



Lamp Catalogue 2003/2004

SYLVANIA

**SYLVANIA**

by Sylvania Lighting International

# Lamp Catalogue 2003/2004



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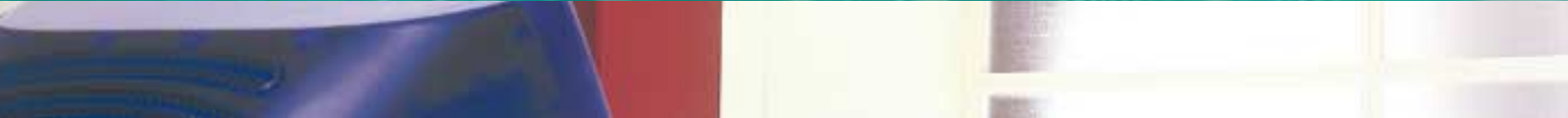
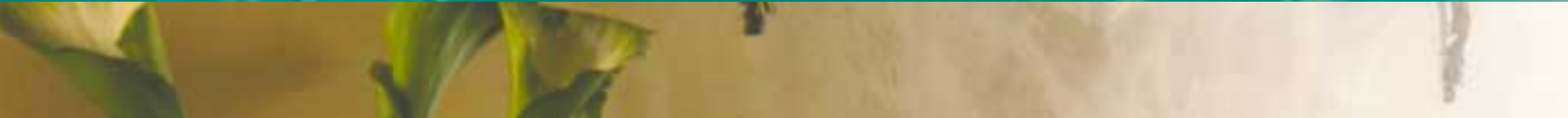
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## SYLVANIA

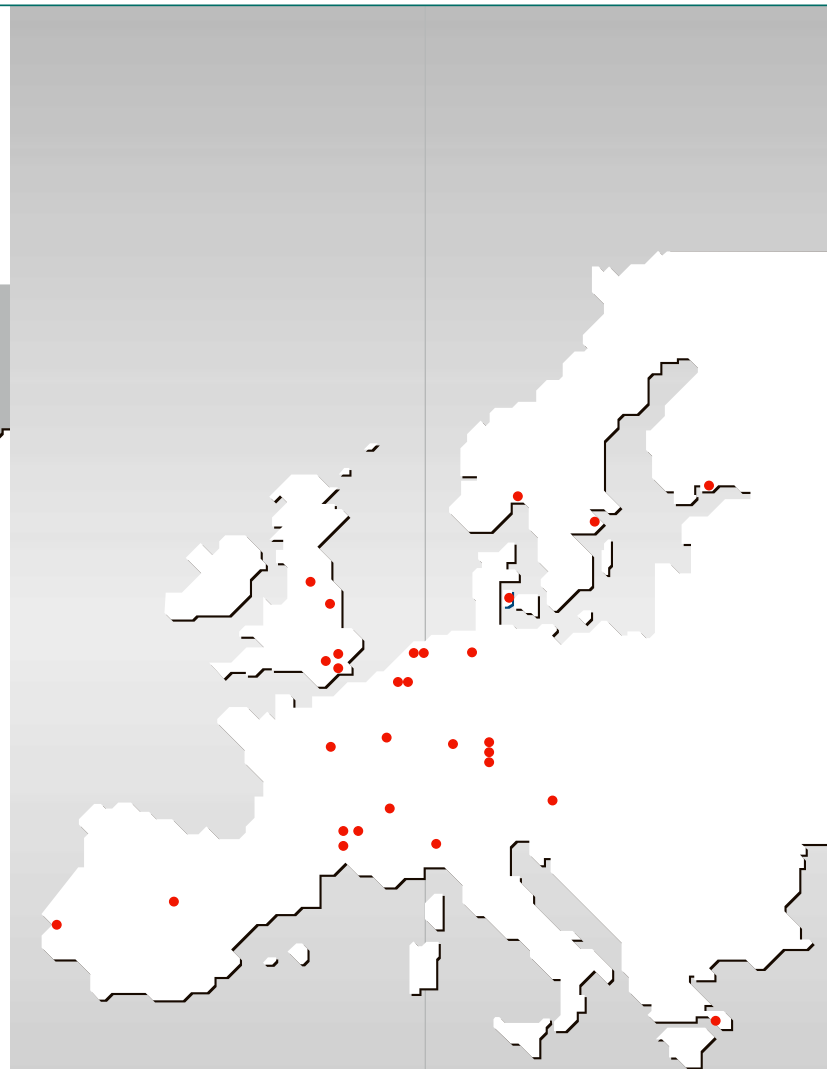
Sylvania is one of the world's largest producers of light sources and manufactures a wide range of lamps: incandescent, halogen, low-energy, fluorescent and a comprehensive range of HID lamps and other specialist lighting products for the professional specifier and user.

Sylvania lamps are distributed from stock, via our national sales organisations around the world, to original equipment manufacturers and retail outlets and through professional wholesale distribution to installers and end users.

### COMPETENCY CENTRES

Sylvania has created Competency Centres for its major lamp product groups - bringing specific design, marketing and production engineering skills, for each key lamp group, together in one place: to co-ordinate and focus the years of experience this brings to new product development; and to bringing products into the market place efficiently and effectively.

- Erlangen (Germany): produces fluorescent lamps of all types.
- Lyon (France): produces decorative incandescent lamps such as candle and globe lamps.
- Shipley (England): produces innovative, energy-saving compact fluorescent lamps.
- Tienen (Belgium): specialises in producing low voltage and mains voltage halogen lamps and HID lamps.



