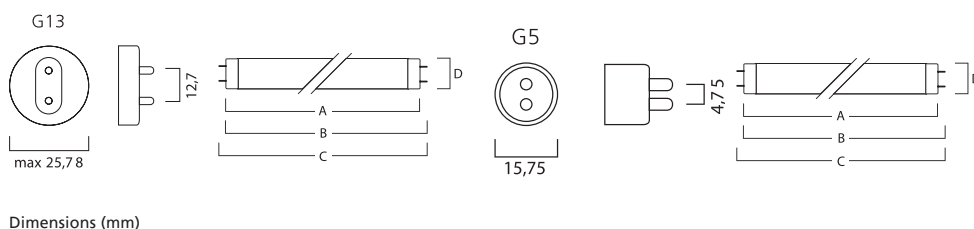
## foodstar Bread - Fluorescent Toughcoat™

Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001797	FHE 21W T5 FoodStar Bread TC	21	126	0.165	849	2A	G5	2300	1650	25
0001798	FHE 28W T5 FoodStar Bread TC	28	166	0.170	1149	2A	G5	2300	2250	25
0001799	FHE 35W T5 FoodStar Bread TC	35	205	0.175	1449	2A	G5	2300	2850	25
0001800	F18W T8 FoodStar Bread TC	18	57	0.370	590	2A	G13	2300	1100	25
0001801	F30W T8 FoodStar Bread TC	30	96	0.365	895	2A	G13	2300	2100	25
0001802	F36W T8 FoodStar Bread TC	36	103	0.430	1200	2A	G13	2300	3000	25
0001803	F58W T8 FoodStar Bread TC	58	110	0.670	1500	2A	G13	2300	4500	25

T8	A max	B min	B max	C max	D nom
18W	589.8	594.5	596.9	604.0	26
30W	894.6	899.3	901.7	908.8	26
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26

T5	A max	B min	B max	C max	D nom
21W	849	853.7	856.1	863.2	16
28W	1149	1153.7	1156.1	1163.2	16
35W	1449	1453.7	1456.1	1463.2	16



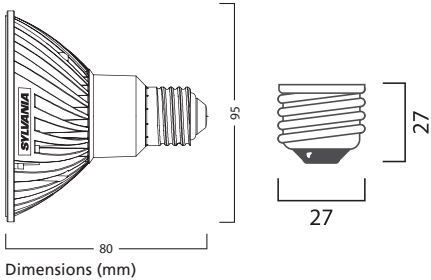
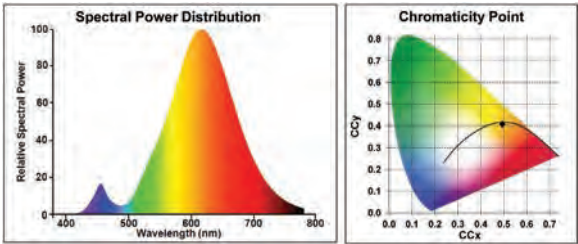


- Full retrofit LED for standard halogen lamps
- High energy saving: Compared to white sodium and filtered metal halide lamps
- Very long life: 25000hrs with more than 100000 switches
- Features a specially tailored spectrum that complements the natural colours of bread and patisserie. Illuminates them in their optimum colours for irresistible presentation
- The truthful colour rendering does not disturb the natural colours of the products
- Integrated electrical isolating transformer for highest safety, even in humid conditions



foodstar Bread - RefLED

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	CRI	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0001777	Hi-Spot 95 RefLED 9W 25° Foodstar Bread	10	220-240	25	E27	75	2300	390	25000	10

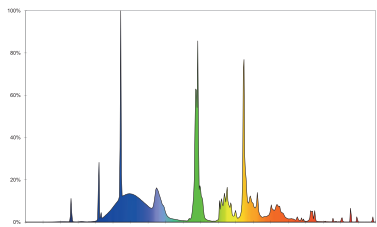
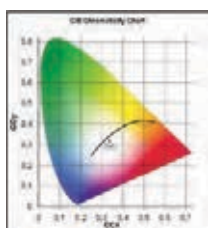




T8



T5



- Fruit and vegetables should reflect freshness. They need a higher colour temperature and cooler light and the display of fish needs it even more
- Truthful colour rendering does not disturb the natural colours of the products
- Reduced warm up of the goods illuminated
- Available in Toughcoat-version (shatter proof). The protective FEP coating meets the IEC600682-75 pendulum hammer test (5 Joule) and 4m drop test demonstrating excellent glass retention in the event of accidental lamp breakage



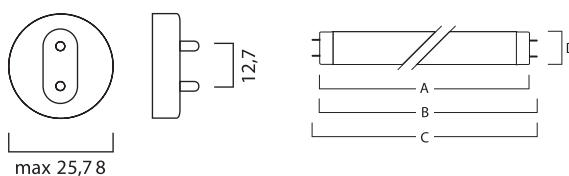
## foodstar Fresh - Fluorescent

Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001865	FHE 21W T5 FoodStar Fresh	21	126	0.165	849	2A	G5	6400	1250	25
0001866	FHE 28W T5 FoodStar Fresh	28	166	0.170	1149	2A	G5	6400	1700	25
0001867	FHE 35W T5 FoodStar Fresh	35	205	0.175	1449	2A	G5	6400	2150	25
0001868	F36W T8 FoodStar Fresh	36	103	0.430	1200	2A	G13	6400	2350	25
0001869	F58W T8 FoodStar Fresh	58	110	0.670	1500	2A	G13	6400	3500	25

## foodstar Fresh - Fluorescent Toughcoat™

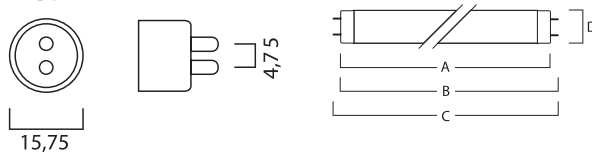
Code	Description	Watt (W)	Volt (V)	Current (mA)	Length (mm)	CRI	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0001804	FHE 21W T5 FoodStar Fresh TC	21	126	0.165	849	2A	G5	6400	1250	25
0001805	FHE 28W T5 FoodStar Fresh TC	28	166	0.170	1149	2A	G5	6400	1700	25
0001806	FHE 35W T5 FoodStar Fresh T	35	205	0.175	1449	2A	G5	6400	2150	25
0001807	F36W T8 FoodStar Fresh TC	36	103	0.430	1200	2A	G13	6400	2350	25
0001808	F58W T8 FoodStar Fresh TC	58	110	0.670	1500	2A	G13	6400	2350	25

G13



	A	B	B	C	D
	max	min	max	max	nom
T8					
36W	1199.4	1204.1	1206.5	1213.6	26
58W	1500.0	1504.7	1507.1	1514.2	26

G5



	A	B	B	C	D
	max	min	max	max	nom
T5					
21W	849	853.7	856.1	863.2	16
28W	1149	1153.7	1156.1	1163.2	16
35W	1449	1453.7	1456.1	1463.2	16

Dimensions (mm)

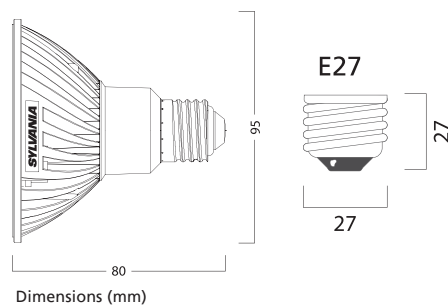
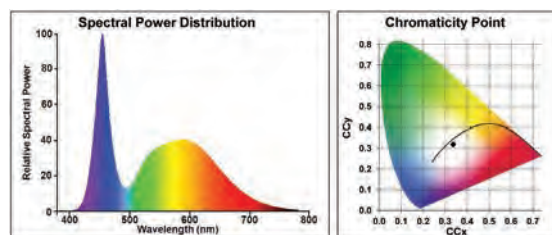


- Full retrofit LED for standard halogen lamps
- High energy saving
- Very long life: 25000hrs with more than 100000 switches
- Features a specially tailored spectrum that complements the natural colours of fruit, vegetables and fish. Illuminates them in their optimum colours for irresistible presentation
- The truthful colour rendering does not disturb the natural colours of the products
- Integrated electrical isolating transformer for highest safety, even in humid conditions



### Foodstar Fresh - RefLED

Code	Description	Watt (W)	Volt (V)	Beam Angle (°)	Cap	CRI	Colour Temp (K)	Luminous Flux (lm)	Average Rated Life (Hrs)	Packing Qty
0001780	Hi-Spot 95 RefLED 9W 25° Foodstar Fresh	10	220-240	25	E27	80	5400	525	25000	10





## Features

- Full-spectrum high colour rendering T8 fluorescent lamp
- Colour rendering: Ra98/Class 1A
- Colour temperature of 6500K (daylight characteristic)



## Applications

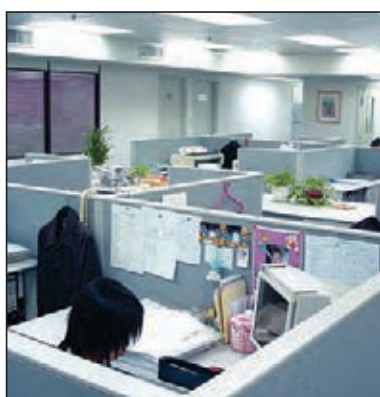
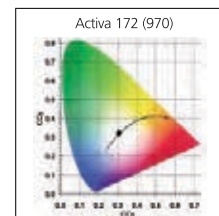
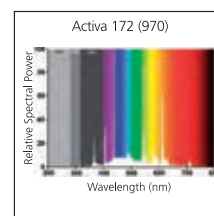
- For all applications where natural colour rendering is required
- Supports the treatment of Seasonal Affective Disorder (Winter Depression) SAD

## Activa-Seasonal Affective Disorder (SAD) T5

Code	Description	Watt (W)	Volt (V)	Current (mA)	CRI Group	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0002240	FHE 14W/T5/Activa	14	86	165	1	G5	6500	1090	25
0002241	FHE 28W/T5/Activa	28	166	170	1	G5	6500	2400	25
0002242	FHE 35W/T5/Activa	35	205	175	1	G5	6500	3000	25
0002243	FHO 54W/T5/Activa	54	120	455	1	G5	6500	4300	25

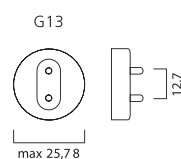
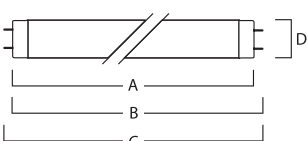
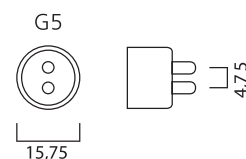
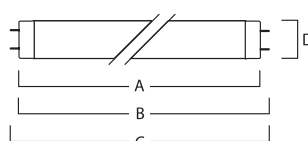
## Activa-Seasonal Affective Disorder (SAD) T8

Code	Description	Watt (W)	Volt (V)	Current (mA)	CRI Group	Cap	Colour Temp (K)	Luminous Flux (lm)	Packing Qty
0002218	F18W/T8/ACTIVA	18	57	370	1A	G13	6500	1000	25
0002219	F36W/T8/ACTIVA	36	103	430	1A	G13	6500	2300	25
0002220	F58W/T8/ACTIVA	58	110	670	1A	G13	6500	3700	25
0002188	F70W/T8/ACTIVA	70	128	700	1A	G13	6500	4600	25



T5	A max	B min	B max	C max	D nom
21W	849	853.7	856.1	863.2	16
28W	1149	1153.7	1156.1	1163.2	16
35W	1449	1453.7	1456.1	1463.2	16

T8	A max	B min	B max	C max	D nom
18W	590	595	597	604	26
36W	1199	1204	1207	1214	26
58W	1500	1505	1507	1514	26
70W	1764	1769	1771	1778	26



Dimensions (mm)





### Features

- Tubular envelope made from transparent clear quartz
- Transmits the full spectrum of visible and infrared radiation
- Clear lamps are the most efficient for transmitting infrared energy
- Instant on-off capability

### Applications

- The glare from the visible light component restricts these to industrial applications, eg Drying of paints in tunnels and automotive body shops
- Heating of plastics for PET bottle blowing
- High speed drying in paper production mills
- Drying of lacquers and printing inks
- Baking and curing of powder coatings
- Thermal sterilisation

### Clear Quartz Halogen lamps

Code	Description	Watt (W)	Volt (V)	Cap	Burning Position	Finish	Colour Temp (K)	Average Rated Life (Hrs)	Packing Qty
0033020	IR 300W CL SK15 230V	300	230	SK15	Horizontal	Clear	2550	2000	50
0033021	IR 300W CL R7s 230V	300	230	R7s	Horizontal	Clear	2550	5000	100
0033022	IR 500W CL R SK15 240V	500	240	SK15	Horizontal	Reflector	2450	5000	10
0033023	IR 1000W CL R X 240V	1000	240	Metal strap X	Universal	Reflector	2450	5000	10
0033024	IR 1000W CL SK15 235V	1000	235	SK15	Universal	Clear	2400	5000	10
0033025	IR 1000W CL R SK15 235V	1000	235	SK15	Universal	Reflector	2400	5000	10
0033026	IR 1200W CL R SK15 235V	1200	235	SK15	Universal	Reflector	2600	5000	10
0033027	IR 2000W CL R SK15 235V	2000	235	SK15	Horizontal	Reflector	2700	5000	10

### Dimensions (mm)

	300W SK15 Fig.6	300W R7s Fig.2	500W SK15 Fig.3	1000W RX Fig.4	1000W SK15 Fig.1	1000W R SK15 Fig.3	1200W SK15 Fig.5	2000W SK15 Fig.3
A (Lamp Length)	120	117.6	216	370	353	353	222	353
B (Heat Length)	60	60	176	270	280	280	157	270
C (Diameter)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
D (Cable X1)	140	N/A	230	N/A	230	230	140	230
E (Cable X2)	140	N/A	230	N/A	230	230	140	230
Cable Connection	Splice	N/A	Fork	N/A	Fork	Fork	Fork	Fork

Fig 1

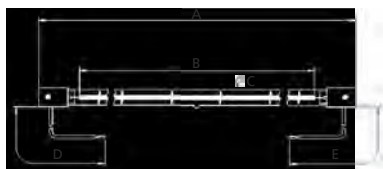


Fig 2

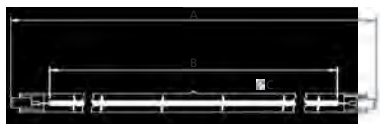


Fig 3



Fig 4



Fig 5



Fig 6



Dimensions (mm)



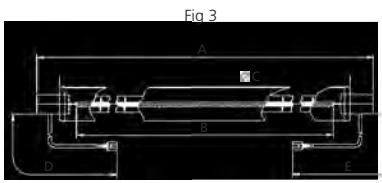
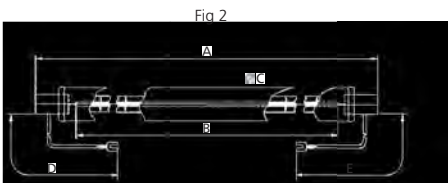
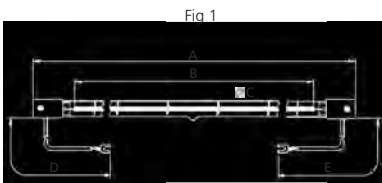
- Features**
- Tubular envelope made from ruby red quartz (Rub Slim)
  - Secondary outer envelope made from red quartz (Ruby Jacket)
  - Transmits virtually all infrared while blocking most visible light
  - Instant on-off capability

- Applications**
- Space heating of large rooms
  - Outdoor heating of communal areas
  - Energy efficient alternative to patio heaters

Ruby Red Halogen lamps

Code	Description	Watt (W)	Volt (V)	Cap	Burning Position	Finish	Colour Temp (K)	Average Rated Life (Hrs)	Packing Qty
0033016	IR 1000W Ruby SK15 235V	1000	235	SK15	Universal	Ruby Slim	2450	5000	10
0033017	IR 1200W Ruby SK15 235V	1200	235	SK15	Universal	Ruby Slim	2450	5000	10
0033018	IR 1500W Ruby SK15 235V	1500	235	SK15	Horizontal	Ruby Jacketed	2350	5000	10
0033019	IR 2000W Ruby SK15 235V	2000	235	SK15	Horizontal	Ruby Jacketed	2350	5000	10

Dimensions (mm)	1000W Fig.1	1200W Fig.1	1500W Fig.2	2000W Fig.3
A (Lamp Length)	353	353	346	346
B (Heat Length)	280	60	176	270
C (Diameter)	10.5	10.5	20.0	20.0
D (Cable X1)	230	230	230	340
E (Cable X2)	230	230	230	340
Cable Connection	Fork	Fork	Fork	Tab



Dimensions (mm)



### Features

- Tubular envelope made from translucent (satin) or clear quartz
- Emits both visible light and infra red radiation
- Rapid on-off capability
- No pre heating of the cabin needed

### Applications

- Personal care in infra-red cabins
- Optimised spectrum to penetrate deeper into the skin for more efficient heat dissipation
- Creates a softer and more pleasant heating sensation than regular lamps

### Infra Red Cabin Halogen lamps

Code	Description	Watt (W)	Volt (V)	Cap	Burning Position	Finish	Colour Temp (K)	Average Rated Life (Hrs)	Packing Qty
0033028	IR 350W CL R7s 235V	350	235	R7s	Horizontal	Clear	1750	5000	80
0033040	IR 350W TL SK15 235V 550mm	350	235	SK15	Horizontal	Translucent	1750	5000	20
0033029	IR 500W TL SK15 235V 700mm	500	235	SK15	Horizontal	Translucent	1750	5000	20
0033030	IR 500W TL SK15 235V 550mm	500	235	SK15	Horizontal	Translucent	1750	5000	20
0033031	IR 750W CL SK15 235V	750	235	SK15	Horizontal	Clear	2000	5000	20
0033032	IR 750W TL SK15 235V	750	235	SK15	Horizontal	Translucent	1750	5000	20
0033033	IR 750W CL SK15 235V	750	235	SK15	Horizontal	Clear	1750	5000	20
0033034	IR 1300W CL SK15 235V	1300	235	SK15	Horizontal	Clear	2000	5000	20

### Dimensions (mm)

	350W R7s Fig.6	350W SK15 Fig.2	500W SK15 700mm Fig.3	500W SK15 550mm Fig.4	750W Fig.1	1300W Fig.3
A (Lamp Length)	185.7	628.5	787.5	628.5	787.5	787.5
B (Heat Length)	115	550	700	550	700	700
C (Diameter)	10.0	11.0	11.0	11.0	11.0	11.0
D (Cable X1)	N/A	1200	1200	1200	1200	1200
E (Cable X2)	N/A	230	230	230	230	230
Cable Connection	N/A	Splice	Splice	Splice	Splice	Fork

Fig 1



Fig 2

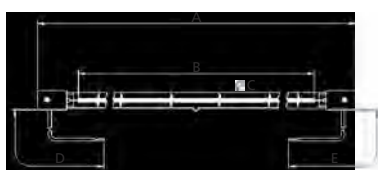


Fig 3



Dimensions (mm)