Erlangen (Germany)



Lyon (France)



Shipley (England)



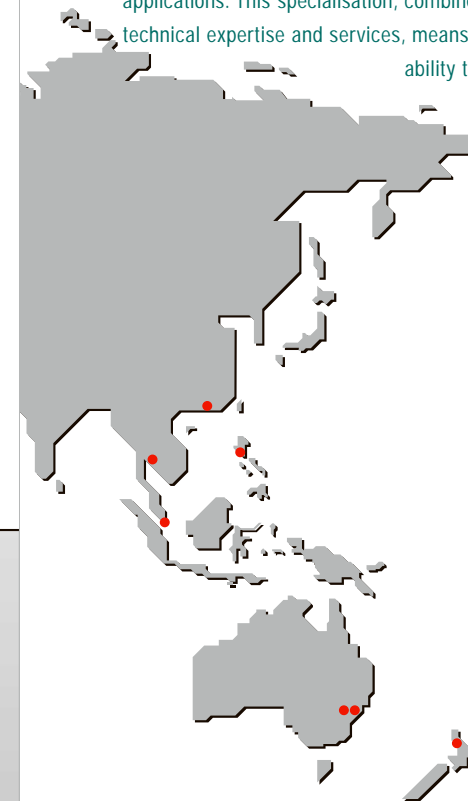
Tienen (Belgium)



## SYLVANIA LIGHTING INTERNATIONAL

Sylvania is part of Sylvania Lighting International (SLI): the principal company behind many of the world's best known professional and consumer lighting brands - brands such as Brilliant, Concord, Lumiance, Marlin and Sylvania (outside North-America).

At SLI, our focus is dedicated to the lighting industry and nothing else. SLI designs, manufactures and markets a diverse range of lamps and lighting fixtures for architectural, industrial, commercial, residential and outdoor applications. This specialisation, combined with our versatile range of products, technical expertise and services, means Sylvania Lighting International has the ability to deliver all your lighting requirements.





LAMP RANGE

Sylvania's range of lamps is one of the largest and most complete in the industry. As a full-line lighting supplier, we can draw on our strengths in both lamps and fixtures to match the two for the best results for our customers.

HALOGEN LAMPS

Low-voltage tungsten halogen lamps come in many forms and sizes and thanks to a highly advanced and precise technique, are now also available in low - pressure versions, which allow free burning in open fixtures. Sylvania's mains voltage tungsten halogen lamps, including the innovative Hi-Spot® range, combine beautiful bright halogen light with the many advantages of mains voltage.



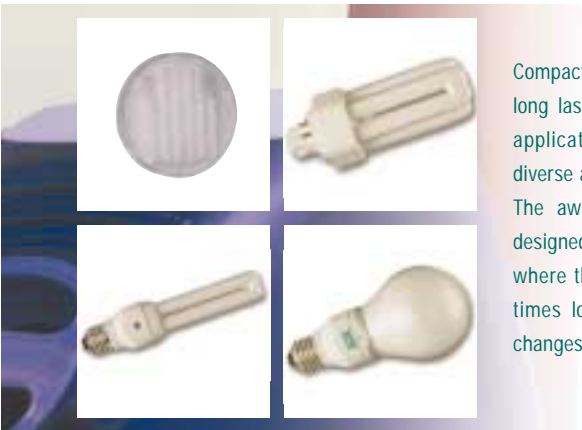
INCANDESCENT LAMPS

Incandescent lamps remain highly popular for home lighting - and are still undergoing significant improvements. Research shows that new shapes and colour tones will stimulate consumers to buy light bulbs which add atmosphere to every part of the home. Sylvania has completely revamped its extensive range of incandescent lamps to meet this demand.



COMPACT FLUORESCENT LAMPS

Compact Fluorescent Lamps meet the growing need for energy-efficient, long lasting, light sources for a wide variety of commercial and domestic applications. The Sylvania Lynx range offers comprehensive solutions for diverse applications. The award-winning Mini-Lynx range offers unique compactness and is designed to replace standard incandescent GLS lamps in any application where they are used, while using a fifth of the energy and lasting twelve times longer (up to 12000 hours) - reducing both energy bills and lamp changes. Lynx and Mini Lynx lamps share the same common features of long life, high colour rendering and constant light output throughout life.



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. There have been significant improvements in recent years in lamp efficacy, colour rendering, lumen maintenance and lamp life. Perhaps the most important improvement has been the use of advanced phosphors, which offer high efficacy and excellent colour rendering. 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.



HID LAMPS

High Intensity Discharge lamps provide excellent luminous efficiency, long life and colour rendering to meet a variety of lighting needs, in both indoor applications - shops and industry for example - and outdoor applications such as street and architectural lighting. Sylvania's ranges of discharge lamps are characterised by quality lamp materials, advanced manufacturing techniques and quality control procedures, which ensure their performance and reliability.





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INCANDESCENT LAMPS



Incandescent lamps, with a typical average rated life of 1000 hours, are still widely used throughout the world in commercial and domestic lighting applications.

Research shows on-going improvements in lamp performance and the introduction of new shapes and colour tones stimulates user purchases. As a result, Sylvania's range of incandescent lamps undergo continual development and improvement leading to better lens and reflector designs, more efficient filaments, gas fillings and infra-red reflective coatings.

**Brilliant Satin** lamps, with improved white coating, have an even-surface brightness which reduces the shadows thrown by normal lamps and are designed for those areas where people need bright white light with minimal envelope glare.

**Clear** lamps deliver the extra sparkle demanded for chandeliers and glass luminaires.

INCANDESCENT LAMPS



**Pastel Satin** is based on our satin coating technology; to which a hint of colour has been applied to enhance the decor of rooms where people seek peace and comfort. Available in Apricot (a touch of orange) Azure (a touch of blue), Crème (Cream), Jade (a touch of green) and Rose (a touch of pink).

**Brilliant Satin, Clear, and Pastel Satin** lamps are available in all popular sizes in the new T60 envelope, introduced as an alternative to the more traditional pear-shaped envelope, as well as in 45 mm round and 35 mm candle lamps.



GLS PEARL

Standard pear-shaped incandescent lamps with a pearl finish envelope.

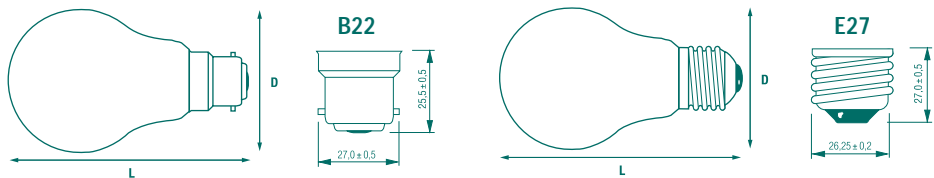


FEATURES

- Pearl finish
- Easy to operate
- Excellent colour reproduction

APPLICATIONS

- Commercial and domestic lighting



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E27	pearl	25	230	E27	104	60	230	100	0012902
25W 240V E27	pearl	25	240	E27	104	60	225	100	0012942
25W 240V B22	pearl	25	240	B22	103	60	225	100	0012945
40W 230V E27	pearl	40	230	E27	104	60	415	100	0013002
40W 240V E27	pearl	40	240	E27	104	60	410	100	0013042
40W 240V B22	pearl	40	240	B22	103	60	410	100	0013045
60W 230V E27	pearl	60	230	E27	104	60	710	100	0013102
60W 240V E27	pearl	60	240	E27	104	60	700	100	0013142
60W 240V B22	pearl	60	240	B22	103	60	700	100	0013145
75W 230V E27	pearl	75	230	E27	104	60	925	100	0013202
75W 240V E27	pearl	75	240	E27	104	60	915	100	0013242
75W 240V B22	pearl	75	240	B22	103	60	915	100	0013245
100W 230V E27	pearl	100	230	E27	104	60	1340	100	0013302
100W 240V E27	pearl	100	240	E27	104	60	1330	100	0013342
100W 240V B22	pearl	100	240	B22	103	60	1330	100	0013345

# GLS CLEAR

Standard pear-shaped incandescent lamps with a crystal clear envelope.

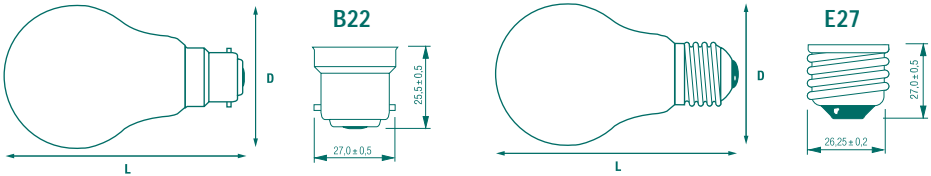


## FEATURES

- Clear sparkling light
- Easy to operate
- Excellent colour reproduction

## APPLICATIONS

- Commercial and domestic lighting



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E27	clear	25	230	E27	104	60	230	100	0012900
25W 240V E27	clear	25	240	E27	104	60	225	100	0012941
25W 240V B22	clear	25	240	B22	103	60	225	100	0012944
40W 230V E27	clear	40	230	E27	104	60	415	100	0013000
40W 240V E27	clear	40	240	E27	104	60	410	100	0013041
40W 240V B22	clear	40	240	B22	103	60	410	100	0013044
60W 230V E27	clear	60	230	E27	104	60	710	100	0013100
60W 240V E27	clear	60	240	E27	104	60	700	100	0013141
60W 240V B22	clear	60	240	B22	103	60	700	100	0013144
75W 230V E27	clear	75	230	E27	104	60	925	100	0013200
75W 240V E27	clear	75	240	E27	104	60	915	100	0013241
75W 230V B22	clear	75	230	B22	103	60	925	100	0013220
100W 230V E27	clear	100	230	E27	104	60	1340	100	0013300
100W 240V E27	clear	100	240	E27	104	60	1330	100	0013341
100W 240V B22	clear	100	240	B22	103	60	1330	100	0013344



GLS-T BRILLIANT SATIN & CLEAR

A range of T-shaped incandescent lamps with a modern appearance. The high-tech electrostatic coating process produces an envelope with a pure white finish.

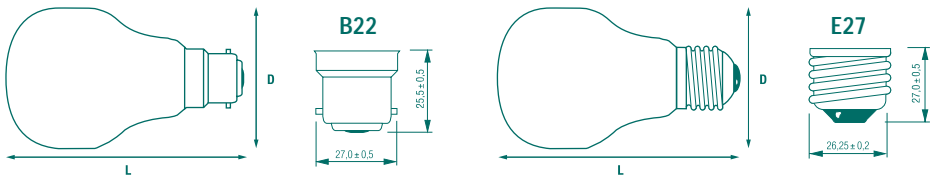


FEATURES

- T-shaped envelope
- Modern appearance
- More even and superior quality light
- No hard shadows
- Available in Brilliant Satin and Clear finishes

APPLICATIONS

- Commercial and domestic lighting
- Replaces conventional incandescent lamps in applications where the lamp appearance is important
- Recommended for use in luminaires where the lamp is completely visible or forms an integral part of the luminaire design



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E27	brilliant satin	25	230	E27	104	60	185	100	0012947
25W 230V B22	brilliant satin	25	230	B22	103	60	185	100	0012949
40W 230V E27	brilliant satin	40	230	E27	104	60	385	100	0013014
40W 230V B22	brilliant satin	40	230	B22	103	60	385	100	0013039
60W 230V E27	brilliant satin	60	230	E27	104	60	655	100	0013134
60W 230V B22	brilliant satin	60	230	B22	103	60	655	100	0013139
75W 230V E27	brilliant satin	75	230	E27	104	60	850	100	0013234
75W 230V B22	brilliant satin	75	230	B22	103	60	850	100	0013239
100W 230V E27	brilliant satin	100	230	E27	104	60	1210	100	0013314
100W 230V B22	brilliant satin	100	230	B22	103	60	1210	100	0013319
25W 230V E27	clear	25	230	E27	104	60	185	100	0012946
40W 230V E27	clear	40	230	E27	104	60	385	100	0013013
60W 230V E27	clear	60	230	E27	104	60	655	100	0013133
75W 230V E27	clear	75	230	E27	104	60	850	100	0013233
100W 230V E27	clear	100	230	E27	104	60	1210	100	0013313

# GLS-T PASTEL SATIN

T-shaped incandescent lamps with a gentle touch of pastel colour.