## Features

- Tubular quartz envelope with gold dichroic coating
- Blocks more light than Ruby quartz types, for lower glare
- Advanced vacuum-sputtered coating won't crack or peel
- Coating extends right over the tip-off area – no light leaks

## Applications

- Gradually replacing ruby quartz types where reduced glare is desirable
- Creates comfort zones in the outdoor cold, ideal for patios, restaurants and cafés
- Efficient spaceheating in large buildings e.g. churches, halls, warehouses, garages, stadiums, exhibition halls etc
- Glare free de-icing of pedestrian walkways

## Gold Filter Halogen lamps

Code	Description	Watt (W)	Volt (V)	Cap	Burning Position	Finish	Average Rated Life (Hrs)	Packing Qty
<b>0033035</b>	IR 1000W Gold X 240V	1000	240	Metal strap X	Universal	Gold plated	5000	10
<b>0033036</b>	IR 1300W Gold R7S 240V	1300	240	R7s	Universal	Gold plated	1000	100
<b>0033037</b>	IR 1500W Gold SK15 240V	1500	240	SK15	Horizontal	Gold plated	5000	10
<b>0033038</b>	IR 1500W Gold SK15 120V	1500	120	SK15	Horizontal	Gold plated	5000	10
<b>0033039</b>	IR 2000W Gold SK15 240V	2000	240	SK15	Horizontal	Gold plated	5000	10

Dimensions (mm)	1000W Fig.1	1300W Fig.2	1500W Fig.3	1500W 120V Fig.4	2000W Fig.5
A (Lamp Length)	370	254	353	353	353
B (Heat Length)	280	180	280	280	280
C (Diameter)	12.5	12.5	12.0	12.0	12.0
D (Cable X1)	N/A	N/A	600	300	600
E (Cable X2)	N/A	N/A	600	300	600
Cable Connection	N/A	N/A	Tab	Fork	Tab



Fig 1

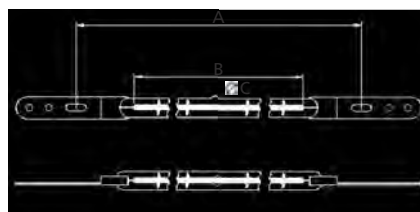


Fig 2

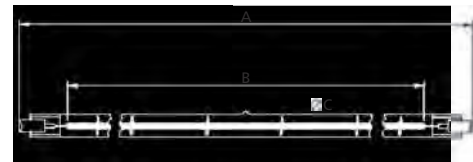


Fig 3



Fig 4



Dimensions (mm)



**Features**

- Integral reflector facilitates simple and economical installations
- Pre-focussed optics deliver intensely controlled radiation
- PAR38 lamps have a pressed hard glass bulb with precision-optical lens
- R125 and R95 lamps have a blown hard glass bulb for low cost applications
- E27 cap allows use in almost any suitable lampholder
- Instant heat after switch-on
- All R125-lamps have a mechanical fitted base in order to avoid loose base problems

**Applications**

- Animal husbandry and other agricultural uses
- Food heating in the catering trade
- Wellness and medical applications for muscle relaxation
- Creates a pleasant warmth in bathroom drying areas
- Various industrial uses for drying, heating, vulcanising, distilling, softening, melting, pasteurising, polymerising, evaporating, gelatinising etc

Infra Red Reflector Incandescent lamps

Code	Description	Watt (W)	Volt (V)	Cap	Finish	Average Rated Life (Hrs)	Packing Qty
0033004	IR R95 100W	100	230	E27	Ruby	5000	20
0033009	IR R125 150W	150	240	E27	Ruby	5000	12
0033010	IR R125 175W	175	240	E27	Ruby	5000	12
0033011	IR R125 250W	250	240	E27	Ruby	5000	12
0033012	IR R125 300W	300	240	E27	Ruby	5000	12
0033013	IR R125 375W	375	240	E27	Ruby	5000	12
0033014	IR PAR38 150W	150	240	E27	Ruby	5000	12
0033015	IR PAR38 175W	175	240	E27	Ruby	5000	12



R95 Lamp Dimensions (mm)  
Fig.1

L	130
D	95

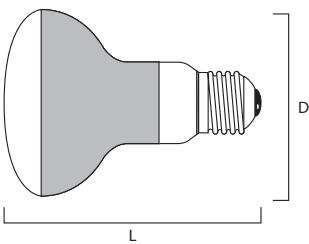
R125 Lamp Dimensions (mm)  
Fig.1

L	185
D	126

PAR38 Lamp Dimensions (mm)  
Fig.2

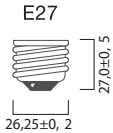
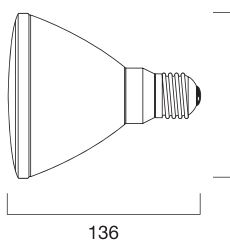
L	135
D	122

Fig 1

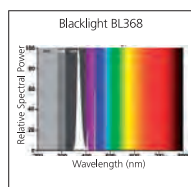
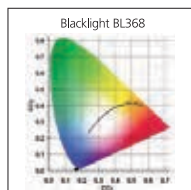


Dimensions (mm)

Fig 2







## Features

- BL368 tubes emit an upgraded highly concentrated radiation with peak around 368 nm. Flying insects eye sensitivity is generally at or near this frequency
- 100% improvement in effectiveness (at 368nm)
- Depreciation of UV-A output over time is significantly reduced (80% at 5000hrs of original 100 hour output)
- Performs longer and better throughout the insect season
- Same shape, structural and electrical characteristics and control circuits as standard T12,T8 or T5 tubes



## Applications

- Insect traps, insect attraction is strongly increased
- Restaurants, kitchens, food shops, supermarkets
- Diazo printing machines
- Photo Polymerisation
- Chemical processing
- Mineral detection
- Various technical applications

## Directions for use

- Maximum exposure limits are set by EN60335-2-59:1997 at an effective 1.0 milliWatt per metre squared (1.0 mW/m<sup>2</sup>) measured at a distance of 1 metre – originally based on the recommendations of the National Radiological Protection Board in the UK. The irradiance value for a single BL368-lamp measured without reflector and/or fixture, in free air at 25 celsius, is varying between 0.2 and 0.4 mW/m<sup>2</sup> depending on the wattage

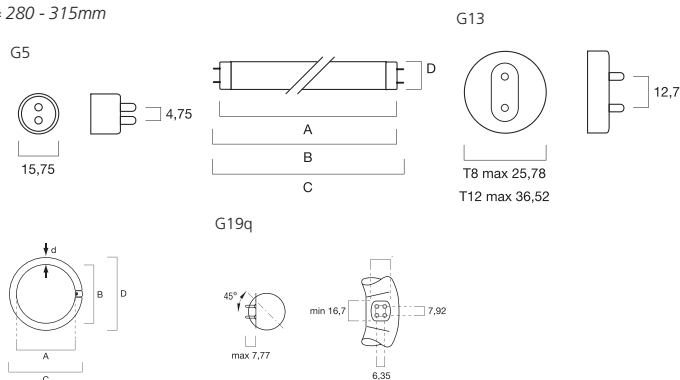
## Blacklight BL368 Linear & Circline

Code	Description	Watt (W)	Volt (V)	Current (A)	Light Colour	Cap	Packing Qty
0000085	F4W T5 BL368	4	29	0.170	BL368	G5	50
0000088	F6W T5 BL368	6	42	0.160	BL368	G5	25
0000089	F8W T5 BL368	8	56	0.145	BL368	G5	25
0000097	F11W T5 BL368	11	34	0.350	BL368	G5	25
0000090	F15W T5 BL368	15	44	0.310	BL368	G5	25
0000082	F15 T8 BL368	15	55	0.310	BL368	G13	25
0000091	F18W T8 BL368 24"	18	59	0.36	BL368	G13	25
0002166	F25 T8 BL368 18"	25	38	0.600	BL368	G13	25
0000098	F30 T8 BL368	30	96	0.365	BL368	G13	25
0000092	F36W T8 BL368 24"	36	50	0.85	BL368	G13	25
0000361	F20 T12 BL368 24"	20	57	0.370	BL368	G13	25
0001638	F40 T12 BL368 24"	40	47	0.880	BL368	G13	25
0000099	F40 T12 BL368 48"	40	103	0.430	BL368	G13	25
0000456	FC22 T9 BL368	22	62	0.400	BL368	G10q	12
0000100	FC32 T9 BL 368 8"	32	57	0.480	BL368	G10q	12

UV-A= 315 - 400nm  
UV-B= 280 - 315nm

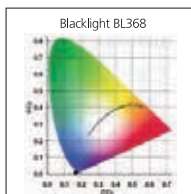
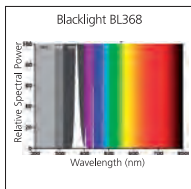


	A max	B min	B max	C max	D nom
4W	135.9	140.6	143.0	150.1	16
6W	212.1	216.8	219.2	226.3	16
8W	288.3	293.0	295.4	302.5	16
11W	212.1	216.8	219.2	226.3	16
15WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
18WT8	589.8	594.5	596.9	604.0	26
25WT8 18"	437.4	442.1	444.5	451.6	26
30WT8	894.6	899.3	901.7	908.8	26
36WT8	589.8	594.5	596.9	604.0	26
20WT12 24"	589.8	594.5	596.9	604.0	38
40WT12 24"	589.8	594.5	596.9	604.0	38
40WT12 48"	1199.4	1204.1	1206.5	1213.6	38



## Dimensions (mm)

	A min	A max	B min	B max	D min	D max	d min	d max
22W	149.1	155.6	147.6	157.2	203.2	215.9	26.2	30.9
32W	149.1	155.6	147.6	157.2	203.2	215.9	26.2	30.9



### Features

- These BL368 tubes emit an upgraded highly concentrated radiation with peak around 368nm. Flying insect - eye sensitivity is generally at or near this frequency
- 100% improvement in effectiveness (at 368nm)
- Depreciation of UV-A output over time is significantly reduced (80% at 5000hrs of original 100 hour output)
- Performs longer and better throughout the insect season



### Directions for use

- Maximum exposure limits are set by EN60335 2-59:1997 at an effective 1.0 milliWatt per metre squared (1.0 mW/m) measured at a distance of 1 metre - originally based on the recommendations of the National Radiological Protection Board in the UK. The irradiance value for a single BL BL368-lamp measured without reflector and/or fixture, in free air at 25 celsius, is varying between 0.2 and 0.4 mW/m depending on the wattage

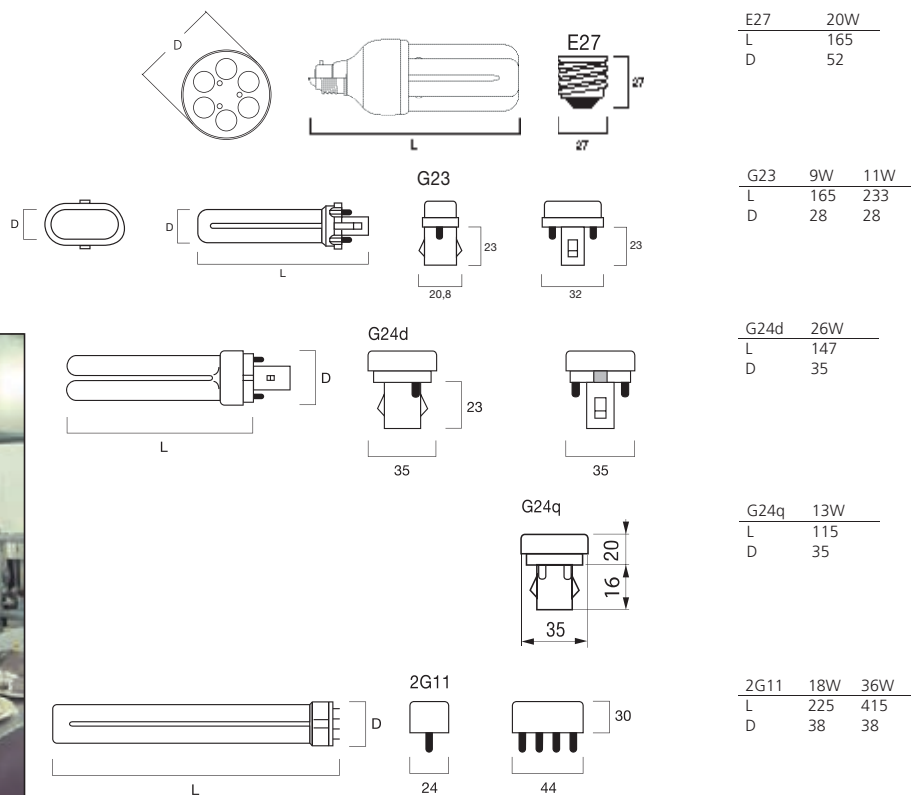
### Blacklight BL355 Compact

Code	Description	Watt (W)	Volt (V)	Current (A)	Lamp Colour	Cap	Packing Qty
0025275	LYNX-S BL355 9W	9	60	0.170	BL355	G23	50

### Blacklight BL368 Compact

Code	Description	Watt (W)	Volt (V)	Current (A)	Lamp Colour	Cap	Packing Qty
0025706	MiniLynx 20W BL368	20	230	0.160	BL368	E27	20
0025411	Lynx-s 9W BL368	9	60	0.170	BL368	G23	50
0025412	Lynx-S 11W BL 368	11	91	0.175	BL368	G23	50
0025708	Lynx-DE 13W BL368	13	91	0.175	BL368	G24q-1	50
0025709	Lynx-D 26W BL368	26	105	0.325	BL368	G24d-3	50
0025268	Lynx-L 18W BL368	18	58	0.375	BL368	2G11	10
0025710	Lynx-L 36W BL368	36	106	0.435	BL368	2G11	10

UV-A= 315-400nm UV-B=280-315nm



Dimensions (mm)







## Features

- Excellent fragment retention in the event of breakage
- The protective FEP coating meets the IEC60068-2-75 Pendulum Hammer test (5 Joule) and the 4m drop test, demonstrating excellent glass retention in the event of accidental lamp breakage
- The 97% UV-A transmission of FEP maintains maximum insect attraction
- No discolouration or yellowing of shatter resistant coating during the entire lamp life (> 10,000 hrs)
- The FEP material does not degrade during life. Versions employing PET coatings become brittle, and may not contain fragments. PET is also less transparent for UV-radiation
- The coating withstands up to 200°C in both open and enclosed IP65 fittings.
- The melting temperature is 260°C
- Meets all necessary regulations for resistance to heat and fire, and does not support combustion when exposed to naked flame or excessive heat. It passes the 850°C Glow Wire Test
- Satisfies the requirements of the International Food Standard (IFS 2004)
- FDA approved, in compliance with 21CFR177.1550 Regulatory Compliance Status
- Satisfies the requirements of the BRC (British Retail Consortium) leading supermarkets global standard. In paragraph 3.2.2.6.2 it states "All bulbs and strip lights, including those on electric fly killer units, where they constitute a risk to products, shall be protected by shatterproof plastic diffusers, sleeve covers or with a shatterproof protective coating"



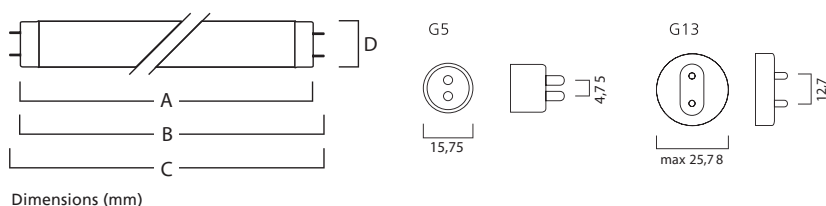
## Applications

- Insect attraction in restaurants, kitchens, food shops, supermarkets
- Food processing plants
- Pharmaceutical industry
- The risk of glass and mercury contamination is strongly decreased
- Help to avoid injury and loss of production time

## Blacklight BL368 FEP Toughcoat™

Code	Description	Watt (W)	Volt (V)	Current (A)	Lamp Colour	Cap	Packing Qty
0001648	F8W T5 BL368 Toughcoat™	8	56	0.145	BL368	G5	25
0001649	F11W T5 BL368 Toughcoat™	11	34	0.350	BL368	G5	25
0001650	F15W T5 BL368 Toughcoat™	15	44	0.310	BL368	G5	25
0000124	F15W T8 BL 368 Toughcoat™	15	55	0.310	BL368	G13	25
0001664	F18W T8 BL368 Toughcoat™ 24"	18	59	0.36	BL368	G13	25
0001651	F25W T8 BL 368 Toughcoat™ 18"	25	38	0.600	BL368	G13	25
0001652	F30W T8 BL 368 Toughcoat™ 24"	30	96	0.365	BL368	G13	25
0001665	F36W T8 BL368 Toughcoat™ 24"	36	50	0.85	BL368	G13	25
0000125	F20W T12 BL 368 Toughcoat™ 24"	20	57	0.370	BL368	G13	25
0000126	F40W T12 BL 368 Toughcoat™ 24"	40	47	0.880	BL368	G13	25
0001630	F40W T12 BL 368 48" Toughcoat™ 48"	40	103	0.430	BL368	G13	25

	A max	B min	B max	C max	D nom
8WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
15WT5	288.3	293.0	295.4	302.5	16
15WT8	437.4	442.1	444.5	451.6	26
18W 24"	589.8	594.5	596.9	604.0	26
20W/2ft-24"	589.8	594.5	596.9	604.0	38
25WT8 18"	437.4	442.1	444.5	451.6	26
30WT8	894.6	899.3	901.7	908.8	26
36W 24"	589.8	594.5	596.9	604.0	26
40W/2ft-24"	589.8	594.5	596.9	604.0	38
40W/4ft-48"	1199.4	1204.1	1206.5	1213.6	38





### Features

- These lamps consist of a tubular glass envelope and emit more than 85% of their energy in the UV-C ultra violet radiation with a peak at 253.7nm for germicidal action
- Shape, electrical characteristics and lighting circuits are similar to general fluorescent lamps
- The majority of germicidal lamps operate most efficiently in still air at an ambient temperature of 25°
- All lamps are Ozone free
- A protective coating on the inside of the lamp limits the depreciation of the UV-C output

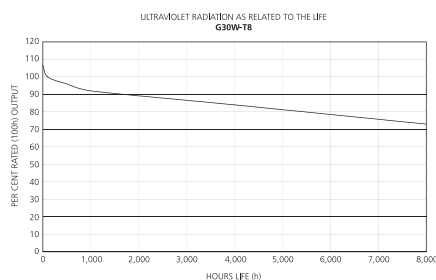
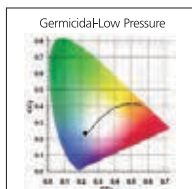
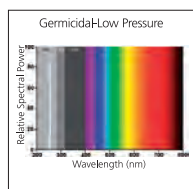


### Applications

- Residential drinking water units
- Stand alone air purifiers
- Wall mounted air purification units
- Ponds & Aquaria