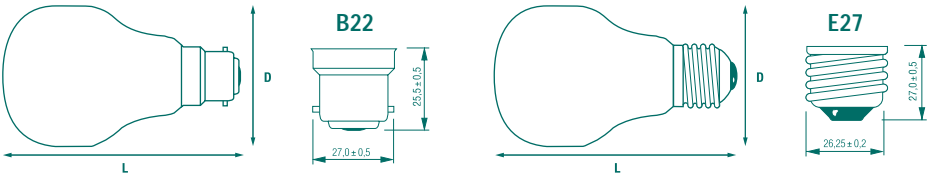


## FEATURES

- T-shaped envelope
- Modern appearance
- Choice of five colours: Apricot (a touch of orange), Azure (a touch of blue) Cream, Jade (a touch of green) and Rose (a touch of pink)

## APPLICATIONS

- Commercial and domestic lighting
- Where a gentle touch of colour will add interest or atmosphere.



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E27	crème	25	230	E27	104	60	215	100	0003170
40W 230V E27	crème	40	230	E27	104	60	400	100	0003171
60W 230V E27	crème	60	230	E27	104	60	670	100	0003319
60W 230V E27	apricot	60	230	E27	104	60	630	100	0003320
60W 230V E27	rose	60	230	E27	104	60	540	100	0003321
60W 230V E27	azure	60	230	E27	104	60	570	100	0003322
60W 230V E27	jade	60	230	E27	104	60	580	100	0003323
60W 230V B22	crème	60	230	B22	103	60	670	100	0003133
60W 230V B22	apricot	60	230	B22	103	60	630	100	0003134
60W 230V B22	rose	60	230	B22	103	60	540	100	0003135
60W 230V B22	azure	60	230	B22	103	60	570	100	0003136
60W 230V B22	jade	60	230	B22	103	60	580	100	0003137
75W 230V E27	crème	75	230	E27	104	60	900	100	0003172
100W 230V E27	crème	100	230	E27	104	60	1250	100	0003173

GLS COLOUR AND VACUUM

Pear-shaped lamps with a choice of vivid coloured envelopes.

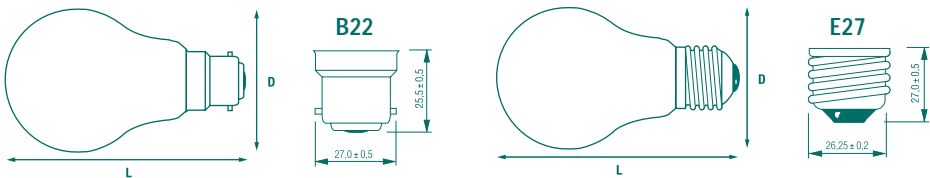


FEATURES

- Choice of five colours: White, Red, Blue, Green and Yellow
- Also available with a pearl finish or clear envelope
- Weather resistant (vacuum types only)

APPLICATIONS

- To create a festive atmosphere, e.g. lighting of Christmas trees and at fairs, carnivals, festivals, etc.
- Outdoor lighting (vacuum types only)



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
15W 230V B22	white	15	230	B22	103	60	-	100	0008309
15W 230V B22	red	15	230	B22	103	60	-	100	0008287
15W 230V B22	blue	15	230	B22	103	60	-	100	0008386
15W 230V B22	green	15	230	B22	103	60	-	100	0008388
15W 230V B22	yellow	15	230	B22	103	60	-	100	0008289
15W 230V B22	clear	15	230	B22	103	60	110	100	0003006
15W 230V B22	pearl	15	230	B22	103	60	110	100	0003007
15W 230V E27	clear	15	230	E27	104	60	110	100	0003026
15W 230V E27	pearl	15	230	E27	104	60	110	100	0003025
15W 240V E27	clear	15	240	E27	104	60	105	100	0003030
15W 240V E27	pearl	15	240	E27	104	60	105	100	0003031
15W 240V B22	clear	15	240	B22	103	60	105	100	0003040
15W 240V B22	pearl	15	240	B22	103	60	105	100	0003041
25W 240V E27	blue	25	240	E27	104	60	-	100	0008453
25W 240V E27	red	25	240	E27	104	60	-	100	0008454
25W 240V E27	green	25	240	E27	104	60	-	100	0008455
25W 240V E27	yellow	25	240	E27	104	60	-	100	0008456



GLS LONG LIFE

Standard pear-shaped incandescent lamps offering more than double the life of a standard GLS incandescent lamp.

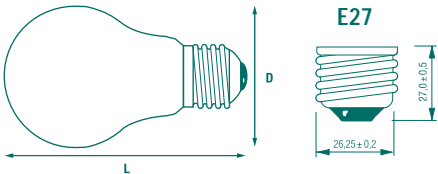


FEATURES

- Pear-shaped envelope
- Last up to 2.5 times longer than conventional GLS lamps

APPLICATIONS

- Commercial and domestic lighting



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 240V E27	satin	25	240	E27	104	60	170	100	0012943
40W 240V E27	satin	40	240	E27	104	60	350	100	0013043
60W 240V E27	satin	60	240	E27	104	60	600	100	0013143
75W 240V E27	satin	75	240	E27	104	60	770	100	0013243
100W 240V E27	satin	100	240	E27	104	60	1090	100	0013343

GLS HIGH WATTAGE

High output pear-shaped incandescent lamps with a pearl or clear envelope.