### Directions for use

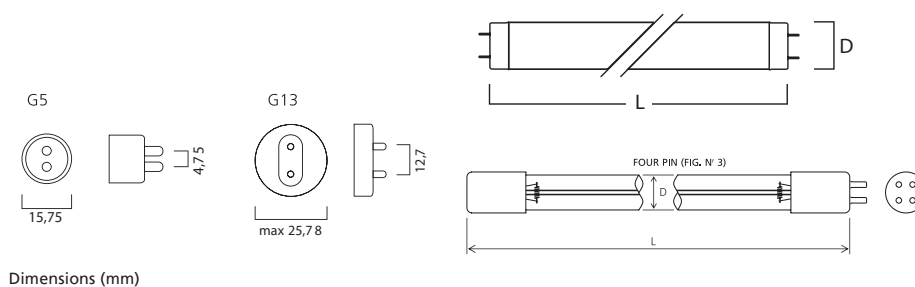
- The radiation from these lamps is very harmful to eyes and skin. Always protect your eyes and skin against radiation
- Germicidal lamps must only be used in appropriate equipment and applications
- When using UV-C emitting lamps, the official reference guides and the current industrial safety guideline must be followed
- Maximum Permissible Exposure Time (MPET) can be established for a given range of wavelengths. For example: 1 minute/day at a distance of 30cm
- Germicidal lamps emit UV-C radiation and must not be used for general lighting purposes



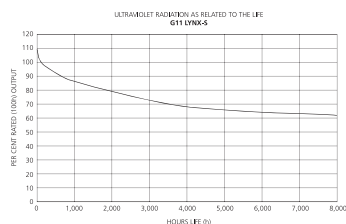
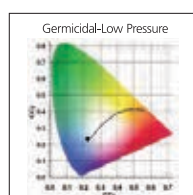
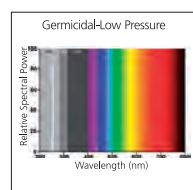
	G4T5 4W	G6T5 6W	G8T5 8W	G11T5 11W
L	136	212	288	212
D	16	16	16	16
	G16T5 16W	G10T8 10W	G15T8 15W	G25T8 25W
L	288	330	437	436
D	16	26	26	26
	G30T8 30W	G36T8 36W	G55T8 55W	G58T8 58W
L	894	1198	893	1500
D	26	26	26	26

### Germicidal Linear

Code	Description	Watt (W)	Volt (V)	Current (A)	UV Output at 25°	Cap	Average Rated Life (Hrs)	Packing Qty
0002328	G4W T5	4	30	0.162	0.8	G5	6000	50
0002216	G6W T5	6	42	0.160	1.7	G5	6000	50
0000501	G8W T5	8	56	0.145	2.5	G5	6000	24
0000507	G11W T5 HO	11	37	0.330	2.2	G5	8000	50
0025016	G11W T5 HO 4-pin	11	37	0.330	2.2	Four pin	8000	45
0025017	G16W T5 HO 4-pin	16	50	0.400	3.9	Four Pin	8000	45
0000508	G16W T5 HO	16	50	0.350	3.2	G5	8000	24
0002482	G10W T8	10	46	0.230	2.6	G13	6000	10
0000502	G15W T8	15	55	0.310	4.9	G13	8000	24
9000526	G25W T8	25	46	0.600	6.9	G13	8000	24
0000503	G30W T8	30	96	0.365	13.4	G13	8000	24
0000504	G36W T8	36	103	0.430	15.5	G13	8000	20
0002208	G55W T8	55	83	0.770	18.0	G13	8000	96
0002217	G58W T8	58	110	0.670	20.0	G13	5000	12



Dimensions (mm)



2G11	18W	36W			
L	225	415			
D	38	38			

G23	5W	7W	9W	11W	13W
L	105	134	165	233	233
D	28	28	28	28	28

## Features

- These lamps have all the benefits of linear germicidal lamps, but have also a very compact design. This allows for compact fixture design. As they are single ended, replacement is very easy
- The HO (High Output) lamps are most efficient in air purification installations, as they are wind chill corrected
- Shape, electrical characteristics and lighting circuits are similar to general lighting compact fluorescent lamps
- The majority of germicidal lamps operate most efficiently in still air at an ambient temperature of 25°
- All lamps are Ozone free
- A protective coating on the inside of the lamp limits the depreciation of the UV-C output



## Applications

- Residential drinking water
- Pond water
- Induct air treatment units
- Stand alone air purifiers

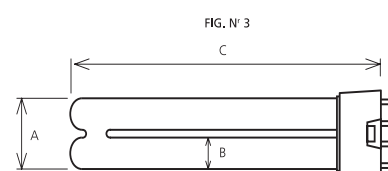
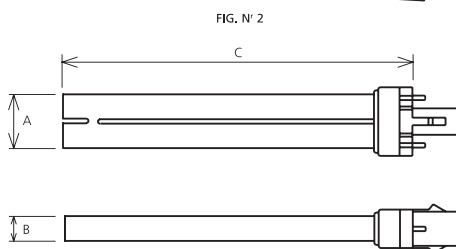
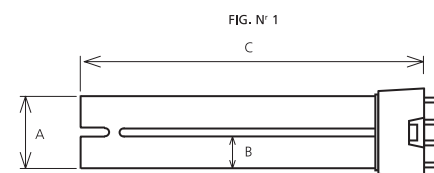
## Directions for Use

- The radiation from these lamps is very harmful to eyes and skin. Always protect your eyes and skin against radiation
- Germicidal lamps must only be used in appropriate equipment and applications
- When using UV-C emitting lamps, the official reference guides and the current industrial safety guideline must be followed
- Maximum Permissible Exposure Time (MPET) can be established for a given range of wavelengths. For example: 1 minute/day at a distance of 30cm
- Germicidal lamps emit UV-C radiation and must not be used for general lighting purpose

## Germicidal Compact

Code	Description	Watt (W)	Volt (V)	Current (A)	UV Output at 25°	Cap	Average Rated Life (Hrs)	Packing Qty
9002460	G5 Lynx-S	5	35	0.180	1.5	G23	8000	50
0025050	G9 Lynx-S	9	59	0.170	2.4	G23	8000	50
0025012	G9W Lynx-SE 4-pin	9	59	0.170	2.4	2G7	8000	50
0025051	G11 Lynx-S	11	89	0.160	3	G23	8000	50
0025047	G13 Lynx-S	13	59	0.285	3.6	GX23	8000	50
0025049	G18W Lynx-L	18	58	0.375	5.5	2G11	8000	25
0025048	G36W Lynx-L	36	106	0.435	12.0	2G11	8000	25
0025045	G55W Lynx-L	55	103	0.540	17.0	2G11	8000	25
0025013	G35W Lynx-L HO*	35	55	0.850	11	2G11	9000	25
0025014	G65W Lynx-L HO*	65	82	0.800	19	2G11	9000	25
0025015	G90W Lynx-L HO*	90	115	0.800	27	2G11	9000	25

\* When used with electronic ballast 25KHz HF



Dimensions (mm)



Sunlamp – CAUTION – ultraviolet (UV) and infrared (IR) radiation. Please follow the instructions. Ultraviolet and infrared radiation from solarium tubes carry a number of health risks and may lead to disorders such as cancer, premature ageing of the skin, burns, eye damage, cataracts, deficiency of the immune system, allergic reactions and damage to the vascular system. Pregnant women and persons taking prescription or over the counter medications should consult their physician before using a tanning bed in a solarium. The simultaneous use of medications such as tranquillisers, antibiotics, diuretic, hypotensive, antineoplastic or contraceptive substances may lead to sunburn occurring more quickly because such substances raise the skin's sensitivity to light. The same applies for cosmetics. UV radiation may accelerate the ageing process of your skin and increase the risk of skin cancer, such as squamous or basal cell carcinoma. Your risk of contracting skin cancer rises with the frequency of exposure to UV radiation. People who do not tan in sunlight will generally not go brown in a solarium and are therefore more at risk from the negative effects of tanning lamps. If you do not tan in sunlight, you should avoid tanning lamps. UV exposure in childhood is suspected of favouring melanoma formation in adulthood. Consequently, children should only be allowed to use solaria under medical supervision. ALWAYS WEAR SUITABLE EYE PROTECTION WHEN TANNING (UV PROTECTIVE GOGGLES)! FAILURE TO WEAR EFFECTIVE EYE PROTECTION MAY LEAD TO SEVERE BURNS OR PERMANENT VISUAL DAMAGE!

Use tanning lamps EXCLUSIVELY with a timer switch in line with the equipment and lamp manufacturers' instructions and according to your skin type. Take all the necessary safety precautions before installing the lamp and replacing the tubes, and follow the manufacturers' instructions concerning the tanning equipment and lighting device.

DISCLAIMER: SYLVANIA shall not be liable for damage resulting from improper use of the product or failure to observe statutory and local authority regulations relating to the use of the product by customers or end users. All of the data listed here result from laboratory measurements conducted under standardised conditions. Information on the reduction of UVA radiation and the guaranteed service life of the equipment is based on the 5-hour value and refers to operating conditions defined by SYLVANIA. SYLVANIA reserves the right to alter these technical data without prior notice.

Wellness, sun tanning and body care in general are more and more part of modern life. Our Pure Bronze range of sun tanning low-pressure tubes and high-pressure lamps leave barely any wish unfulfilled. Open and closed glass, 2-meter and miniature tubes, with and without reflectors, standard or long life versions, Pure Bronze provides a matching solution for practically every requirement.

## Bodycare



## Features

- Short irradiation and exposure times
- Ozone free construction
- Long-life types offer outstanding UV-A maintenance out to 800 hours
- Special versions available upon request
- Complete PBF range also available

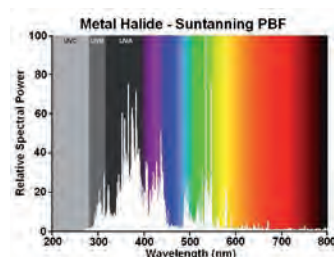
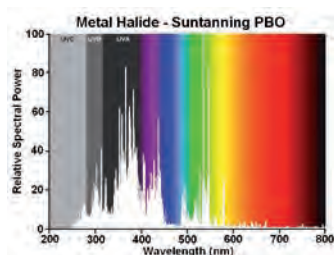


## Applications

- Domestic cosmetic facial tanning
- Professional facial, half body and full body units
- Short intense tanning sessions

## Directions For Use

- Only use in tanning devices equipped with appropriate filter and timer
- Burning position: horizontal  $\pm 10^\circ$  for double ended types : universal for single ended types
- Do not touch the quartz envelope with bare fingers
- Pinch temperature: max 350°C
- Bulb temperature: min 750°C, max 950°C



## PureBronze Suntanning - High Pressure HID

Code	Description	Watt (W)	Base/Cap	Maximum diameter D (mm)	Maximum length L (mm)	Average Rated Life (Hrs)	Fig.
<b>Performance</b>							
0024250	PureBronze PBF 250W SE	250	GY9.5	14	69	600	3
0024300	PureBronze PBO BEST 300/500W S	300-500	R7s	14	106	800	1
0024201	PureBronze PBO 400W SL	250-500	R7s long	14.0	117.9	600	1
0024202	PureBronze PBO 400W C	250-500	Cable	14.0	116.0	600	2
0024303	PureBronze PBO BEST 300/500W SE	300-500	GY9.5	14	103	800	3
0024227	PureBronze PBO 400-600W G12	300-600	G12	14	106	600	-
0024210	PureBronze PBO 500W S	300-600	R7s	17.0	106.0	600	1
0024212	PureBronze PBO 500W SE	300-600	GY 9.5	17.0	107.0	600	3
0024261	PureBronze PBO 300/500W SEC	300-500	CODED SE	14	103	600	-
0024228	PureBronze PBO 400/600W SEC	400-600	CODED SE	17	107	600	-
0024220	PureBronze PBO 1000W C 230 V	1000	Cable	25.5	139.0	600	2
0024223	PureBronze PBO 1000W SE short	500-1000	GY9.5	25.0	108.5	600	3



	250	400	500	700	1000	2000
<b>Single Ended</b>						
MOL	71	103			129	
DIA	20	14			25	
<b>C (Cable)</b>						
BBL		116			139	174
DIA		14			25.5	27
<b>S (R7s) Base</b>						
BBL		106	118			
DIA		14	14			

Fig. 1

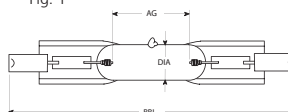


Fig. 2

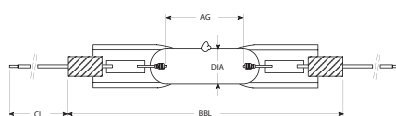
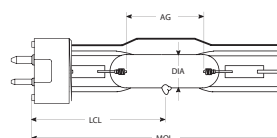
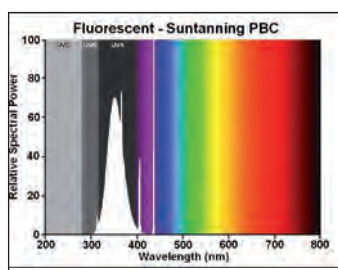


Fig. 3



Dimensions (mm)



Responding to the recent European Directive which calls for a maximum effective irradiance of 0.3 W/m<sup>2</sup> in the sunbed, Sylvania has developed a comprehensive range of retrofit tubes which allow you to bring equipment in line with the new regulations. By optimal balance of the UV-A and UV-B ratios, tanning times are maintained as short as possible. From the three product ranges TopLine, PerformanceLine and ClassicLine, Sylvania can offer a tube to meet the performance and budgetary requirements of the entire spectrum from professional salon to domestic user.



## CLASSICLINE: for the beginner

- Comprehensive product range from 15W to 180W
- Closed glass tube limits the deeper UV wavelengths
- Available with and without internal reflector
- The starter series for both home use and smaller salons
- Lower cost tube suitable for the beginner
- Guaranteed UV output for 600 hours life

## PERFORMANCELINE : for immediate tanning

- Increased power tubes from 80W to 160W
- Professional quality open glass tube lets out the important UV wavelengths
- Ideal choice for professional studios
- High levels of direct pigmentation are achieved thanks to the open glass
- Guaranteed UV output for 600 hours life

## TOPLINE : for the professional

- Ultimate output of 100W to 250W for reduced tanning times
- Professional quality open glass tube lets out the important UV wavelengths
- Top performance choice for professional studios
- DirectTan technology for instant visual results
- PurePower models deliver up to 30% more direct pigmentation
- Guaranteed UV output for industry-leading 1000 hours life
- Sylvania LongLife technology delivers low cost of ownership for professional salons

## Directions For Use

- Always consider the type of equipment and your skin type when using Sylvania tanning tubes

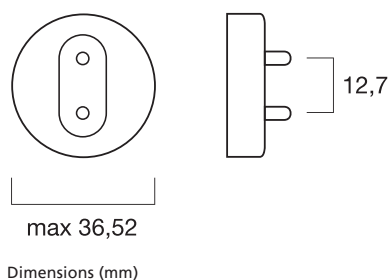


## PureBronze Suntanning - Low Pressure 0.3 Range

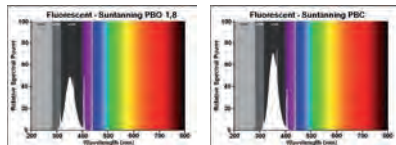
Code	Description	Watt (W)	Length (CM)	Typical radiation strength* (mW/cm2)	UV-B (%)	UV-A (W)	Sun/erythema factor (fse)	Sunning time** HT 3 (min.)	Average Rated Life (Hrs)
<b>Classic 15-100W</b>									
0003012	PBC 15W 1.0	15	28.8	16	1.0	2.8	0.4	21	600
0003009	PBC 25W 1.0	25	52	16	1.0	2.8	0.05	21	600
0001180	PBC 100W 0.7	100	176	17	0.8	27	0.05	24	600
0001181	PBC 100W 1.3	100	176	17	1.3	27	0.07	20	600
0001182	PBC 100W 2.0	100	176	17	2.0	27	0.11	12	600
0001169	PBC 100W 0.7 R	100	176	18	0.7	26	0.07	24	600
0001170	PBC 100W 1.0 R	100	176	18	1.0	26	0.08	21	600
0001301	PBC 100W 1.3 R	100	176	18	1.3	26	0.1	18	600
0001313	PBC 140W 1.3 R	140	150	21	1.3	33	0.12	15	600
0001217	PBC 160W 0.7 R	160	176	21	0.7	33	0.08	22	600
0001214	PBC 160W 1.0 R	160	176	21	1.0	33	0.1	18	600



Code	Description	Watt (W)	Length (CM)	Typical radiation strength* (mW/cm2)	UV-B (%)	UV-A (W)	Sun/erythema factor (fse)	Sunning time** HT 3 (min.)	Average Rated Life (Hrs)
<b>Extra-long tubes</b>									
0001297	PBC 120W 0.7 R 1.9m	100-120	190	19	0.7	30	0.08	22	600
0001298	PBC 120W 0.7R 2m	100-120	200	18	0.7	30	0.08	22	600
0001302	PBC 180W 0.7R 1.9m	160-180	190	22	0.7	38	0.08	18	600
0001299	PBC 180W 0.7 R 2m	180-200	200	23	0.7	41	0.08	22	600
<b>Performance 80-100W</b>									
0001166	PBO 80W 1.0 R	80	150	19	1.0	23	0.11	18	600
0001248	PBO 100W 0.5 R	100	176	19	0.5	30	0.06	27	600
0001201	PBO 100W 1.0 R	100	176	20	1.0	30	0.1	19	600
0001202	PBO 100W 1.3 R	100	176	20	1.3	30	0.13	15	600
0001267	PBO 160W 0.5 R	160	176	23	0.5	36	0.06	23	600
0001249	PBO 160W 0.7 R	160	176	23	0.7	36	0.08	18	600
0001218	PBO 160W 1.0 R	160	176	23	1.0	36	0.12	15	600
<b>TopLine 100W</b>									
0001246	PBO 100W R NormMax Xtra LL	100	176	21	0.5	32	0.06	26	1000
0001279	PBO 100W R NormMax LL	100	176	21	0.7	32	0.08	23	1000
0001280	PBO 100W R NormMax+ LL	100	176	21	1.0	32	0.11	18	1000
0001286	PBO 160W R NormMax Ultra LL	160	176	25	0.3	38	0.05	30	1000
0001320	PBO 160W R NormMax Xtra LL	160	176	25	0.6	38	0.07	22	1000
0001281	PBO 160W R NormMax LL	160	176	25	0.8	46	0.09	17	1000
0001234	PBO 160W R NormMax+ LL	160	176	25	0.95	38	0.13	14	1000
0001275	PPB 160W R NormMax + LL	160	176	28	0.7	46	0.11	17	1000
<b>Extra-long tubes</b>									
0001274	PPB 180/250W R NormMax LL 2m	180-250	200	28	0.35	51	0.08	23	1000







Not all sun beds need to be equipped with reduced power tubes in order to conform with the 0.3 W/m<sup>2</sup> directive. For these applications Sylvania continues to offer a comprehensive selection of high output tubes delivering high erythral performance.



The products are split into the same categories of ClassicLine, PerformanceLine and TopLine to suit the lifetime and performance requirements of different consumers

## CLASSICLINE: for the beginner

- Closed glass tube limits the deeper UV wavelengths
- Lower cost tube suitable for the beginner
- Guaranteed UV output for 600 hours life

## PERFORMANCELINE: for immediate tanning

- Professional quality open glass tube lets out the important UV wavelengths
- Ideal choice for professional studios
- High levels of direct pigmentation are achieved thanks to the optimised UV-A spectrum
- Guaranteed UV output for 600 hours life

## TOPLINE: for the professional

- Ultimate output of 100W to 250W for reduced tanning times
- Professional quality open glass tube lets out the important UV wavelengths
- Top performance choice for professional studios
- DirectTan technology for instant visual results
- PurePower models deliver up to 30% more direct pigmentation
- Guaranteed UV output for industry-leading 1000 hours life
- Sylvania LongLife technology delivers low cost of ownership for professional salons

## Directions For Use

- Always consider the type of equipment and your skin type when using Sylvania tanning tubes



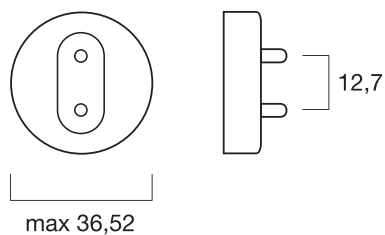
## PureBronze Suntanning – Low Pressure Class 5 Range

Code	Description	Watt (W)	Length (CM)	Typical radiation strength* (mW/cm <sup>2</sup> )	UV-B (%)	UV-A (W)	Sun/erythema factor (fse)	Sunning time** HT 3 (min.)	Average Rated Life (Hrs)
<b>Classic 25-36W</b>									
0003013	PBO 25W 1.5	25	52	16	1.5	5.5	0.08	14	600
0003011	PBO 25W 2.5	25	52	16	1.5	5.5	0.11	12	600
<b>Performance 80-100W</b>									
0001168	PBO 80W 2.3R	80	150	19	2.3	21	0.21	9	600
0001206	PBO 100W 2.6R	100	176	19	2.6	30	0.23	12	600
<b>Performance 140-160W</b>									
0001213	PBO 140W 2.3 R	140	150	23	2.3	30	0.26	8	600
0001221	PBO 160W 2.0 R	160	176	23	2.0	38	0.25	9	600
0001223	PBO 160W 2.6 R	160	176	23	2.6	38	0.30	6	600
0001283	PBO 160W 3.3 R	160	176	23	3.3	38	0.32	4	600
0001284	PBO 160W 3.6 R LL	160	176	20	3.6	38	0.34	3	600

## PureBronze Suntanning – Low Pressure Class 5 Range

**SYLVANIA**

Code	Description	Watt (W)	Length (CM)	Typical radiation strength* (mW/cm2)	UV-B (%)	UV-A (W)	Sun/erythema factor (fse)	Sunning time** HT 3 (min.)	Average Rated Life (Hrs)
<b>Extra-long tubes</b>									
<b>0001228</b>	PBO 120W 2,0 R 2m	100-120	200	19	2.0	32	0.19	10	600
<b>0001233</b>	PBO 180W 2,0 R 1,9m	160-200	600	23	2.0	42	0.25	9	600
<b>0001245</b>	PBO 180W 3,3 R 1,9m	160-200	190	23	3.3	41	0.32	4	600
<b>0001237</b>	PBO 180W 2,6 R 2m	160-200	200	23	2.6	42	0.30	6	600
<b>TopLine 100W</b>									
<b>0001309</b>	PBO 100W 3,6 R LL	100	176	19	3.6	30	0.31	6	1000
<b>TopLine 140-160W</b>									
<b>0001226</b>	PBO 160W 2,3 R LL	160	176	23	2.3	38	0.27	8	1000
<b>0001312</b>	PPB 160W 3,0 R LL	160	176	28	3.0	46	0.42	5	1000
<b>0001307</b>	PPB 160W 3,6 R LL	160	176	28	3.6	46	0.50	3	1000
<b>Extra-Long tubes</b>									
<b>0001239</b>	PPO 180W 2,6 R LL 2m	160-200	200	23	2.6	42	0.27	7	1000
<b>0001285</b>	PPO 180W 3,6 R LL 2m	160-200	176	28	3.6	46	0.50	3	1000
<b>0001258</b>	PPB 180/250W 2,3 R LL 2m	180-250	200	28	2.3	50	0.37	5.5	1000
<b>0001318</b>	PPB 180/250W 3,0 R LL 2m	180-250	200	28	2.6	50	0.42	5	1000
<b>0001319</b>	PPB 180/250W 3,6 R LL 2m	180-25	200	32	3.3	53	0.52	3	1000



Dimensions (mm)



**Features**

- Will perfectly start the PureBronze fluorescent lamps
- Works with a broad range of lamp wattages
- Long Life (at least 20.000 starts)
- No delay or flickering. This avoids unnecessary blackening around the electrodes and lengthens the lamps economic life
- Resistant to ultra-violet light
- ENEC, VDE and VL approved

**Applications**

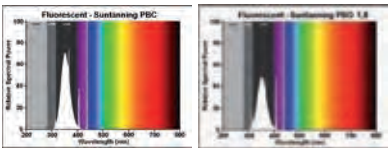
- Sunbeds

**Directions For Use**

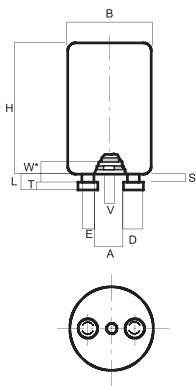
- Single electrical circuit
- Designed for use on 220-240V
- Minimum ambient temperature: 0°C min
- Maximum temperature in any part of the starter: 100°C max
- Sylvania recommends to change the starters when changing lamps and not later than the second lamp change

Pure Bronze Suntanning Starters

Code	Starter Type	Watt (W)	Volt (V)	No. of Starts (K)	Electrical Circuit	Packing Qty
0024479	PureBronze PBS 120-180	120-180	220-240	20	Single	25



Dimension	Min.	Max.
A	12,5	12,9
B	-	21,5
D	4,7	5,0
E	2,8	3,2
H	33,0	36,0
L	-	4,3
S	1,7	-
T	1,9	2,2
V	2,7	-
W*	4,2	-



Dimensions (mm)

## Technical information

### Ballast lumen factor BLF (%)

Refers to the ratio of light output from the lamp on emergency operation to the nominal light output.

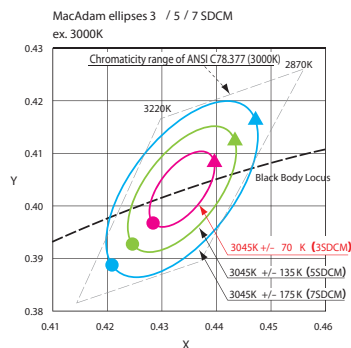
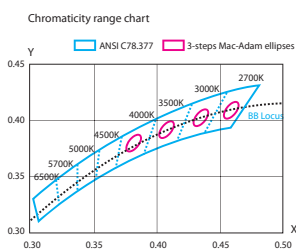
### Beam Angle

Indicates how broadly the light is emitted from a reflector lamp. It can be thought of as an imaginary cone whose apex intersects the lamp face, and the breadth of the cone extends outwards to the point where luminous intensity has diminished to 50% of the centre beam value.

### Binning

The term binning refers to the variations which occur within a single production batch of LED's such as chromaticity, lumen output and forward voltage. It is important that a specific bin has been identified and selected to ensure a uniform and constantly even lighting installation is achieved. If all the LED's were selected from one production batch and used in the same luminaire or installation, there would be a mix of colour temperatures and brightness levels. For the lighting manufacturer / designer binning is an essential part of LED specification.

MacAdam ellipses methodology was created in 1943 for mathematically constructing ellipses around target points, something which became very useful for the lamp industry. ANSI C78.377 is now the standard for chromaticity specified by the American National Standards Institute. ANSI recommends that lamp manufacturers stay within a "4-step" ellipse. This means that, given a certain target point on the CIE diagram, manufacturers are given a fairly wide range of perceptible differences.



### Candela (cd)

The unit of measurement for luminous intensity, which refers to the quantity of light emitted in a particular direction. The symbol is cd.

### Colour Correlated Temperature (CCT)

An incandescent light bulb is very close to a perfect black-body radiator, so its colour temperature is basically the temperature of the filament. However many light sources, such as fluorescent tubes or high intensity discharge lamps, emit light by processes other than thermal radiation and therefore it is not possible to apply the black-body spectrum. For these light sources it is possible to assign what is known as a colour correlated temperature (CCT). The CCT is the colour temperature of a black-body (Planckian) radiator which most closely matches the colour of the light emitted from the lamp.



Warm White 3000K

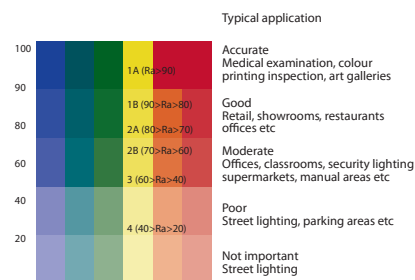


Neutral White 4000K

### Colour Rendering Index (CRI)

The colour rendering of a light source is an indicator of its ability to realistically reproduce the colour of an object. The chart illustrates our ability to accurately determine colour depending on the colour rendering properties of the light source. The higher the colour rendering index (on a scale of 0 to 100) of the source the better our ability to perceive differences in colour, which is a considerable aid to highlighting fashion products and effective display of coloured artworks.

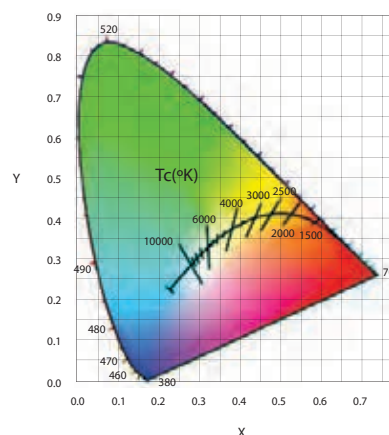
The CIE colour rendering index (CRI) is a method to determine how well a light source's illumination of eight standardised colour patches compares to the illumination provided by a reference source. At Ra (8) the perceived colour shift of eight reference colours is measured as a percentage and averaged to give one number. However it is currently understood that due to the spectral power distribution of LED's that instead of using the standard Ra8 it is important to include 7 additional colours which include red, yellow, blue & green and use Ra14 to ensure better results.



### Colour Temperature

Colour temperature is a characteristic of visible light that plays a significant role in lighting applications. The colour temperature of a light source is the temperature of a perfect black-body radiator that radiates light of a similar appearance to that of the light source. The colour temperature is measured in units of absolute temperature; Kelvin (K).

Colour temperature works paradoxically to our cultural associations with colour, red as hot and blue as cold. On the black-body curve, blue occurs at higher temperatures than red. A good example is a candle which has a warm red orange appearance but in fact has a low Kelvin temperature, 1850K. Therefore higher colour temperatures (5000K more) are called cool colours (blueish white); lower colour temperatures (2700 – 3000K) are called warm colours (yellowish white through red).



The Planckian locus shows the chromaticities of black-body light sources of various colour temperatures and lines of constant correlated colour temperature shown within the CIE chromaticity diagram

## Dimmability

The Sylvania lamps range includes dimmable LEDs lamps. Most conventional dimmers have been designed for incandescent lamps and are therefore rated for higher minimum loads (W) than LED lamps consume. There may therefore be some restrictions in terms of functionality of dimmers with individual LEDs – but when more than one lamp is used to increase the total loading, dimming becomes easier.

## Downward Flux Fraction (DFF)

The factor of the total LOR, which is downward, taking the combined ULOR and DLOR as 100%. Using Cassini as an example, the DLOR is 37% and the ULOR is 15% so the combined is 52%. If this is taken as 100% LOR, 72% is downward (37% divided by 53%).

## Drivers

Electronic devices that transform the high mains voltage into a constant current lower voltage for operating the LEDs. A miniature electronic driver is contained inside the base of each Sylvania LED lamp.

## Glare

Glare is the discomfort caused by high luminances in the field of vision.

## Heat Sink

A device used to conduct heat away from the LED sources and dissipate it to the surrounding air. The more efficiently an LED is cooled the greater its efficacy, light output and lifetime. Materials having excellent thermal properties and optimised cooling fin geometries are engineered into Havells-Sylvania lamps and luminaires to deliver the pinnacle of performance.

## Infrared (IR) Radiation

Comprises electromagnetic waves in the spectral range between visible light and microwaves, which produce a heating effect when absorbed by materials. All lamps and luminaires produce infrared radiation, but the quantity emitted by LEDs is far lower than other technologies and this makes them ideal for reducing air conditioning load, as well as for the illumination of heat-sensitive goods.

## Illuminance

This definition determines the amount of light that covers a surface. If  $\Phi$  is the luminous flux and  $S$  is the area of the given surface then the illuminance  $E$  is determined by  $E = \Phi/S$ . The unit of illumination in SI system is lx, and in foot-pound system it is foot-candle. One lx is the illuminance of 1 m<sup>2</sup> surface area uniformly lighted by 1 lm of luminous flux.

## Junction Temperature (Tj)

The temperature of the Junction of the LED die inside the LED lamp. Measuring the LED die temperature by direct mechanical means is difficult and may lead to erroneous results. It is recommended that the Tj is calculated with manufacturer's data through measurement of the temperature at the solder point (Tsp).

## LED (Light Emitting Diode)

An electronic semiconductor component which emits light when an electrical current flows through it. The colour of light emitted depends on the chemical doping of the semiconductor material.

## Lens

An optical component having two refractive surfaces, at least one of which is either convex or concave. In LED lamps the function of a lens is to focus or disperse the light rays to achieve the desired beam angle or light distribution pattern.

## Lifetime

LED lamps can have extremely long lives, however their light output diminishes as they age. They can carry on working until they are emitting less than 10% of their initial light output, but with so little light left they would be practically useless. Sylvania defines the lifetime of its LED lamps the same way as for other lamps: i.e. the burning hours until the light output has decreased to 70% of the initial value, or when 50% of a group of lamps will have failed – whichever is the soonest. The International Electrotechnical Commission (IEC) is currently preparing an international standard based on similar threshold values.

## Light

Light Electromagnetic radiation with a wavelength between 380-780nm. Ultraviolet light has a wavelength of less than 380nm whilst infrared light's is greater than 720nm.

## Lighting level

The incidence of light flux on a surface per unit of area, measured in lux. There is a difference between the vertical and horizontal lighting level.

## Light output ratio (LOR)

The ratio of the luminaire light output to lamp light output. The efficiency of the luminaire.

## Lumen (lm)

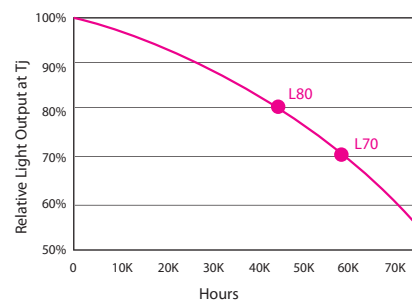
Unit of luminous flux used to describe a quantity of light emitted by a source or received by a surface.

## Lumen Maintenance

Rated Lumen Maintenance Life (Lxx): The elapsed operating time over which the LED light source will be the percentage, xx, of its initial light output.

- L80 = Time to 80% lumen maintenance, in hours
- L70 = Time to 70% lumen maintenance, in hours

For LED lamps and luminaires, lumen maintenance is often shown as curves of relative lumen output over time for the LED under various operating conditions, such as drive current and junction temperature.



## Luminaire efficiency

How well a luminaire uses the luminous flux of the lamp(s) employed. This ratio is calculated by dividing the total luminaire lumens by the total circuit watts.

## Luminance

The measure of brightness with which the eye perceives an illuminated surface from a certain direction. The luminous intensity per unit of visible surface of a light source (direct) or an illuminated surface (reflection). Luminance is indicated in candelas per square metre (cd/m<sup>2</sup>).

## Luminous efficacy (lm/w)

Indicates how efficiently a light source converts electrical energy to light.

## Luminous flux (lm)

The total light output of a light source measured in lumens.

## Luminous intensity (cd)

The power of a source or illuminated surface to emit light in a particular direction, measured in candelas.

## Lux (lux)

The unit of illuminance, equal to one lumen per square metre (lm/m<sup>2</sup>).

## Technical information

### Performance cone

Shows whether the luminaire emits a narrow or wide beam of light and indicates the lighting level measured at the centre of the beam. The beam diameter and angle indicate where half the illuminance is measured in relation to the centre of the beam. It gives only a rough guide of the size of beams narrower than 40°.

### Polar curve

The graphic representation of the luminous intensity in different directions. If two curves are plotted, the distributions are in two vertical planes. The value is indicated in candelas per 1000 lumen (cd/klm) and therefore must be multiplied by the nominal luminous flux of the lamp(s) used. The polar curve graph also indicates luminaire efficiency.

### Recycling

Havells-Sylvania lamps and luminaires are extremely durable and do not contain any mercury, lead or other toxic metals. However because their drivers contain electronic components they must be disposed of as waste electrical and electronic equipment at the end of their life.

### Reflector

An optical component having a mirror surface, which captures light rays from the source and bounces them back at a particular angle. Although more commonly used in incandescent and halogen lamps, some Sylvania LED lamps use reflectors to control their light instead of a lens.

### Room index K

An index relating to the dimensions of a room influencing the amount of light emitted from the fitting onto the working surface.

$$K = \frac{a \times b}{h \times (a+b)}$$

where: a = room length

b = room width

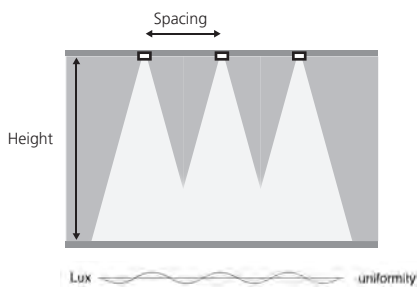
h = height between the luminaire and working surface

### Shielding angle (°)

The horizontally measured angle from which the lamp or reflection from it in the reflector is no longer visible. It is an important measure of glare and, therefore, light comfort.

### Spacing to height ratio (SHR)

Used to determine the maximum distance between luminaires. The ratio of the distance between adjacent luminaires to the distance between the luminaire plane and the horizontal working plane.



### Switching Frequency

LED lamps cannot be switched on and off indefinitely, but are rated to tolerate an impressive 60,000 switching cycles or more.

### TCO (Total Cost of Ownership)

TCO includes all the costs over the entire life of a lamp or for a particular operating time. It covers procurement costs, electricity consumption costs, relamping costs and may even incorporate a reduction in the necessary air conditioning load. LEDs are presently more expensive to purchase than lamps based on other technologies, but their minimal energy consumption results in rapid payback when replacing incandescent and halogen lamps.

### Transformer

A device for reducing the high mains voltage down to a lower voltage. A distinction is made between conventional (magnetic) transformers and electronic transformers. Sylvania low voltage LEDs will function on all magnetic transformers, and compatibility details with electronic transformers are available in the technical data sheets.

### Uniformity ratio of illuminance

This indicates the degree of evenness of the light on the working surface and is shown as a ratio of the minimum to the mean lighting level on a surface. The lower the number the more disturbing the light.

### Ultra Violet (UV) radiation

Comprises electromagnetic waves in the spectral range between visible light and X-rays, which are invisible to the human eye but essential for all life (delivered via natural sunlight). Small amounts of UV are emitted by many light sources (e.g. Halogen and Discharge) and over time will cause fading of coloured objects being illuminated. Havells-Sylvania lamps and luminaires do not emit any UV radiation.