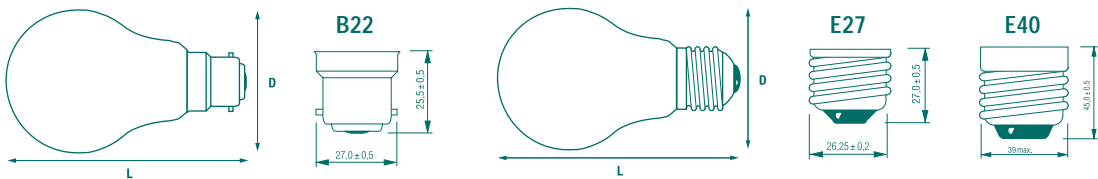


FEATURES

- High output
- Pearl or clear envelope

APPLICATIONS

- General, commercial and agricultural lighting i.e. garages, cellars, outhouses, car parks, staircases, etc.



Item description	Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
150W 230V E27 clear	150	230	E27	128	68	2160	100	0004305
150W 230V E27 pearl	150	230	E27	128	68	2160	100	0004306
150W 240V B22 clear	150	240	B22	127	68	2150	100	0004311
150W 240V B22 pearl	150	240	B22	127	68	2150	100	0004312
150W 240V E27 pearl	150	240	E27	128	68	2150	100	0004310
200W 230V E27 clear	200	230	E27	128	68	3090	100	0004345
200W 230V E27 pearl	200	230	E27	128	68	3090	100	0004346
200W 240V E27 clear	200	240	E27	128	68	3080	100	0004349
200W 240V E27 pearl	200	240	E27	128	68	3080	100	0004350
200W 240V B22 clear	200	240	B22	127	68	3080	100	0004351
300W 240V E40 clear	300	240	E40	187	88	4550	10	0010008
300W 230V E40 clear	300	230	E40	187	88	4275	10	0010006
300W 240V E27 clear	300	240	E27	175	88	4550	10	0010007

# GLS EXTRA LOW VOLTAGE

Pear - shaped incandescent lamps for operating on low voltage circuits.

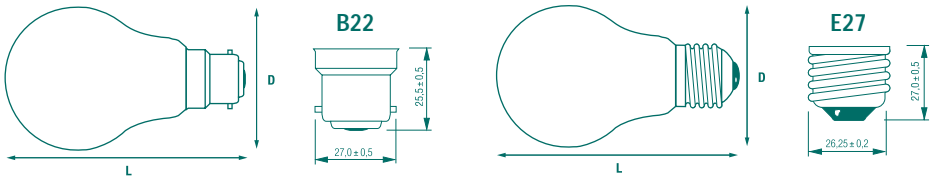


## FEATURES

- Pearl or clear envelope
- Suitable for operation on low voltage circuits (24-25V)

## APPLICATIONS

- Emergency lighting
- Machines
- Signs and signal panels



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 24-25V E27	clear	25	24-25	E27	104	60	316	100	0009668
25W 24-25V E27	pearl	25	24-25	E27	104	60	316	100	0009669
40W 24-25V E27	clear	40	24-25	E27	104	60	610	100	0009696
40W 24-25V E27	pearl	40	24-25	E27	104	60	610	100	0009697
40W 24-25V B22	clear	40	24-25	B22	103	60	610	100	0009694
40W 24-25V B22	pearl	40	24-25	B22	103	60	610	100	0009695
60W 24-25V E27	clear	60	24-25	E27	104	60	960	100	0009728
60W 24-25V E27	pearl	60	24-25	E27	104	60	960	100	0009729
60W 24-25V B22	clear	60	24-25	B22	103	60	960	100	0009726
60W 24-25V B22	pearl	60	24-25	B22	103	60	960	100	0009727
75W 24-25V B22	clear	75	24-25	B22	103	60	1310	100	0009759
100W 24-25V E27	pearl	100	24-25	E27	104	60	1800	100	0009781
100W 24-25V E27	clear	100	24-25	E27	104	60	1800	100	0009780
100W 24-25V B22	clear	100	24-25	B22	103	60	1800	100	0009779
100W 24-25V B22	pearl	100	24-25	B22	103	60	1800	100	0009785



GLS TRAFFIC SIGNAL

Special incandescent lamps with a re-enforced filament to resist vibrations.

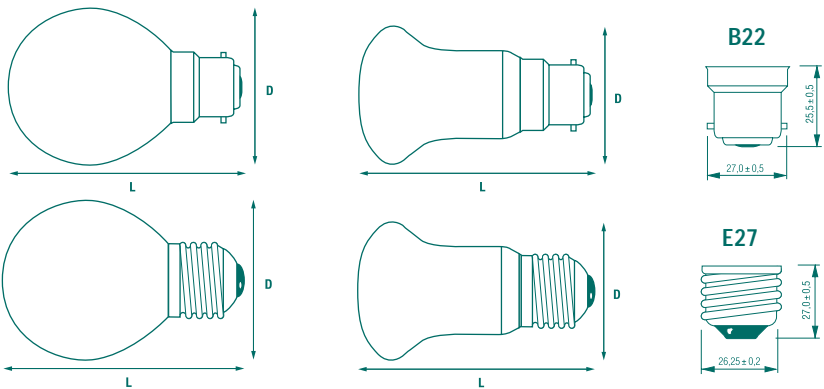


FEATURES

- Round (45 mm) or mushroom shaped (50 mm) envelope
- The filament is held by extra supports to resist vibration
- Average rated life: 8000 hours