### Utilisation factor

The ratio of the light flux which the reference surface receives to the totalled luminous fluxes of the installation lamps. This is influenced by the shape of the room and selected luminaire and is expressed in the form of UF tables.

### Volt

The derived SI unit of electrical pressure (symbol V). Low voltage LED lamps (12V) operate with transformers. High-voltage LED lamps can be operated directly on the mains supply (220-240V).

### Watt

Watt is the SI unit of power and was used for incandescent lamps as an indication of their light output. Since modern energy saving lamps and LED lamps consume far less power to achieve the same brightness, however, the wattage is no longer as meaningful. The lumen value is now used instead.

### Wattage Comparison According to ErP

The EU directive for nondirectional light (ErP DIM I) requires a certain luminous flux from LED lamps to make a comparison with incandescent lamps.

Abbreviations	Meaning
1	1 pack
10	10 pack
830	3000K lamp
840	4000K lamp
1-10V	1-10V analogue dimmable ballast
3 hour emrg.	3 hours emergency
3 PK	3 Pack
ALU	Aluminium
ASYM	Asymmetric
BL	Black
BRI	Bright
CHR	Chrome
CON	Connected
DALI	Digital Adjustable Lighting Interface
DB	Dimmable ballast
DB10	1-10V analogue dimmable ballast
DBDA	Dimmable DALI
DBLASYM	Double asymmetric
DSI	Digital Serial Interface
DS	Double Sided light output
E1	Emergency 1 hour
E3	Emergency 3 hours
EB	Electronic ballast
EXTGEAR	External gear tray
GRY	Grey
GRY DIFF	Grey diffuser
HF	High Frequency ballast or, Electronic ballast
HQPS	High Quality PolyStyrene
HV	High Voltage
LIN	Linear
LLB	Low Loss Ballast or, Magnetic ballast
LLB NC	Non Compensated
LLB PC	Parallel Compensated
Magn. El. Starter	Magnetic Electric starter
MECH CON	Mechanical connection
MEDI	Medium
MGR	Magnetic gear
MW	Microwave sensor
NARR	Narrow
No PFC	No Power Factor Correction
NW	Neutral white
PC	Polycarbonate
PEND	Pendant
PSM	Prismatic
PULLC	Pull cord
PUSHB	Push button
RAP.D	Rapid double
RAP.S	Rapid single
REC	Recessed
REFL	Reflector
RGB	Red Green Blue
RU	Rust
SAT	Satin
SHAVS	Shaver socket
SI	Silver
SS	Single Sided light output
STE	Brushed steel
STRPL	Strip light
SURF	Surface mounted
SUSP	Suspension kit
SYM	Symmetric
TLT	Tilt
UV	Ultra Violet
WHT	White
WW	Warm white



# Emergency Lighting

Emergency lighting is a vital and necessary safety requirement for most building types. The safety it provides for occupants is paramount and not negotiable.

## Product Safety

- All Havells-Sylvania carry the CE mark. They are designed to conform to BS EN 60.598 2-22 and are manufactured in accordance with the quality system BS EN ISO 9001:2000 under certificate number FM01687
- Any emergency lighting luminaire conversion other than by Havells-Sylvania to a CE marked luminaire invalidates this CE marking and its associated legal protection

## Emergency Lighting Equipment

This comprises an inverter plus a set of batteries, which conform to BS EN 60.598 2-22 and may be mounted:

- Integral within the luminaire (self contained – integral)
- Remote from, but within 1 metre of, the luminaire (self contained remote)

## Non-maintained Operation

In this mode of operation the emergency lighting lamps are not normally energized. An automatic monitoring and switching system is provided to switch on the emergency lighting if the normal supply is interrupted

## Maintained Operation

- A single lamp is used for both general and emergency modes
- In multi-lamp luminaires only one lamp will be used for the provision of emergency illumination
- Emergency lighting is provided for at least 3 hours (1 hour duration available to special order)

## Maintained Remote Emergency Control

The majority of Havells-Sylvania maintained emergency luminaires are supplied with integral emergency control gear. Where the housing design precludes integral gear a remote control box is provided complete with connection cables

## Product Combined Operation (also known as Sustained)

- Separate lamps provide general and emergency illumination
- Emergency lighting is provided for at least 3 hours. (1 hour duration available to special order)

## Self-testing

Automatic self-testing and monitoring of Havells-Sylvania luminaires is available to special order on a project basis

## Central Battery

Havells-Sylvania luminaires for use with a central battery system are available to special order on a project basis

## System Design

This guide should be read in conjunction with current standards

## Legislation Changes & Requirements

The British Standard BS5266 has been revised to conform with the European Standard EN1838 (issued in the UK under reference BS EN1838/BS5266 Part 7) which specifies luminous requirements for emergency systems installed in premises. It also now calls up the luminaire product standard BS EN60598-2-22: 1999

Emergency lighting is provided for use when the supply to the normal lighting fails and is therefore powered from a source independent of that supplying the normal lighting. For the purposes of this standard emergency lighting is regarded as a generic term of which there are a number of forms

## Definitions

### Emergency Exit

A way out that is intended to be used in an emergency.

### Escape Route

A route designated for escape in the event of an emergency

### Emergency Escape Lighting

That part of emergency lighting that provides illumination for the safety of people leaving a location or attempting to terminate a potentially dangerous process before doing so.

### Escape Route Lighting

That part of emergency escape lighting provided to ensure that the means of escape can be effectively identified and safely used when the location is occupied

### Open Area Lighting

In some countries this is known as anti-panic lighting. This relates to that part of emergency escape lighting provided to avoid panic and provide illumination, allowing people to reach a place where an escape route can be identified

### High Risk Task Area Lighting

That part of emergency escape lighting that provides illumination for the safety of people involved in a potentially dangerous process or situation and to enable proper shut down procedures for the safety of the operator and other occupants of the premises

## Areas Covered/Levels of Illumination

### Defined Escape Route

Based on 2m wide on the horizontal plane, preferably 1 lux but not less than 0.2 lux on the centre line. The lighting provided should operate within 5 seconds of the failure of the normal supply

### Open Area (Sometimes referred to as ‘anti-panic’ lighting)


Not less than 0.5 lux at floor level of the open space. The ratio of max to min illuminance should be greater than 40:1.


These extracts are provided for guidance purposes. In order to fully comply with the many elements of the various applicable standards, a full and thorough assessment must be made


## Electrical protection


EN 60.598

Class 1 – fittings comply with class 1 (I) earthed electrical requirements i.e. functional insulation in all parts and earth termination.

 Class 2 – fittings comply with class 2 (II) double insulated electrical requirements i.e. complete insulation in all parts without earth termination. In the event of an electrical fault, no dangerous voltage can reach touchable metal parts.

 Class 3 – fittings comply with class 3 (III) triple insulated electrical requirements i.e. designed to connect to an external low voltage supply which is the same as the internal operating voltage requirement. In the event of an electrical fault, no dangerous voltage can develop. Inflammability of surface protection EN 60.598

 Suitable for mounting in or on furniture made of semi-incombustible or normally combustible materials such as wood.

 Fittings made for mounting in or on furniture made of materials of unknown properties.

 Passes the 650° glow wire test in accordance with IEC 695-2-1.

 Horizontal rotation


 Vertical tilt


 Safety isolating transformer

 Electronic transformer

 Electronic ballast/gear

 HID lamp requires an external ignitor

 Ceiling cut-out – round

 Ceiling cut-out – square

 Trailing edge dimmable (capacitive)

 Leading edge dimmable (inductive)

 Ingress protection

 Impact protection

 Minimum distance in metres permitted from lighted object

 European Norms Electrical Certification

 Suitable for Office applications


 Suitable for Healthcare applications

 Suitable for Education applications


 Suitable for Retail and Display applications


 Suitable for Exterior applications

 Allowed lamp operating positions


 Universal burning position


 Horizontal burning position

 Vertical burning position

 Incandescent Candle and Ball:  
Base up not allowed

 Lamp can be operated in luminaires without a protective shield


 Lamp should be operated only in a luminaire provided with a protective shield

 Lamp emits a high level of UV radiation

 Reduced UV emissions

 Cool beam reflector

 Not dimmable

 Protection against water contact

 Internal ignitor


 External ignitor


 Ballast is required

 Lamp should not be operated when the outer bulb is broken


 Be aware of high temperatures when replacing lamp

 Do not hold the lamp glass when installing or removing

 Switch off power supply before replacing lamp

 Do not touch lamp with bare fingers when replacing lamp

 Energy saving

 Treat lamp as small chemical waste

 Open packaging and read instructions

 Read instructions before use

 Lamp complies with legal standards

 Lamp complies with legal standards

 Grüne Punkt

 Bowl Mirror lamps

 Luminaire can be looped

 RoHS compliant

 WEEE compliant

 WARRANTY Warranty logo, please refer to intro pages for full details

 Ball resistant luminaire






 RAL 9007 RAL reference

## Lamp Information for luminaires

Throughout the catalogue, lamp boxes provide guidance on lighting performance. Beam angles quoted are usually for either a lamp and reflector combination or a reflector type lamp. **Note** that beam angles quoted are at 50% of the peak intensity.

















In the case of the lamp plus a reflector, the beam angle quoted will indicate the designed performance. However, in the case of the reflector lamp the quoted beam angle will be the 'bare-lamp' performance for that recommended lamp. The actual performance for a reflector lamp, within a luminaire, will be indicated by a polar curve for the particular lamp/luminaire combination - usually shown on the same page. There will sometimes be a small variation between luminaire performance and the lamp in 'bare-lamp' configuration.

### LED Lamps

Title	Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
LED Reflector 	Hi-Spot RefLED	-	-	51	56	7.5	GU10	350	-	25	25000	2700/ 3000/ 4000	85	1B
	Hi-Spot RefLED PAR20	-	-	63.5	85	5.5	E27	300	-	-	30000	3000	85	1B
	Hi-Spot RefLED PAR30	-	-	95	80	11	E27	680	-	-	30000	3000	85	1B
	AR111 Low Voltage	-	-	110.7	57	10	G53	550	-	25/40	25000	3000	85	1B
MicroLynx LED	MicroLynx LED	-	-	76	16	4	GX53	250	-	-	15000	2700	85	1B
LED Non-Directional 	ToLEDo GLS	-	-	61	107	5	E27	250	-	-	15000	2700	85	1B
	ToLEDo GLS	-	-	61	107	7.5	E27	470	-	-	15000	2700	85	1B
	ToLEDo GLS	-	-	61	112	10.5	E27	806	-	-	15000	2700	85	1B

### Mains Voltage Tungsten Halogen Lamps

















**Note** - Permanently dimming halogen lamps shortens lamp life. Dimmed halogen lamps should be run-up to full power at regular intervals to maintain optimum life

Title	Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
Quartz halogen	Hi-Pin	QT14	HSGST/F	14	44	42	G9	460	-	-	2000	2800	100	1A
Matt frosted	Hi-Pin	QT14	HSGST/F	14	44	53	G9	790	-	-	2000	2800	100	1A
Low pressure 														
														
Quartz halogen	-	QT-DE12	HDF	10	78.3	48	R7s	840	-	-	2000	2900	100	1A
Double ended tube	Linear DE Eco	QT-DE12	HDF	10	78.3	80	R7s	1600	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	10	78.3	120	R7s	2600	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	8	118.6	160	R7s	3000	-	-	2000	2880	100	1A
	Linear DE Eco	QT-DE12	HDF	8	118.6	230	R7s	4800	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	8	118.6	400	R7s	9250	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	12	189.1	1000	R7s	22000	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	12	254.1	1500	R7s	33000	-	-	2000	2900	100	1A
	Linear DE Eco	QT-DE12	HDF	12	331	2000	R7s	44000	-	-	2000	2900	100	1A
Halogen PAR16	Hi-Spot ES50	QPAR16	HAGSPAR	50	55	35	GU10	315	800	25	2500	2700	100	1A
Clear	Hi-Spot ES50	QPAR16	HAGSPAR	50	55	50	GU10	525	1300	25	2500	2700	100	1A
Low Pressure 	Hi-Spot ES50	QPAR16	HAGSPAR	50	55	50	GU10	525	500	50	2500	2700	100	1A
														
Halogen PAR16	Hi-Spot 50	QPAR16	HAPAR	50	77	40	E14	400	950	25	2000	2700	100	1A
Clear														
Low Pressure 														
														
Halogen PAR20	Hi-Spot ES63	QPAR63	HAGSPAR	62	64	50	GU10	525	1500	25	2500	2750	100	1A
Clear	Hi-Spot ES63	QPAR63	HAGSPAR	62	64	75	GU10	980	2500	25	2500	2750	100	1A
Low Pressure 	Hi-Spot ES63	QPAR63	HAGSPAR	62	64	75	GU10	980	1000	25	2500	2750	100	1A
														
Halogen PAR20	Hi-Spot 63	QPAR20	HAPAR	65	88	50	E27	630	3000	10	2500	2900	100	1A
Clear	Hi-Spot 63	QPAR20	HAPAR	65	88	50	E27	630	1000	25	2500	2900	100	1A
Low Pressure 														
														
Halogen PAR25	Hi-Spot 80	QPAR80	HAPAR	81	108	50	E27	630	4000	10	2500	2900	100	1A
Clear	Hi-Spot 80	QPAR80	HAPAR	81	108	50	E27	630	1100	25	2500	2900	100	1A
Low Pressure 	Hi-Spot 80	QPAR80	HAPAR	81	108	75	E27	1050	5500	10	3000	2900	100	1A
	Hi-Spot 80	QPAR80	HAPAR	81	108	75	E27	1050	1300	25	3000	2900	100	1A
Halogen PAR30	Hi-Spot 95	QPAR30	HAPAR	97	88	75	E27	1050	6900	10	2500	2900	100	1A
Clear	Hi-Spot 95	QPAR30	HAPAR	97	88	75	E27	1050	2200	30	2500	2900	100	1A
Low Pressure 	Hi-Spot 95	QPAR30	HAPAR	97	88	100	E27	1550	10000	10	3000	2900	100	1A
	Hi-Spot 95	QPAR30	HAPAR	97	88	100	E27	1550	3500	30	3000	2900	100	1A

## Lamp Information for luminaires













### Low Voltage Tungsten Halogen Lamps - 12V

**Note** - Permanently dimming tungsten halogen lamps shortens lamp life. Dimmed halogen lamps should be run-up to full power at regular intervals to maintain optimum life

Title	Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
Tungsten halogen 	Capsule LP	QT9-LPax	HSG/LP	9	33	5	G4	40	-	-	2000	2800	100	1A
Capsule - axial filament	Capsule LP	QT9-LPax	HSG/LP	9	33	10	G4	100	-	-	2000	2800	100	1A
Clear	Capsule LP	QT9-LPax	HSG/LP	9	33	20	G4	260	-	-	2000	2800	100	1A
Low Pressure 	-	QT12-LPax	HSG/LP	12	44	20	GY6.35	300	-	-	3000	3000	100	1A
 UV Stop	Capsule LP	QT12-LPax	HSG/LP	12	44	35	GY6.35	520	-	-	2000	2900	100	1A
	Capsule LP	QT12-LPax	HSG/LP	12	44	50	GY6.35	900	-	-	2000	2900	100	1A
	-	QT12-LPax	HSG/LP	12	44	75	GY6.35	1600	-	-	3000	3000	100	1A
	-	QT12-LPax	HSG/LP	12	44	100	GY6.35	2300	-	-	3000	3000	100	1A
Tungsten halogen 														
Capsule - axial filament	Capsule	QT12-Uvrax	HSG	12	44	35	GY6.35	650	-	-	3000	3000	100	1A
Clear	Capsule	QT12-Uvrax	HSG	12	44	50	GY6.35	1000	-	-	3000	3000	100	1A
 UV Stop	Capsule	QT12-Uvrax	HSG	12	44	75	GY6.35	1600	-	-	3000	3000	100	1A
Only use in fixtures with toughened 1A front safety glass	Capsule	QT12-Uvrax	HSG	12	44	100	GY6.35	2300	-	-	3000	2900	100	100
MR16 Dichroic reflector axial - filament Clear front Low pressure 		QR-CBC35	HRGI	35.3	37	10	GU4	140	300	38	2000	3000	100	1A
 UV Stop														
Superia 35 	Superia 35	QR-CBC35	HRGI	35.3	42	20	GZ4/GU4	-	700	38	4000	2925	100	1A
	Superia 35	QR-CBC35	HRGI	35.3	42	35	GZ4/GU4	-	1350	38	4000	3000	100	1A
Superia 50 EcoPlus 	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	20	GX/GU5.3	-	6000	10	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	20	GX/GU5.3	-	1000	38	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	35	GX/GU5.3	-	11000	10	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	35	GX/GU5.3	-	4100	24	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	35	GX/GU5.3	-	2000	36	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	45	GX/GU5.3	-	15000	10	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	45	GX/GU5.3	-	5450	24	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	45	GX/GU5.3	-	2850	36	5000	3000	100	1A
	Superia 50 EcoPlus	QR-CBC51	HRGI	51	49	45	GX/GU5.3	-	1300	60	5000	3000	100	1A
MR16 Quartz capsule & aluminium reflector (Coolfit 50)														
Axial filament	Coolfit 50	QR-C51	HAGI	51	49	20	GX/GU5.3	320	660	38	5000	3000	100	1A
Clear front	Coolfit 50	QR-C51	HAGI	51	49	35	GX/GU5.3	630	1200	38	5000	3000	100	1A
Low pressure 	Coolfit 50	QR-C51	HAGI	51	49	50	GX/GU5.3	1000	1950	38	5000	3000	100	1A
 UV Stop	Coolfit 50	QR-C51	HAGI	51	49	50	GX/GU5.3	1000	900	60	5000	3000	100	1A
AR70 Quartz capsule & aluminium reflector														
Axial filament 	-	QR-LP70	HMG	70	50	50	BA15d	930	12500	8	3000	3000	100	1A
Clear front	-	QR-LP70	HMG	70	50	50	BA15d	930	2600	24	3000	3000	100	1A
Low pressure 														
 UV Stop														
AR111 Quartz capsule & aluminium reflector														
Axial filament	SA111	QR-LP111	HMG	111	50	50	G53	930	23000	8	3000	2900	100	1A
Clear front	SA111	QR-LP111	HMG	111	50	50	G53	930	4000	24	3000	2900	100	1A
Low pressure 	SA111	QR-LP111	HMG	111	50	50	G53	930	1200	45	3000	2900	100	1A
 UV Stop	SA111	QR-LP111	HMG	111	50	100	G53	2200	48000	8	3000	2900	100	1A
	SA111	QR-LP111	HMG	111	50	100	G53	2200	8500	24	3000	2900	100	1A
	SA111	QR-LP111	HMG	111	50	100	G53	2200	2800	45	3000	2900	100	1A



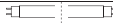

## Lamp Information for luminaires

### Compact fluorescent lamps [CFL]

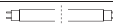
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TC-S		Lynx-S	TC-S	FSD	105	5	G23	250	10000	3000/3500/4000/6500	85	1B
2 limb, 2 pin [SS]		Lynx-S	TC-S	FSD	134	7	G23	400	10000	2700/3000/3500/4000/6500	85	1B
		Lynx-S	TC-S	FSD	165	9	G23	600	10000	2700/3000/3500/4000/6500	85	1B
		Lynx-S	TC-S	FSD	233	11	G23	900	10000	2700/3000/3500/4000/6500	85	1B
TC-SEL		Lynx-SE	TC-SEL	FSD	85	5	2G7	250	10000	2700/4000	85	1B
2 limb, 4 pin [HF]		Lynx-SE	TC-SEL	FSD	115	7	2G7	400	10000	2700/4000	85	1B
		Lynx-SE	TC-SEL	FSD	145	9	2G7	600	10000	2700/4000	85	1B
		Lynx-SE	TC-SEL	FSD	215	11	2G7	900	10000	2700/4000	85	1B
TC-D		Lynx-D	TC-D	FSQ	87	10	G24d-1	600	10000	2700/3000/3500/4000/6000/6500	85	1B
4 limb, 2 pin [SS]		Lynx-D	TC-D	FSQ	115	13	G24d-1	900	10000	2700/3000/3500/4000/6000/6500	85	1B
		Lynx-D	TC-D	FSQ	129	18	G24d-2	1200	10000	2700/3000/3500/4000/6000/6500	85	1B
		Lynx-D	TC-D	FSQ	147	26	G24d-3	1800	10000	2700/3000/3500/4000/6000/6500	85	1B
TC-DEL		Lynx-DE	TC-DEL	FSQ	91	10	G24q-1	600	12000	2700/3000/3500/4000	85	1B
4 limb, 4 pin [HF]		Lynx-DE	TC-DEL	FSQ	112	13	G24q-1	900	12000	2700/3000/3500/4000	85	1B
		Lynx-DE	TC-DEL	FSQ	128	18	G24q-2	1200	12000	2700/3000/3500/4000	85	1B
		Lynx-DE	TC-DEL	FSQ	149	26	G24q-3	1800	12000	2700/3000/3500/4000	85	1B
TC-T		-	TC-T	FSM	113	13	GX4d-1	900	10000	2700/3000/3500/4000/6500	85	1B
6 limb, 2 pin [SS]		Lynx-T	TC-T	FSM	100	18	GX4d-2	1200	10000	2700/3000/3500/4000/6500	85	1B
		Lynx-T	TC-T	FSM	115	26	GX4d-3	1800	10000	2700/3000/3500/4000/6500	85	1B
TC-TEL		-	TC-TEL	FSM	113	13	GX4q-1	900	15000	2700/3000/3500/4000	85	1B
6 limb, 4 pin [HF]		Lynx-TE	TC-TEL	FSM	100	18	GX4q-2	1200	15000	2700/3000/3500/4000	85	1B
		Lynx-TE	TC-TEL	FSM	115	26	GX4q-3	1800	15000	2700/3000/3500/4000	85	1B
		Lynx-TE	TC-TEL	FSM	131	32	GX4q-3	2400	15000	2700/3000/3500/4000	85	1B
		Lynx-TE	TC-TEL	FSM	152	42	GX4q-4	3200	15000	2700/3000/3500/4000	85	1B
TC-TELI		-	TC-TELI	FSM	178	57	GX24q-5	4300	12000	3000/4000/6000	82	1B
6 limb, 4 pin [HF]												
TC-L		Lynx-L	TC-L	FSL	225	18	2G11	1200	15000	3000/4000/6000	85	1B
2 limb, 4 pin [HF]		Lynx-L	TC-L	FSL	320	24	2G11	1800	15000	3000/4000/6000	85	1B
		Lynx-L	TC-L	FSL	415	36	2G11	2900	15000	3000/4000/6000	85	1B
		Lynx-L	TC-L	FSL	535	40	2G11	3500	15000	3000/4000/6000	85	1B
		Lynx-L	TC-L	FSL	535	55	2G11	4800	15000	3000/4000/6000	85	1B
TC-F		Lynx-F	TC-F	FSM	122	18	2G10	1100	10000	4000	85	1B
4 limb, 4 pin [HF]		Lynx-F	TC-F	FSM	165	24	2G10	1700	10000	3000/4000	85	1B
		Lynx-F	TC-F	FSM	217	36	2G10	2800	10000	3000/4000	85	1B
2D		-	TC-DD	FSF	-	16	GR8	1050	10000	2700/3000/6000	82	1B
8 limb, 2 pin [SS]												
2D		-	TC-DD	FSF	-	16	GR10q	1050	10000	2700/3000/4000	82	1B
8 limb, 4 pin [HF]		-	TC-DD	FSF	-	28	GR10q	2250	15000	2700/3000/4000	82	1B
		-	TC-DD	FSF	-	38	GR10q	3000	15000	2700/3000/4000	82	1B
		-	TC-DD	FSF	-	55	GRY10q-3	3900	15000	2700/3000/4000	82	1B
Micro-Lynx F With integral HF gear		Micro-Lynx F	TC-FSE	FBC	75Ø	6	GX53	230	8000	2700/3000/4000	85	1B

## Lamp Information for luminaires

### T5 Fluorescent Lamps

Title		Sylvania	ZVEI	ILCOS	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (lL)	Max Lumens at 33-37°	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
T5 HE (16mm Ø) High Efficiency Triphosphor		Luxline FHE	T16	FDH	549	14	G5	1230	1350	24000	2700/3000/4000	85	1B
		Luxline FHE	T16	FDH	549	14	G5	1140	1250	24000	6000	85	1B
		Luxline FHE	T16	FDH	849	21	G5	1910	2100	24000	2700/3000/4000	85	1B
		Luxline FHE	T16	FDH	849	21	G5	1775	1950	24000	6000	85	1B
		Luxline FHE	T16	FDH	1149	28	G5	2640	2900	24000	2700/3000/4000	85	1B
		Luxline FHE	T16	FDH	1149	28	G5	2460	1950	24000	6000	85	1B
		Luxline FHE	T16	FDH	1449	35	G5	3300	3650	24000	2700/3000/4000	85	1B
Luxline FHE	T16	FDH	1449	35	G5	3095	3400	24000	6000	85	1B		
T5 HO (16mm Ø) High Output Triphosphor		Luxline FHO	T16	FDH	549	24	G5	1700	2000	24000	2700/3000/4000	85	1B
		Luxline FHO	T16	FDH	549	24	G5	1570	1850	24000	6000	85	1B
		Luxline FHO	T16	FDH	849	39	G5	3220	3500	24000	2700/3000/4000	85	1B
		Luxline FHO	T16	FDH	849	39	G5	2990	3250	24000	6000	85	1B
		Luxline FHO	T16	FDH	1449	49	G5	4165	4900	24000	2700/3000/4000	85	1B
		Luxline FHO	T16	FDH	1449	49	G5	3950	4650	24000	6000	85	1B
		Luxline FHO	T16	FDH	1149	54	G5	4150	5000	24000	2700/3000/4000	85	1B
		Luxline FHO	T16	FDH	1149	54	G5	4050	4550	24000	6000	85	1B
		Luxline FHO	T16	FDH	1149	80	G5	6150	7000	24000	2700/3000/4000	85	1B
		Luxline FHO	T16	FDH	1449	80	G5	5700	6650	24000	6000	85	1B
T5 (16mm Ø) Standard Halophosphor		Standard	T16	FD	136	4	G5	140	-	10000	3000/3500	53	3
		Standard	T16	FD	136	4	G5	140	-	10000	4300	64	2B
		Standard	T16	FD	136	4	G5	115	-	10000	6500	76	2A
		Standard	T16	FD	212	6	G5	280	-	10000	3000/3500	53	3
		Standard	T16	FD	212	6	G5	280	-	10000	4300	64	2B
		Standard	T16	FD	212	6	G5	240	-	10000	6500	76	2A
		Standard	T16	FD	288	8	G5	400	-	10000	3000/3500	53	3
		Standard	T16	FD	288	8	G5	400	-	10000	4300	64	2B
		Standard	T16	FD	288	8	G5	340	-	10000	6500	76	2A
		Standard	T16	FD	517	13	G5	880	-	10000	3000/3500	53	3
		Standard	T16	FD	517	13	G5	880	-	10000	4300	64	2B
		Standard	T16	FD	517	13	G5	750	-	10000	6500	75	2A
		T5 Circular (16mm Ø) High output Triphosphor		T16-R	FSCH	230Ø	22	2GX13	1800	-	16000	2700/3000/4000/6000	85
T16-R	FSCH			305Ø	40	2GX13	3200	-	16000	2700/3000/4000/6000	85	1B	
T16-R	FSCH			305Ø	55	2GX13	4200	-	16000	2700/3000/4000/6000	85	1B	

### T8 Fluorescent Lamps

Title		Sylvania	ZVEI	ILCOS	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (lL)	Max Lumens at 33-37°	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
T8 (26mm Ø)		Luxline Plus	T26	FD	590	18	G13	1350	20000	2700/3000/3500/4000	85	1B
Triphosphor		Luxline Plus	T26	FD	590	18	G13	1300	20000	5000/6000	85	1B
		Luxline Plus	T26	FD	1200	36	G13	3350	20000	2700/3000/3500/4000	85	1B
		Luxline Plus	T26	FD	1200	36	G13	3250	20000	5000/6000	85	1B
		Luxline Plus	T26	FD	1500	58	G13	5200	20000	2700/3000/3500/4000	85	1B
		Luxline Plus	T26	FD	1500	58	G13	5000	20000	5000/6000	85	1B
		Luxline Plus	T26	FD	1764	70	G13	6050	20000	2700/3000/3500/4000	85	1B
		Luxline Plus	T26	FD	1764	70	G13	5700	20000	5000/6000	85	1B

## Lamp Information for luminaires

### HID metal halide - Ceramic arc tube















Note: Ceramic Metal halide lamps and Electronic Gear

**Lamp warm-up** - Ceramic metal halide lamps require approximately 5-12 minutes warm up time to reach full output. Several colour changes are often experienced as part of the warm up process.

**Hot Re-strike** - Hot lamps must cool down sufficiently until the gear can re-ignite them. Length of time this takes will depend upon the ambient and lamp temperature.

**Timed ignition** - Gear will shut down to protect itself when lamps are damaged and at end of lamp life. Constant attempts to strike such lamps would result in a reduction in gear life. Once the lamp has been replaced and the gear reset (by switching the unit off at the mains) the gear will operate as normal.













**Thermal protection** - Gear will shut down to protect itself when high ambient and internal temperatures are reached that would substantially decrease gear life. Such occurrences may occur in areas with poor ventilation or sometimes at the end of lamp life. Once the temperature has reduced to a safe level the gear will automatically re-set itself and operate normally.

Title		Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (lL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
Metal halide ceramic capsule		-	HIT-TC-CE	MT	14	85	20	G8.5	1700	-	-	6000	3000	81	1B
		CMI-TC	HIT-TC-CE	MT	17	85	35	G8.5	3750	-	-	12000	3000	87	1B
		CMI-TC	HIT-TC-CE	MT	17	85	70	G8.5	6700			12000	3000	89	1B
Metal halide ceramic capsule		CMI-T	HIT-CE	MT	20	90	35	G12	3750	-	-	12000	3000	83	1B
		CMI-T	HIT-CE	MT	20	90	70	G12	6700	-	-	12000	3000	87	1B
		CMI-T	HIT-CE	MT	20	90	70	G12	6700	-	-	12000	4200	93	1A
		CMI-T	HIT-CE	MT	20	100	150	G12	13500	-	-	12000	3000	83	1B
		CMI-T	HIT-CE	MT	20	100	150	G12	13000	-	-	12000	4200	88	1A
Superia CMI-T		S CMI-T WDL	HIT-CE	MT	20	90	35	G12	4000	-	-	15000	3000	91	1B
		S CMI-T WDL	HIT-CE	MT	20	90	70	G12	7300	-	-	15000	3000	90	1B
		S CMI-T NDL	HIT-CE	MT	20	90	35	G12	4200	-	-	15000	3000	92	1B
		S CMI-T NDL	HIT-CE	MT	20	90	70	G12	7300	-	-	15000	3000	96	1B
		S CMI-T Mini	HIT-CE	MT	13.3	52	20	GU6.5	1900	-	-	15000	3000	85	1B
Metal halide ceramic tubular double ended		CMI-TD	HIT-DE-CE	MD	22	117.6	70	Rx7s	6200	-	-	9000	3000	85	1B
		CMI-TD	HIT-DE-CE	MD	22	117.6	70	Rx7s	6200	-	-	9000	4200	90	1A
		CMI-TD	HIT-DE-CE	MD	25	135.4	150	Rx7s-24	13500	-	-	9000	3000	85	1B
		CMI-TD	HIT-DE-CE	MD	25	135.4	150	Rx7s-24	12500	-	-	9000	4200	90	1A
Metal halide ceramic tubular		S CMI-TT	HIT-CE	MT	32	156	70	E27	6300	-	-	12000	3000	83	1B
		S CMI-TT	HIT-CE	MT	47	211	150	E40	13500	-	-	7000	3000	85	1B
Metal halide ceramic elliptical		-	HIE-CE	ME	71	156	70	E27	5900	-	-	12000	3000	83	1B
		-	HIE-CE	ME	91	226	150	E40	13000	-	-	7000	3000	85	1B
		-	QT32	HEGT/W	32	105	250	E27	4210	-	-	2000	2900	100	1A
Metal halide ceramic elliptical		-	HIT-CE	ME	54	138	70	E27	5700	-	-	9000	3000	87	1B
		-	HIT-CE	ME	54	138	70	E27	5600	-	-	9000	4200	90	1A
		-	HIT-CE	ME	54	141	100	E27	8600	-	-	9000	3000	87	1B
		-	HIT-CE	ME	54	138	150	E27	12500	-	-	9000	3000	87	1B
		-	HIT-CE	ME	54	138	150	E27	12500	-	-	9000	4200	90	1A
Metal halide ceramic reflector		-	HIPAR20	MR	65	95	35	E27	-	26000	10	9000	3000	81	1B
		-	HIPAR20	MR	65	95	35	E27	-	5000	30	9000	3000	81	1B
		-	HIPAR-L30	MR	97	125	35	E27	-	44000	10	9000	4200	81	1B
		-	HIPAR-L30	MR	97	125	35	E27	-	7400	30	9000	3000	81	1B
		-	HIPAR-L30	MR	97	125	70	E27	-	68000	10	9000	4200	83	1B
		-	HIPAR-L30	MR	97	125	70	E27	-	10000	40	9000	4200	83	1B












## Lamp Information for luminaires

### HID metal halide - Quartz arc tube






Title	Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
Metal halide quartz capsule  	HSI-T	HIT-UVr	MT	26	76	70	G12	5200	-	-	6000	3000	80	1B
	HSI-T	HIT-UVr	MT	26	76	70	G12	5200	-	-	6000	4200	80	1B
	HSI-T	HIT-UVr	MT	26	76	150	G12	12000	-	-	6000	3000	80	1B
	HSI-T	HIT-UVr	MT	26	76	150	G12	12500	-	-	6000	4200	80	1B
Metal halide quartz tubular double ended  	HSI-TD	HIT-DE	MD	22	117.6	70	Rx7s	5500	-	-	9000	3200	80	1B
	HSI-TD	HIT-DE	MD	22	117.6	70	Rx7s	5500	-	-	9000	4000	80	1B
	HSI-TD	HIT-DE	MD	25	135.4	150	Rx7s-24	11250	-	-	9000	3200	80	1B
	HSI-TD	HIT-DE	MD	25	135.4	150	Rx7s-24	11250	-	-	9000	4200	80	1B
	HSI-TD	HIT-DE	MD	25	135.4	150	Rx7s-24	11250	-	-	9000	5200	80	1B
	HSI-TD	HIT-DE-UVr	MD	27.5	161.6	250	Fc2	20000	-	-	9000	3200	80	1B
	HSI-TD	HIT-DE-UVr	MD	27.5	161.6	250	Fc2	20000	-	-	9000	4200	80	1B
	HSI-TD	HIT-DE-UVr	MD	27.5	161.6	250	Fc2	18000	-	-	9000	5200	80	1B
Metal halide quartz tubular  Britelux compatible with HP sodium control gear 	HSI-TSX	HIT	MT	48	260	250	E40	21000	-	-	20000	4200	70	1B
	HSI-TSX	HIT	MT	63	270	400	E40	40000	-	-	20000	4200	70	1B
Metal halide quartz elliptical  Britelux clear compatible with HP sodium control gear 	HSI-SX	HIE	MT	90	227	250	E40	23500	-	-	20000	4100	70	1B
	HSI-SX CL/P	HIE-P	MT	90	227	250	E40	21000	-	-	15000	4500	70	1B
	HSI-SX CL/P	HIE-P	MT	120	290	400	E40	4000	-	-	15000	4300	70	1B
Metal halide quartz elliptical  Britelux Coated compatible with HP sodium control gear 	HSI-SX CO	HIE	MT	90	227	250	E40	22300	-	-	15000	3800	70	1B
	HSI-SX CO/P HIE-P/c		MT	90	227	250	E40	20000	-	-	15000	4200	70	1B
	HSI-SX CO/P HIE-P/c		MT	120	290	400	E40	42000	-	-	15000	4200	70	1B
Metal halide quartz elliptical  Britelux Coated/protected compatible with HP sodium control gear 	HSI-SX CO/P HIE-P/c		MT	90	227	250	E40	20000	-	-	15000	4200	70	1B
	HSI-SX CO/P HIE-P/c		MT	120	290	400	E40	42000	-	-	15000	4200	70	1B