APPLICATIONS

- Traffic lights and signs



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
Round shaped									
25W 230V E27	clear	25	230	E27	71	45	135	100	0009868
25W 130V E27	clear	25	130	E27	71	45	190	100	0009866
25W 230V B22	clear	25	230	B22	70	45	135	100	0009869
25W 130V B22	clear	25	130	B22	70	45	190	100	0009867
40W 230V E27	clear	40	230	E27	71	45	300	100	0009893
40W 130V E27	clear	40	130	E27	71	45	360	100	0009891
40W 230V B22	clear	40	230	B22	70	45	300	100	0009894
40W 130V B22	clear	40	130	B22	70	45	360	100	0009892
Mushroom shaped									
55W 230V E27	clear	55	230	E27	87	50	435	100	0009718
55W 130V E27	clear	55	130	E27	87	50	510	100	0009716
55W 230V B22	clear	55	230	B22	86	50	435	100	0009719
70W 230V E27	clear	70	230	E27	87	50	605	100	0009748
70W 130V E27	clear	70	130	E27	87	50	710	100	0009746
70W 230V B22	clear	70	230	B22	86	50	605	100	0009749
70W 130V B22	clear	70	130	B22	86	50	750	100	0009747

GLS ENERGY SAVING

Incandescent lamps that use 10% less energy compared to equivalent standard GLS lamps.

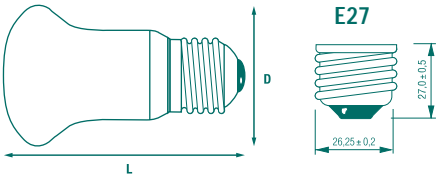


FEATURES

- Mushroom shaped envelope
- Use 10% less energy
- Same light output and lamp life as equivalent standard GLS lamps

APPLICATIONS

- General commercial and domestic lighting



Item description	Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
36W 230V E27      pearl	36	230	E27	87	50	415	100	0003367
54W 230V E27      pearl	54	230	E27	87	50	715	100	0003549
69W 230V E27      pearl	69	230	E27	87	50	940	100	0003951
93W 230V E27      pearl	93	230	E27	95	60	1350	100	0004159

GLS SUPER DELUXE

Mushroom-shaped incandescent lamps. The crown of the lamp has a pearl finish envelope while the rest of the envelope has a white coating.

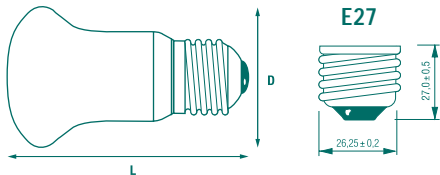


FEATURES

- Mushroom shaped envelope

APPLICATIONS

- Commercial and domestic lighting



Item description	Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
40W 230V E27	40	230	E27	87	50	390	100	0005082
60W 230V E27	60	230	E27	87	50	670	100	0005083
75W 230V E27	75	230	E27	87	50	875	100	0005084
100W 230V E27	100	230	E27	95	60	1260	100	0005085



GLS KRYPTON

Incandescent lamps filled with Krypton gas, offering a higher light output than equivalent standard GLS lamps.

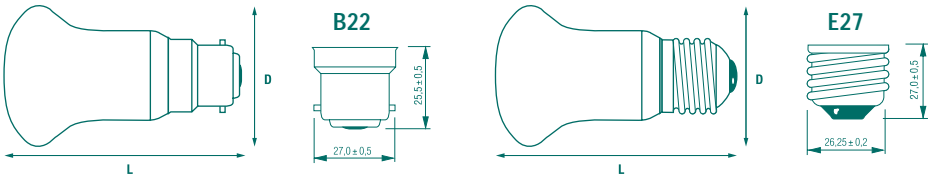


FEATURES

- Mushroom shaped envelope
- Krypton gas filled
- White finish envelope

APPLICATIONS

- Commercial and domestic lighting, i.e. offices, shops, hotels, etc.



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
40W 230V E27	opal	40	230	E27	87	50	415	100	0003363
40W 230V B22	opal	40	230	B22	86	50	415	100	0003365
60W 230V E27	opal	60	230	E27	87	50	715	100	0003545
60W 230V B22	opal	60	230	B22	86	50	715	100	0003547
75W 230V E27	opal	75	230	E27	87	50	940	100	0003947
75W 230V B22	opal	75	230	B22	86	50	940	100	0003949
100W 230V E27	opal	100	230	E27	95	60	1350	100	0004155
100W 230V B22	opal	100	230	B22	94	60	1350	100	0004157
150W 230V E27	opal	150	230	E27	111	65	2175	100	0004315
150W 230V B22	opal	150	230	B22	110	65	2175	100	0004317

CANDLE BRILLIANT SATIN & CLEAR

Candle shaped incandescent lamps. Brilliant Satin lamps have a pure white envelope finish obtained by a high-tech electrostatic process. Clear lamps have a crystal clear envelope for added sparkle.

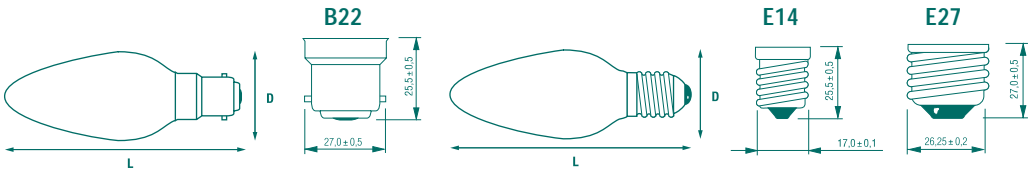


FEATURES

- Candle shaped envelope
- More even, superior quality light (Brilliant Satin) or sparkling crystal clear light of impeccable quality (Clear)
- E14, E27or B22 cap