## Lamp Information for luminaires

### HID metal halide - Quartz arc tube





Title	Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
Metal halide quartz tubular 	HSI-THX	HIT	MT	48	257	250	E40	20000	-	-	14500	4500	80	1B
	HSI-THX	HIT	MT	63	270	400	E40	36000	-	-	14500	4200	80	1B
Clear compatible with HP mercury control gear <b>UV Stop</b>														
Metal halide quartz elliptical 	HSI-HX	HIE	MT	90	227	250	E40	23000	-	-	14500	4500	80	1B
	HSI-HX	HIE	MT	120	290	400	E40	37000	-	-	14500	4500	80	1B
Clear compatible with HP mercury control gear <b>UV Stop</b>														
Metal halide quartz elliptical Britelux HSI-HX 	HSI-HX	HIE	MT	90	227	265	E40	22300	-	-	14500	3800	80	1B
	HSI-HX	HIE	MT	120	290	425	E40	40000	-	-	14500	4200	80	1B
Coated compatible with sodium control gear external ignitor required <b>UV Stop</b>														
Metal halide quartz elliptical 	HSI-HX	HIE	MT	90	227	245	E40	21000	-	-	14500	3800	80	1B
	HSI-HX	HIE	MT	120	290	400	E40	35200	-	-	14500	3800	80	1B
Coated compatible with mercury control gear with internal ignitor <b>UV Stop</b>														
Metal halide quartz elliptical 	HSI-MP	HIE-P	ME	54	138	75	E27	5200	-	-	15000	2900	80	1B
	HSI-MP	HIE-P	ME	54	138	75	E27	5500	-	-	15000	3800	80	1B
	HSI-MP	HIE-P	ME	54	138	100	E27	7900	-	-	15000	2900	80	1B
	HSI-MP	HIE-P	ME	54	138	100	E27	8100	-	-	15000	3800	80	1B
	HSI-MP	HIE-P	ME	54	138	150	E27	12500	-	-	15000	2900	80	1B
	HSI-MP	HIE-P	ME	54	138	150	E27	12500	-	-	15000	3800	80	1B
Metal halide quartz reflector BriteSpot ES50 	ES50	HIPAR51	MR	51	62.5	20	GX10	3300	3500	24	6000	3000	85	1B
	ES50	HIPAR51	MR	51	62.5	20	GX10	3300	2000	38	6000	3000	85	1B
	ES50	HIPAR51	MR	51	62.5	20	GX10	3300	1000	60	6000	3000	85	1B
	ES50	HIPAR51	MR	51	62.5	35	GX10	3300	7000	24	6000	3000	90	1A
	ES50	HIPAR51	MR	51	62.5	35	GX10	3300	4000	38	6000	3000	90	1A
	ES50	HIPAR51	MR	51	62.5	35	GX10	3300	2000	60	6000	3000	90	1A
Metal halide quartz reflector Dichroic BriteSpot ESD50 Coolbeam Universal 	ESD50	HIPAR51	MR	51	62.5	35	GX10	3300	7000	24	6000	3000	90	1A
	ESD50	HIPAR51	MR	51	62.5	35	GX10	3300	4000	38	6000	3000	90	1A
	ESD50	HIPAR51	MR	51	62.5	35	GX10	3300	2000	60	6000	3000	90	1A
<b>UV Stop</b>														
Metal halide quartz reflector BriteSpot ES111 	ES111	HIPAR111	MR	111	75	35	GX10	3300	4000	8	6000	3000	90	1A
	ES111	HIPAR111	MR	111	75	35	GX10	3300	1000	24	6000	3000	90	1A
	ES111	HIPAR111	MR	111	75	35	GX10	3300	3500	45	6000	3000	90	1A
Metal halide quartz reflector Dichroic BriteSpot ESD111 Coolbeam Universal 	ESD111	HIPAR111	MR	111	75	70	GX10	3300	2000	24	6000	3000	90	1A
	ESD111	HIPAR111	MR	111	75	70	GX10	3300	7000	45	6000	3000	90	1A
<b>UV Stop</b>														

### HID Sodium

High pressure sodium ceramic capsule SDW-TG 	-	HST-CRI	STH	20	96	100	GX12	4800	-	-	5000	2550	83	1B
	-	HST-CRI	STH	32	149	100	PG12-1	5000	-	-	5000	2500	83	1B
High pressure sodium tubular SON-T 	SHP-T	HST	ST	39	156	50	E27	3771	-	-	24000	2050	20	4
	SHP-T	HST	ST	39	156	70	E27	5885	-	-	24000	2050	20	4
	SHP-T	HST	ST	48	211	100	E40	10000	-	-	24000	2500	20	4
	SHP-T	HST	ST	48	211	150	E40	17000	-	-	24000	2050	20	4
	SHP-T	HST	ST	48	260	250	E40	33000	-	-	24000	2050	20	4
	SHP-T	HST	ST	48	292	400	E40	45000	-	-	24000	2050	20	4
	SHP-T	HST	ST	68	400	1000	E40	130000	-	-	24000	2050	20	4
High pressure sodium tubular mercury free 	SHP-TS	HST-MF	ST	39	156	50	E27	3947	-	-	24000	2050	23	4
	SHP-TS	HST-MF	ST	39	156	70	E27	6521	-	-	30000	2050	23	4
	SHP-TS	HST-MF	ST	48	211	100	E40	10622	-	-	30000	2050	23	4
	SHP-TS	HST-MF	ST	48	211	150	E40	17143	-	-	32000	2050	23	4
	SHP-TS	HST-MF	ST	48	260	250	E40	32581	-	-	32000	2050	25	4
	SHP-TS	HST-MF	ST	48	292	400	E40	54326	-	-	32000	2050	25	4
High pressure sodium elliptical with internal ignitor 	-	HSE-I	SE	72	165	50	E27	3500	-	-	15500	2050	23	4
	-	HSE-I	SE	72	165	70	E27	5600	-	-	15500	2050	23	4
High efficacy SON requires external ignitor 	SHP-S	HSE-E	SE	72	165	50	E27	3600	-	-	23000	2050	23	4
	SHP-S	HSE-E	SE	72	165	70	E27	6800	-	-	23000	2050	23	4
	SHP-S	HSE-E	SE	91	227	250	E40	30189	-	-	32000	2050	23	4
	SHP-S	HSE-E	SE	122	292	400	E40	53567	-	-	32000	2050	23	4

## Lamp Information for luminaires

### HID Mercury

Title		Sylvania	ZVEI	ILCOS	Ømm	Length (mm)	Watts Nominal	Cap/ Base	Initial Lumens (IL)	Peak Intensity (Cd)	Beam (50%)	Average Rated Life (Hrs)	Colour Temp. (°K)	Colour Rendering (Ra)	Colour Rendering (Group)
High pressure mercury quartz elliptical comfort		HSL-SC	HME	QE	56	130	50	E27	2000	-	-	29000	3400	60	2B
MBF/U comfort/super de luxe		HSL-SC	HME	QE	71	166	80	E27	4000	-	-	29000	3400	60	2B
		HSL-SC	HME	QE	76	178	125	E27	6500	-	-	29000	3400	60	2B
High pressure mercury quartz elliptical		HSL-BW	HME	QE	56	130	50	E27	1800	-	-	29000	4000	42	3
HSL-BW		HSL-BW	HME	QE	71	166	80	E27	3800	-	-	29000	4000	42	3
		HSL-BW	HME	QE	76	178	125	E27	6300	-	-	29000	4000	42	3
		HSL-BW	HME	QE	91	228	250	E40	13000	-	-	29000	4000	42	3
		HSL-BW	HME	QE	122	292	400	E40	22000	-	-	29000	3800	42	3
		HSL-BW	HME	QE	152	357	700	E40	40000	-	-	29000	4000	42	3
		HSL-BW	HME	QE	167	411	1000	E40	58000	-	-	29000	4000	42	3
High pressure mercury quartz elliptical		HSB-BW	HME-SB	QB	76	178	160	E27	3100	-	-	16000	3500	42	3
self-ballasted		HSB-BW	HME-SB	QB	91	233	250	E27	5600	-	-	16000	3500	42	3
HSL-BW		HSB-BW	HME-SB	QB	91	228	250	E40	5600	-	-	16000	3500	42	3
230V		HSB-BW	HME-SB	QB	122	292	500	E40	14000	-	-	16000	3500	42	3
		HSB-BW	HME-SB	QB	76	178	160	E27	3100	-	-	16000	3500	42	3
		HSB-BW	HME-SB	QB	76	178	160	B22d	3100	-	-	16000	3500	42	3
		HSB-BW	HME-SB	QB	91	228	250	E40	5600	-	-	16000	3500	42	3
240V		HSB-BW	HME-SB	QB	122	292	500	E40	14000	-	-	16000	3500	42	3
Low pressure mercury induction elliptical		-	LMG-IHF	FSG	111	181	85	-	6000	-	-	60000	2700/3000 /4000	80	1B
QL		-	LMG-IHF	FSG	131	210	165	-	12000	-	-	60000	2700/3000 /4000	80	1B

# Calculation Data Total Lamp Lumen / Circuit Power

Initial lumens are based on 100-hour measurements. Efficacy is calculated by dividing the 100-hour lumen output by the rated lamp power. Control gear losses are not taken into account. E.g. 13w TC-D 900 ÷ 13 = 69 lm/w. For reflector lamps efficacy PAR lamps, use the equivalent rated non-reflector variant e.g. PAR 38 100w use A 60 (GLS) 100w, PAR 30 75w use QT32 75w and CDM-R 35w use CMI/CDM-TC 35w. Circuit power is shown for both magnetic (Cu/fe) and electronic ballasts (HF) where applicable - circuit watts for magnetic ballasts are shown in brackets. Data sources; CELMA, GE, Osram, Philips and Sylvania.

## Tungsten Lamps

A (GLS)	25w	40w	60w	75w	100w	150w	200w	300w
Total Lamp Lumens (lL)	225	410	700	915	1330	2150	3080	4550
Total Circuit Power (W)	25	40	60	75	100	150	200	300
Efficacy (lm/W)	9	10	12	12	13	14	15	15

## Tungsten Halogen Lamps - 240 volts

G9 (satin)	40w	60w						
Total Lamp Lumens (lL)	460	790						
Total Circuit Power (W)	40	60						
Efficacy (lm/W)	12	13						
QT18 (clear)	75w	100w	150w	250w				
Total Lamp Lumens (lL)	1100	1500	2500	4350				
Total Circuit Power (W)	75	100	150	250				
Efficacy (lm/W)	15	15	17	17				
QT32 (clear)	75w	100w	150w	250w				
Total Lamp Lumens (lL)	1100	1500	2500	4350				
Total Circuit Power (W)	75	100	150	250				
Efficacy (lm/W)	15	15	17	17				
QT-DE12	100w	150w	200w	300w	500w	750w	1000w	1500w
Total Lamp Lumens (lL)	1600	2600	3000	5000	9500	15000	22000	33000
Total Circuit Power (W)	100	150	200	300	500	750	1000	1500
Efficacy (lm/W)	16	17	16	17	19	20	22	22

## Tungsten Halogen Lamps - 12 volts

QT9 (LV)	5w	10w	20w			
Total Lamp Lumens (lL)	60	140	350			
Total Circuit Power (W)	5	10	20			
Efficacy (lm/W)	12	14	18			
QT12 (LV)	20w	35w	50w	75w	100w	175w
Total Lamp Lumens (lL)	300	600	950	1575	2200	4900
Total Circuit Power (W)	20	35	50	75	100	175
Efficacy (lm/W)	15	17	19	21	22	28

## Compact Fluorescent Lamps

TC-DD (2D)	16w	28w	38w	55w		
Total Lamp Lumens (lL)	1050	2250	3000	3900		
Total Circuit Power (W)	17(23)	29(36)	38(45)	61		
Efficacy (lm/W)	66	80	79	71		
TC-S/SEL	5w	7w	9w	11w		
Total Lamp Lumens (lL)	250	400	600	900		
Total Circuit Power (W)	7(12)	9(14)	11(16)	14(18)		
Efficacy (lm/W)	50	57	67	82		
TC-D/DEL	10w	13w	18w	26w		
Total Lamp Lumens (lL)	600	900	1200	1800		
Total Circuit Power (W)	11(16)	14(19)	19(26)	27(34)		
Efficacy (lm/W)	60	69	67	69		
TC-T	13w	18w	26w	32w	42w	57w
Total Lamp Lumens (lL)	900	1200	1800	2400	3200	4300
Total Circuit Power (W)	14(19)	19(26)	27(34)	36	47	63
Efficacy (lm/W)	69	67	69	75	76	75
TC-L	18w	24w	36w	40w	55w	
Total Lamp Lumens (lL)	1200	1800	2900	3500	4800	
Total Circuit Power (W)	19(26)	25(32)	36(43)	45	61	
Efficacy (lm/W)	67	75	81	88	87	
TC-F	18w	24w	36w			
Total Lamp Lumens (lL)	1100	1700	2800			
Total Circuit Power (W)	19(26)	25(32)	36(43)			
Efficacy (lm/W)	61	71	78			
T5 Circular Lamps	22w	40w	55w			
Total Lamp Lumens (lL)	1800	3200	4200			
Total Circuit Power (W)	26	45	61			
Efficacy (lm/W)	82	80	82			

## Calculation Data Total Lamp Lumen / Circuit Power

### Compact Fluorescent Lamps (Integral HF electronic gear)

<b>Mini-Lynx 2 limb</b>	7w	11w	15w	20w
Total Lamp Lumens (lL)	400	600	900	1250
Total Circuit Power (W)	7	11	15	20
Efficacy (lm/W)	57	55	60	63
<b>Mini-Lynx 3 limb</b>	15w	20w	23w	
Total Lamp Lumens (lL)	900	1250	1500	
Total Circuit Power (W)	15	20	23	
Efficacy (lm/W)	60	63	65	
<b>Micro-Lynx F</b>	7w			
Total Lamp Lumens (lL)	220			
Total Circuit Power (W)	7			

### Linear Fluorescent Lamps

<b>T5 Triphosphor (HE/FH)</b>	14w	21w	28w	35w	
Total Lamp Lumens (lL)	1350	2100	2900	3650	
Total Circuit Power (W)	17	24	32	39	
Efficacy (lm/W)	96	100	104	104	
<b>T5 Triphosphor (HO/FO)</b>	24w	39w	49w	54w	80w
Total Lamp Lumens (lL)	2000	3500	4900	5000	6130
Total Circuit Power (W)	26	43	55	60	88
Efficacy (lm/W)	83	90	100	93	77
<b>T5 Halophosphor</b>	4w	6w	8w	13w	
Total Lamp Lumens (lL)	140	280	400	880	
Total Circuit Power (W)	6(11)	8(13)	11(15)	15(19)	
Efficacy (lm/W)	35	47	50	68	

## Calculation Data Total Lamp Lumen / Circuit Power

### High Intensity Discharge (HID) lamps

<b>MG-IHF (QL)</b>	85w	165w				
Total Lamp Lumens (IL)	6000	12000				
Total Circuit Power (W)	85	165				
Efficacy (lm/W)	71	73				
<b>CMI-TC/HIT-TC-CE (CDM-TC)</b>	20w	35w	70w			
Total Lamp Lumens (IL)	1650	3400	6200			
Total Circuit Power (W)	24	45(47)	80(82)			
Efficacy (lm/W)	83	97	89			
<b>CMI-TC/HIT-CE (CDM-TC)</b>	35w	70w	150w			
Total Lamp Lumens (IL)	3400	6200	13500			
Total Circuit Power (W)	45(47)	80(82)	162(170)			
Efficacy (lm/W)	97	89	90			
<b>HIT-CE (CDM-TT)</b>	70w	150w				
Total Lamp Lumens (IL)	6300	13500				
Total Circuit Power (W)	80(82)	162(170)				
Efficacy (lm/W)	90	90				
<b>HIE-CE (CDM-ET)</b>	70w	150w				
Total Lamp Lumens (IL)	5900	13000				
Total Circuit Power (W)	80(82)	162(170)				
Efficacy (lm/W)	84	87				
<b>CMI-TD/HIT-DE-CE (CDM-TD)</b>	70w	150w				
Total Lamp Lumens (IL)	6200	13000				
Total Circuit Power (W)	80(82)	162(170)				
Efficacy (lm/W)	89	87				
<b>HSI-T/HIT-UVr (HQI-T)</b>	35w	70w	150w	250w	400w	
Total Lamp Lumens (IL)	2400	5200	12000	21000	40000	
Total Circuit Power (W)	45(47)	80(82)	162(170)	284	430	
Efficacy (lm/W)	69	74	80	84	100	
<b>HSI-TD/HIT-DE (HQI-TS)</b>	70w	100w	150w	250w	400w	
Total Lamp Lumens (IL)	5500	8400	13000	20000	32000	
Total Circuit Power (W)	80(82)	(114)	162(170)	(284)	(430)	
Efficacy (lm/W)	79	84	87	80	80	
<b>HSI-MP/HIE-P (Metalarc)</b>	75w	100w	150w			
Total Lamp Lumens (IL)	5200	7900	12500			
Total Circuit Power (W)	(97)	(114)	(170)			
Efficacy (lm/W)	69	79	83			
<b>HSI-CRI (SDW-TG)</b>	70w					
Total Lamp Lumens (IL)	4800					
Total Circuit Power (W)	115					
Efficacy (lm/W)	48					
<b>HSI-CRI (SDW-T)</b>	100w					
Total Lamp Lumens (IL)	5000					
Total Circuit Power (W)	115					
Efficacy (lm/W)	50					
<b>SHP-TS/HST-MF (SON-T)</b>	50w	70w	100w	150w	250w	400w
Total Lamp Lumens (IL)	4400	6000	10000	14500	28000	48000
Total Circuit Power (W)	(62)	(82)	(114)	(170)	(284)	(434)
Efficacy (lm/W)	88	86	100	97	112	120
<b>SHP-S/HSE-I/E (SON)</b>	50w	70w				
Total Lamp Lumens (IL)	3300	5800				
Total Circuit Power (W)	(62)	(82)				
Efficacy (lm/W)	66	83				
<b>HST-DE (NAV-TS)</b>	70w	150w				
Total Lamp Lumens (IL)	6800	15000				
Total Circuit Power (W)	(82)	(170)				
Efficacy (lm/W)	97	100				
<b>HSL-SC/HME (MBF/U)</b>	50w	80w	125w	250w	400w	
Total Lamp Lumens (IL)	2000	4000	6500	13000	22000	
Total Circuit Power (W)	59	(91)	(137)	(270)	(420)	
Efficacy (lm/W)	40	50	52	52	55	

## DEFINITIONS

The following definitions shall apply to these terms and conditions:

“Business Day”	means a day other than a Saturday, Sunday or public holiday in England;
“Buyer”	means the party purchasing goods from the Seller;
“Buyer Specification”	any specification for the Products, including any related plans and drawings, that is supplied to the Seller by the Buyer, or produced by the Seller and agreed in writing by the Buyer;
“Contract”	means the contract between the Seller and the Buyer for the sale and purchase of the Products in accordance with these Terms;
“Force Majeure Event”	has the meaning given in clause 8;
“Order”	means Buyer’s order for the Products, as set out in the Buyer’s Purchase Order Form. The procedure for placing orders is outlined in clause 2.4.
“Products”	means the goods purchased by Buyer from the Seller in accordance with these Terms;
“Product Specification”	means the specification relating to Products provided by Seller;
“Seller”	means Havells Sylvania Europe Limited;
“Terms”	the terms and conditions set out in this document.

In these Terms, the following rules apply:

A person includes a natural person, corporate or unincorporated body (whether or not having separate legal personality);

A reference to a party includes its personal representatives, successors or permitted assigns;

A reference to a statute or statutory provision is a reference to such statute or provision as amended or re-enacted. A reference to a statute or statutory provision includes any subordinate legislation made under that statute or statutory provision, as amended or re-enacted;

Any phrase introduced by the terms including, include, in particular or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.

A reference to writing or written includes faxes.

## CONTRACT FORMATION

In the absence of a written agreement to the contrary executed by Seller, these Terms shall apply to every sale of Products between Seller and Buyer.

A quotation by Seller does not constitute an offer and Seller reserves the right to withdraw or revise any quotation prior to time of its acceptance of Buyer’s purchase order.

An Order constitutes an offer by Buyer to purchase the Products in accordance with these Terms. The contract shall be formed at the time when Buyer’s Order is confirmed in writing or by action by Seller, at which point the Contract shall come into existence

Orders can be placed with our Sales Office by completing a Purchase Order Form and can be sent via fax, EDI (Electronic Data Information) or COMNET (Havells Sylvania’s Internet Portal). Orders must be confirmed by us in writing.

Any terms and conditions proposed by Buyer or contained in any Order, Buyer Specification or other document sent by Buyer are expressly rejected by Seller and waived by Buyer.

These Terms apply to the purchase of Products to the exclusion of any other terms that Buyer seeks to impose or incorporate, or which are implied by trade, custom, practice or course of dealing.

The Contract constitutes the entire agreement between the parties. Buyer acknowledges that it has not relied on any statement, promise or representation made or given by or on behalf of Seller which is not set out in the Contract, save that nothing in this clause shall exclude liability for fraudulent misrepresentation.

Any typographical, clerical or other error or omission in any sales literature, quotation, price list, acceptance of offer, invoice or other document or information issued by Seller shall be subject to correction without any liability on the part of the Seller.

## PRODUCT SPECIFICATIONS

Seller reserves the right to make any changes to the Product Specification, that is required to conform with any applicable statutory or EU requirements.

Unless otherwise specifically agreed to in writing by the Seller, all descriptive and forwarding specifications, drawings and particulars of weight and dimension issued by Seller are approximate only and are intended to present a general idea of the Products to which they refer and shall not form any part of any contract.

## PRICE

The price for Products shall be the price quoted by Seller to Buyer or, when no price is quoted, the Seller’s list price at date of delivery, unless otherwise agreed in writing by the parties.

All costs associated with and/or arising out of implementation of the WEEE Directive on electrical or electronic waste into national law shall be charged to the Buyer separately.

The price of the Products is exclusive of amounts in respect of value added tax (“VAT”) Any other tax, tariff, duty or charge which Seller may be required to pay or collect, now or hereafter imposed by any governmental authority or agency, foreign or domestic, with respect to the sale, purchase, production, processing, storage, delivery, transportation, use, or consumption of any of the products or services covered hereby, including all taxes upon or measured by receipts from sales or services will be charged to the Buyer by the Seller.

## DELIVERY AND SHORTFALL

Delivery shall be made on Ex-Works (Incoterms 2010) basis unless otherwise agreed in writing. Should the Seller agree to deliver Product otherwise than at Seller’s premises, Buyer shall be liable to pay Seller’s charges for transport, packaging and insurance.

Where the Product is to be delivered in instalments, each delivery shall constitute a separate Contract which shall be invoiced and paid for separately. If Seller fails to deliver the Products, its liability shall be limited to the costs and expenses incurred by Buyer in obtaining replacement goods of similar description and quality less the price of the Products.

If Buyer fails to fulfil terms of purchase under this contract including failure to make payment on the due date, Seller may defer further shipments without notice until the breach is remedied, or reserve the right to cancel such shipments if the breach is not cured.

No claim in respect of loss in transit or short delivery will be accepted unless the Seller is advised in writing of such loss or short delivery at the time of delivery. The shortfall must be specified in writing on the Purchase Order Form.

The following details must be stated on the form:

Conditions of packages  
Date consignment received  
Date Seller was advised  
The extent of damage or shortfall.

## PASSING OF RISK AND TITLE

All risk in the Products shall pass to Buyer upon completion of delivery.

Not with standing delivery and the passing of risk in the Product, all title in and to the Products shall not pass to Buyer until payment for has been received by Seller in full (in cash or cleared funds)



# Standard Terms And Conditions Of Sale

Until such time as title in the Products passes to Buyer, the Buyer shall:

not be entitled to pledge or in any way charge or otherwise encumber by way of security for any indebtedness any of Product;

hold Product as Seller's fiduciary agent and bailee;

not remove, deface or obscure any identifying mark or packaging on or relating to the Products;

keep the Product separate from those of Buyer and third parties and properly stored, protected and insured and identified as Seller's property;

notify Seller immediately if it becomes subject to any of the events set out in clause 12;

provide Seller with such information relating to the Products as Seller may require from time to time,

For the avoidance of doubt, nothing in this clause 6.3 shall operate to prevent Buyer from reselling or using the Products in the ordinary course of its business.

Buyer shall bear the risk of any loss or damage to or deterioration of the Products from whatever cause arising following delivery of the Products to Buyer.

If before title to the Products passes to Buyer, Buyer becomes subject to any of the events set out in clause 12, or Seller reasonably believes that any such event is about to happen and notifies Buyer accordingly, then, provided that the Products have not been resold, or irrevocably incorporated into another product, and without limiting any other right or remedy, Seller may at any time require Buyer to deliver the Product back to Seller.

## PAYMENT

Buyer shall pay all invoices in full and in cleared funds without any setoff or deduction, within the payment term specified on the invoice and in the currency specified in the invoice, free of exchange collection, or other charges.

If Buyer fails to pay any invoice in full by the due date under the Contract, Seller may suspend production and/or decline to make shipment or delivery of all or part of the unshipped Product. In addition, the Buyer shall pay interest on the overdue amount at the applicable rate in accordance with the Late Payment of Commercial Debts (Interest) Act 1998. Such interest shall accrue on a daily basis from the due date until the date of actual payment of the overdue amount, whether before or after judgment. The Buyer shall pay the interest together with the overdue amount.

Buyer shall not be entitled to assert any credit, set-off or counterclaim against Seller in order to justify withholding payment of any such amount in whole or in part. Seller may at any time, without limiting any other rights or remedies it may have, set off any amount owing to it by Buyer against any amount payable by the Seller to the Buyer.

## FORCE MAJEURE

Seller shall not be liable for any failure to perform or delay in performance due to circumstances beyond Seller's reasonable control, including but not limited to riot, war or hostilities between nations, civil war, civil commotion, acts of terrorism, governmental orders or regulations, import or export regulations or embargoes, acts of God, fire, accidents, strikes, lock-outs, or other industrial actions or trade disputes (whether involving employees of the Seller or of a supplier), lack of transportation facilities, delays of carriers, inability to obtain raw materials, curtailment of or failure in obtaining sufficient electrical power, or any other contingencies beyond the reasonable control of Seller ("Force Majeure Event"). In the case of a Force Majeure Event, Seller may, in its sole discretion, cancel, reduce or modify its deliveries to Buyer without liability for any damages whatsoever.

## WARRANTY; CLAIMS; LIMITATION OF LIABILITY.

Subject to the conditions set out below, Seller warrants that on delivery and for a period of 24 months from the date of delivery, the Products shall:

correspond to the Product Specifications agreed to in writing by Seller; and be free from defects in design, material and workmanship, unless otherwise indicated by Seller in the product specification or elsewhere.

Subject to clause 9.3 if: Buyer gives notice in writing to Seller during the warranty period set out in clause 9.1 above and within a reasonable time of discovery that some or all of the Products do not comply with the warranty set out in clause 9.1;

Seller is given a reasonable opportunity of examining such Products;

Buyer (if asked to do so by Seller) returns such Products to Seller's place of business at Buyer's cost,

Where we consider that the Product is covered by this warranty, we will repair and/or replace ONLY the defective lamp(s) within a reasonable period of time. Further warranty is excluded unless compulsory required by law. For the avoidance of doubt, "repair or replace the defective lamps" does not include any removal or reinstallation activities, costs or expenses, including without limitation, labor costs or expenses.

Seller shall be under no liability in respect of any defect in the Products arising from: any drawing, design or any Buyer Specification supplied by Buyer; Buyer making any further use of the Products after giving notice in accordance with clause 9.2;

normal wear and tear, wilful damage, negligence, abnormal storage or working conditions, improper handling, third party interference (e.g. improper installation, overuse, excess voltage or frequency oscillations);

failure to follow Seller's instructions (whether oral or in writing) as to the storage, commissioning, installation, use and maintenance of the Products or (if there are none) good trade practice;

misuse, alteration or repair of the Products without the Seller's approval.

For the avoidance of doubt, the above warranty does not extend to parts, materials or equipment not manufactured by Seller, in respect of which Buyer shall only be entitled to the benefit of any such warranty or guarantee as is given to Seller by the third party manufacturer

Except as set out in these Terms, all warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

These Terms shall also apply to any repaired or replacement Products supplied by Seller. Nothing in these Terms shall limit or exclude Seller's liability for:

death or personal injury caused by its negligence; or fraud or fraudulent misrepresentation.

Subject to clause 9.6, Seller shall not be liable to Buyer, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit or indirect or consequential loss or damages arising under or in connection with the Contract.

## PATENTS

Between the Buyer and the Seller, all Intellectual Property Rights and all other rights in the Deliverables and materials shall be owned by the Seller.

Where necessary, the Seller licenses all such rights limited to the Buyer free of charge and on a non-exclusive, royalty free rights of the IP to the extent as is necessary to enable the Buyer to make reasonable use of the Deliverables and the Services.

Should Products sold by Seller be the subject to a claim for patent infringement, Seller may, at its sole option and expense, either procure for Buyer the right to continue using said Product, or modify same so that it becomes non-infringing, or replace it with non-infringing Product, or remove the Product and refund the purchase price paid by Buyer.

Buyer agrees to defend and indemnify Seller from and against any liability for or on account of any infringement or alleged infringement of any patented or unpatented inventions or trade secret with respect to (i) any use of Products by Buyer or their customers, including without limitation use of Products alone or in combination with other components or (ii) Products furnished, or methods used by Seller, in accordance with specifications or instructions furnished by or expressly or implicitly prescribed by Buyer.

## DESIGN OWNERSHIP

Any specifications, drawings, or other technical information, data, tools, dyes, patterns, masks, test equipment, software and any other item designed, supplied, or created by Seller in performance of Buyer's order, (the "Creative Elements" shall remain the exclusive property of Seller, and no right, title or license in any such item or design is hereby granted to Buyer and Buyer is prohibited from copying or using the Creative Elements without Seller's prior written consent.

### INSOLVENCY

Either party shall have the right to cancel any order in the event that the other party is insolvent (or as applicable, bankrupt) according to the law, or has made any arrangements with its creditors or under the law with a view to avoiding an impending insolvency (or as applicable, bankruptcy), or has had any person appointed by its creditors or under law as a consequence of debts which have fallen, or which are about to fall, due and which the relevant party is unable to properly repay.

### PRIVACY POLICY

The Customer acknowledges and agrees that details of the Customer's name, address and payment record may be submitted to a credit reference agency, and personal data will be processed by and on behalf of the Seller in connection with the Services. Information may also be used for marketing activity and will be held on our customer database.

Havells Sylvania endeavours to respect the confidentiality of any personal data provided and to use them in line with the UK Data Protection Act 1998. This policy also applies to the above mentioned credit reference agencies Havells Sylvania works with. For further information please consult our privacy policy which is accessible on our company website [www.havells-sylvania.com](http://www.havells-sylvania.com) or upon request a copy will be provided.

### ASSIGNMENT AND SUBCONTRACTING

Seller may at any time assign, transfer, charge, subcontract or deal in any other manner with all or any of its rights or obligations under the Contract. This includes an assignment of the Contract or parts of it made under these Terms at any time to an affiliate its right to receive payment;

Buyer may not assign any of its rights or obligations hereunder without the previous written consent of Seller, which will not be unreasonably withheld.

### GOVERNING LAW AND JURISDICTION

The Contract, and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims), shall be governed by, and construed in accordance with, English law, and the parties irrevocably submit to the exclusive jurisdiction of the courts of England and Wales.

### MISCELLANEOUS

No waiver by Seller of any breach of the contract by Buyer shall be considered as a waiver of any subsequent breach of the same or any other provision.

If any provision of these Terms is held by any competent authority to be invalid or unenforceable in whole or in part, the validity of the other provisions of these Terms and the remainder of the provision in question shall not be affected.

No variation to this Contract shall be valid unless agreed to in writing and signed by an authorized representative of Seller and Buyer.

- 16.4** The Seller may, from time to time and without notice, change the Products in order to comply with any applicable safety or statutory requirements, provided that such changes do not materially affect the nature, scope of, or the charges for the Products. If the Seller requests a change to the scope of the Products for any other reason, the Customer shall not unreasonably withhold or delay consent to it.

### EXCLUSION OF THIRD PARTY RIGHTS

The Contracts (Rights of Third Parties) Act 1999 shall not apply to these Terms nor any contract made under them and no person other than Buyer and Seller shall have any rights there under, nor shall any such contract or these Terms be enforceable under that Act by any other person.

## Specifications

The following notes prepared to meet the company's obligations imposed by the Health & Safety at Work Act 1974 (Amended 1988) are of a general nature only. Specific information regarding installation use and disposal appropriate to individual models is provided in the instruction leaflet packed with the product, or can be found on the relevant pages of this catalogue.

The Health & Safety at Work Act 1974 imposes upon the users of the company's products an obligation to ensure that all personnel involved in the installation, handling, use or disposal of these products are acquainted with the information provided by the Company and are made fully aware of any precautions that need to be taken.

The installation of these products should only be carried out by a qualified contractor in accordance with the instructions supplied with the product.

### Specifications

Leadership in design is based on constant development and improvement. Whilst great care is taken to give up-to-date information in this publication, the right is reserved to change any specifications herein detailed, without prior notice. All descriptions, illustrations etc, in this publication shall not form part of any contract.

### Track and Spotlights

All track and spotlights are designed for normal, dry interiors, and are not recommended for use in damp or corrosive situations. Adequate ventilation will be necessary when tungsten spotlights are used in confined spaces where elevated temperatures will occur.

### Lamps

Wattage and where applicable type of lamp are shown for every fitting. Incorrect lamps may affect efficiency, change the planned distribution, create glare and in some cases, seriously overheat the luminaire. Unless otherwise stated all luminaires are supplied without lamps.

### Wiring

The majority of luminaires are fully prewired and with heat resistant cable wherever required.

### Weights

Where given, the weights of luminaires do not include lamps.

### Transformer & Control Gear

Transformers and Control Gear are available for 240V 50HZ and 230V 50HZ with other options subject to special quotation.

240V 50HZ will be supplied unless any other voltage is requested at the time of ordering.

### Ceiling Cut-outs

Throughout this publication cut-out sizes refer to the aperture for the ceiling ring with recessed fittings when mounted in soft fibrous tiles. For timber or metal tiles and cast-in construction, check dimensions on site.

### Product colours and finishes

The Havells-Sylvania range of standard colours has been rationalised. This change situation has provided Havells-Sylvania with the opportunity to harmonise our standard colours in line with developments that have taken place in architectural materials and building accessories.

For reference the standard paint finishes are now:

#### Concord luminaire

RAL 9005 Jet Black Black  
RAL 9006 White Aluminium Silver  
RAL 9010 Pure White White  
RAL 9016 Traffic White White

#### Sylvania Outdoor luminaires

RAL 9007 Light grey Grey

#### LED Lamps

RAL 9023 Dark Silver  
RAL 9016 Traffic White

Please note:

- Due to photography and the printing process the colours reproduced in this catalogue may not be truly representative.
- Though paint colours may be the same, gloss, matt, satin and textured finishes will appear different.

### Protection of Electronic Components

All products incorporating electronic components are protected against damage which may result from transients on the mains supply.

The level of protection incorporated is generally in excess of the minimum level specified in the current international standards.

It is the customer's responsibility to ensure that electronic equipment is not subjected to transients above these international immunity standards. In extreme cases additional suppression devices may be needed on the mains supply. The company does not take responsibility for damage to products caused by excessive mains transients. Patents Many of the products listed in this publication are the subject of Patents or Patent Applications and/or Design Registration UK and other countries.

Our exhaustive Conditions of sales are available on our website under (see below web address), or by request by calling your local sales office.  
[www.havells-sylvania.com/terms-and-conditions](http://www.havells-sylvania.com/terms-and-conditions)

### Product Specifications

Seller reserves the right to make any changes to the Product Specification, that is required to conform with any applicable statutory or EU requirements.

Unless otherwise specifically agreed to in writing by the Seller, all descriptive and forwarding specifications, drawings and particulars of weight and dimension issued by Seller are approximate only and are intended to present a general idea of the Products to which they refer and shall not form any part of any contract.

### Warranty; Claims; Limitation of liability

Subject to the conditions set out below, Seller warrants that on delivery and for a period of 24 months from the date of delivery, the Products shall:

correspond to the Product Specifications agreed to in writing by Seller; and be free from defects in design, material and workmanship, unless otherwise indicated by Seller in the product specification or elsewhere.

Subject to clause 9.3 if: Buyer gives notice in writing to Seller during the warranty period set out in clause 9.1 above and within a reasonable time of discovery that some or all of the Products do not comply with the warranty set out in clause 9.1;

Seller is given a reasonable opportunity of examining such Products;

Buyer (if asked to do so by Seller) returns such Products to Seller's place of business at Buyer's cost,

Where we consider that the Product is covered by this warranty, we will repair and/or replace ONLY the defective lamp(s) within a reasonable period of time. Further warranty is excluded unless compulsory required by law. For the avoidance of doubt, "repair or replace the defective lamps" does not include any removal or reinstallation activities, costs or expenses, including without limitation, labor costs or expenses.

Seller shall be under no liability in respect of any defect in the Products arising from: any drawing, design or any Buyer Specification supplied by Buyer; Buyer making any further use of the Products after giving notice in accordance with clause 9.2;

normal wear and tear, wilful damage, negligence, abnormal storage or working conditions, improper handling, third party interference (e.g. improper installation, overuse, excess voltage or frequency oscillations);

failure to follow Seller's instructions (whether oral or in writing) as to the storage, commissioning, installation, use and maintenance of the Products or (if there are none) good trade practice;

misuse, alteration or repair of the Products without the Seller's approval.

For the avoidance of doubt, the above warranty does not extend to parts, materials or equipment not manufactured by Seller, in respect of which Buyer shall only be entitled to the benefit of any such warranty or guarantee as is given to Seller by the third party manufacturer

Except as set out in these Terms, all warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

These Terms shall also apply to any repaired or replacement Products supplied by Seller. Nothing in these Terms shall limit or exclude Seller's liability for:

death or personal injury caused by its negligence; or fraud or fraudulent misrepresentation.

Subject to clause 9.6, Seller shall not be liable to Buyer, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit or indirect or consequential loss or damages arising under or in connection with the Contract.

### Patents

Between the Buyer and the Seller, all Intellectual Property Rights and all other rights in the Deliverables and materials shall be owned by the Seller. Where necessary, the Seller licenses all such rights limited to the Buyer free of charge and on a non-exclusive, royalty free rights of the IP to the extent as is necessary to enable the Buyer to make reasonable use of the Deliverables and the Services.

Should Products sold by Seller be the subject to a claim for patent infringement, Seller may, at its sole option and expense, either procure for Buyer the right to continue using said Product, or modify same so that it becomes non-infringing, or replace it with non-infringing Product, or remove the Product and refund the purchase price paid by Buyer.

Buyer agrees to defend and indemnify Seller from and against any liability for or on account of any infringement or alleged infringement of any patented or unpatented inventions or trade secret with respect to (i) any use of Products by Buyer or their customers, including without limitation use of Products alone or in combination with other components or (ii) Products furnished, or methods used by Seller, in accordance with specifications or instructions furnished by or expressly or implicitly prescribed by Buyer.

### Design ownership

Any specifications, drawings, or other technical information, data, tools, dyes, patterns, masks, test equipment, software and any other item designed, supplied, or created by Seller in performance of Buyer's order, (the "Creative Elements" shall remain the exclusive property of Seller, and no right, title or license in any such item or design is hereby granted to Buyer and Buyer is prohibited from copying or using the Creative Elements without Seller's prior written consent.

### Privacy policy

The Customer acknowledges and agrees that details of the Customer's name, address and payment record may be submitted to a credit reference agency, and personal data will be processed by and on behalf of the Seller in connection with the Services. Information may also be used for marketing activity and will be held on our customer database.

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