APPLICATIONS

- Commercial and domestic decorative lighting



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
Brilliant Satin									
15 W 230V E14	satin	15	230	E14	97	35	105	100	0011261
25 W 230V E14	satin	25	230	E14	97	35	215	100	0011272
25 W 230V B22	satin	25	230	B22	91	35	215	100	0011292
25 W 240 V B22	satin	25	240	B22	91	35	215	100	0011000
25 W 230V E27	satin	25	230	E27	92	35	215	100	0006306
40 W 230V E14	satin	40	230	E14	97	35	415	100	0011302
40 W 230V B22	satin	40	230	B22	91	35	415	100	0011323
40 W 240 V B22	satin	40	240	B22	91	35	415	100	0011052
40 W 230V E27	satin	40	230	E27	92	35	415	100	0006476
60 W 230V E14	satin	60	230	E14	97	35	700	100	0011352
60 W 230V B22	satin	60	230	B22	91	35	700	100	0011372
60 W 240V B22	satin	60	240	B22	91	35	700	100	0011100
60 W 230V E27	satin	60	230	E27	92	35	700	100	0006644
Clear									
15 W 240V E14	clear	15	240	E14	97	35	100	100	0011263
25 W 230V E14	clear	25	230	E14	97	35	215	100	0011270
25 W 230V B22	clear	25	230	B22	91	35	215	100	0011291
25 W 240V B22	clear	25	240	B22	91	35	215	100	0011001
25 W 230V E27	clear	25	230	E27	92	35	215	100	0006301
40 W 230V E14	clear	40	230	E14	97	35	415	100	0011300
40 W 230V B22	clear	40	230	B22	91	35	415	100	0011321
40 W 240V B22	clear	40	240	B22	91	35	415	100	0011053
40 W 230V E27	clear	40	230	E27	92	35	415	100	0006470
60 W 230V E14	clear	60	230	E14	97	35	700	100	0011350
60 W 230V B22	clear	60	230	B22	91	35	700	100	0011371
60 W 240V B22	clear	60	240	B22	91	35	700	100	0011101
60 W 230V E27	clear	60	230	E27	92	35	700	100	0006643

## CANDLE TWISTED

Candle shaped lamps with a twisted envelope.

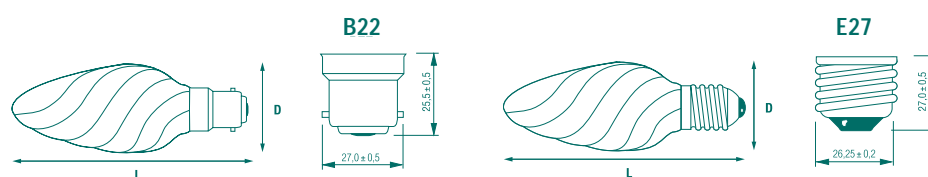


### FEATURES

- Decorative appearance
- Twisted candle shaped envelope
- Clear or satin envelope finish
- E14 or B22 cap

### APPLICATIONS

- Commercial and domestic decorative lighting
- To replace candle lamps in wall or ceiling luminaires



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25 W 230V E14	clear	25	230	E14	97	35	215	100	0011400
25 W 230V E14	satin	25	230	E14	97	35	215	100	0011404
25 W 230V B22	satin	25	230	B22	91	35	215	100	0011406
40 W 230V E14	clear	40	230	E14	97	35	415	100	0011410
40 W 230V E14	satin	40	230	E14	97	35	415	100	0011412
40 W 230V B22	satin	40	230	B22	91	35	415	100	0011426
60 W 230V E14	clear	60	230	E14	97	35	700	100	0011430
60 W 230V E14	satin	60	230	E14	97	35	700	100	0011432
60 W 230V B22	satin	60	230	B22	91	35	700	100	0011436



CANDLE - PASTEL SATIN

Candle shaped incandescent lamps with a touch of colour added to the coating to create gentle pastel shades.



FEATURES

- Candle shaped envelope
- Choice of five colours: Apricot (a touch of orange), Azure (a touch of blue) Cream, Jade (a touch of green) and Rose (a touch of pink)
- E14 cap

APPLICATIONS

- Commercial and domestic decorative lighting
- Where a gentle touch of colour will add interest or atmosphere

CANDLE - KRYPTON

Incandescent lamps filled with Krypton gas, delivering a higher light output than equivalent standard candle lamps.

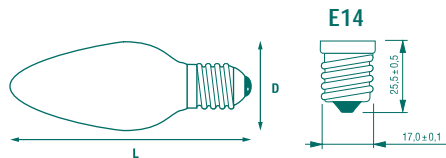


FEATURES

- Candle shaped envelope
- Krypton gas filled
- White envelope finish
- E14 cap

APPLICATIONS

- Commercial and domestic lighting, i.e. in offices, shops, hotels



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
Candle Pastel Satin									
40W 230V E14	cream	40	230	E14	97	35	380	100	0006215
40W 230V E14	apricot	40	230	E14	97	35	360	100	0006216
40W 230V E14	rose	40	230	E14	97	35	320	100	0006217
40W 230V E14	azure	40	230	E14	97	35	315	100	0006218
40W 230V E14	jade	40	230	E14	97	35	320	100	0006219
Candle Krypton									
25W 230V E14	opal	25	230	E14	97	35	215	100	0011450
40W 230V E14	opal	40	230	E14	97	35	410	100	0011454
60W 230V E14	opal	60	230	E14	97	35	700	100	0011457

CANDLE GIANT TWISTED

Giant candle shaped incandescent lamps with a twisted envelope.

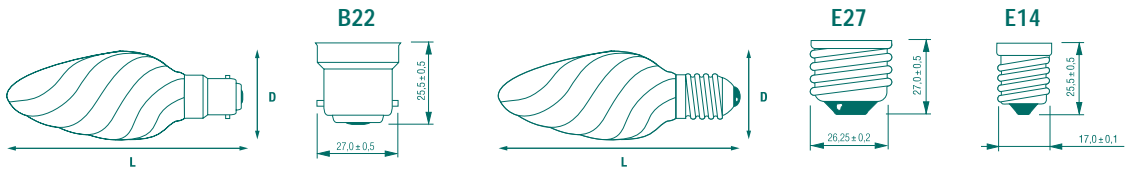


FEATURES

- Decorative appearance
- Outside frosted finish
- E14, E27 and B22 cap

APPLICATIONS

- Domestic and commercial decorative lighting
- Wall luminaires, candelabras



Item description			Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
						L	D			
40W 230V E14	frosted		40	230	E14	128,5	47	410	100	0011423
40W 230V E27	frosted		40	230	E27	125,5	47	410	100	0011424
40W 230V B22	frosted		40	230	B22	124,5	47	410	100	0011421
60W 230V E14	frosted		60	230	E14	128,5	47	700	100	0011443
60W 230V E27	frosted		60	230	E27	125,5	47	700	100	0011445
60W 230V B22	frosted		60	230	B22	124,5	47	700	100	0011441

## ROUND BRILLIANT SATIN & CLEAR

Small round incandescent lamps. Brilliant Satin lamps have a pure white envelope finish obtained by a high-tech electrostatic process. Clear lamps have a crystal clear envelope for added sparkle.

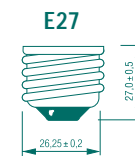
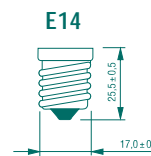
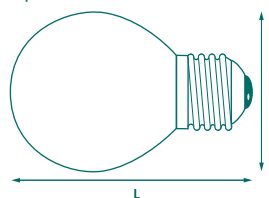
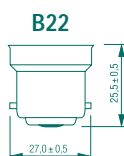
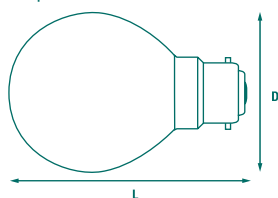


### FEATURES

- Round lamp envelope
- More even, superior quality light (Brilliant Satin) or sparkling crystal clear light of impeccable quality (Clear)
- E14, E27 or B22 cap

### APPLICATIONS

- Domestic and commercial decorative lighting
- To replace conventional pearl round lamps in applications where the quality of the light and the lamp appearance are more important



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
Brilliant Satin									
25W 230V E14	satin	25	230	E14	72,5	45	215	100	0036652
25W 240V E14	satin	25	240	E14	72,5	45	215	100	0036751
25W 230V E27	satin	25	230	E27	71	45	215	100	0037402
25W 230V B22	satin	25	230	B22	70	45	215	100	0037612
25W 240V B22	satin	25	240	B22	70	45	215	100	0037615
40W 230V E14	satin	40	230	E14	72,5	45	415	100	0036852
40W 240V E14	satin	40	240	E14	72,5	45	415	100	0036901
40W 230V E27	satin	40	230	E27	71	45	415	100	0037452
40W 240V E27	satin	40	240	E27	71	45	415	100	0037456
40W 230V B22	satin	40	230	B22	70	45	415	100	0037652
40W 240V B22	satin	40	240	B22	70	45	415	100	0037655
60W 230V E14	satin	60	230	E14	72,5	45	700	100	0036952
60W 230V E27	satin	60	230	E27	71	45	700	100	0037502
60W 230V B22	satin	60	230	B22	70	45	700	100	0037702
Clear									
25W 230V E14	clear	25	230	E14	72,5	45	215	100	0036650
25W 240V E14	clear	25	240	E14	72,5	45	215	100	0036750
25W 230V E27	clear	25	230	E27	71	45	215	100	0037400
25W 230V B22	clear	25	230	B22	70	45	215	100	0037610
40W 230V E14	clear	40	230	E14	72,5	45	415	100	0036850
40W 240V E14	clear	40	240	E14	72,5	45	415	100	0036900
40W 230V E27	clear	40	230	E27	71	45	415	100	0037450
40W 240V E27	clear	40	240	E27	71	45	415	100	0037455
40W 230V B22	clear	40	230	B22	70	45	415	100	0037650
40W 240V B22	clear	40	240	B22	70	45	415	100	0037656
60W 230V E14	clear	60	230	E14	72,5	45	700	100	0036950
60W 230V E27	clear	60	230	E27	71	45	700	100	0037500
60W 230V B22	clear	60	230	B22	70	45	700	100	0037700

## ROUND PASTEL SATIN

Small round incandescent lamps with a touch of colour added to the envelope coating to create soft pastel shades.

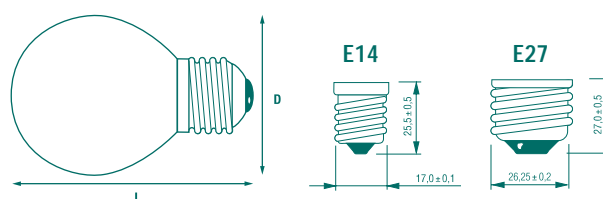


### FEATURES

- Round lamp envelope
- Choice of five colours: Apricot (a touch of orange), Azure (a touch of blue) Cream, Jade (a touch of green) and Rose (a touch of pink)
- E14 or E27 cap

### APPLICATIONS

- Domestic and commercial decorative lighting
- Where a gentle touch of colour will add interest or atmosphere



Item description	Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
40W 230V E14 crème	40	230	E14	72,5	45	380	100	0005452
40W 230V E14 apricot	40	230	E14	72,5	45	360	100	0005453
40W 230V E27 rose	40	230	E14	72,5	45	320	100	0005454
40W 230V E14 azure	40	230	E14	72,5	45	315	100	0005455
40W 230V E14 jade	40	230	E14	72,5	45	320	100	0005456
40W 230V E27 crème	40	230	E27	71	45	380	100	0005462
40W 230V E27 apricot	40	230	E27	71	45	360	100	0005463
40W 230V E27 rose	40	230	E27	71	45	320	100	0005464
40W 230V E27 azure	40	230	E27	71	45	315	100	0005465
40W 230V E27 jade	40	230	E27	71	45	320	100	0005466

# ROUNDS

## ROUND KRYPTON

Incandescent lamps filled with Krypton gas, offering a higher light output than equivalent standard round lamps.

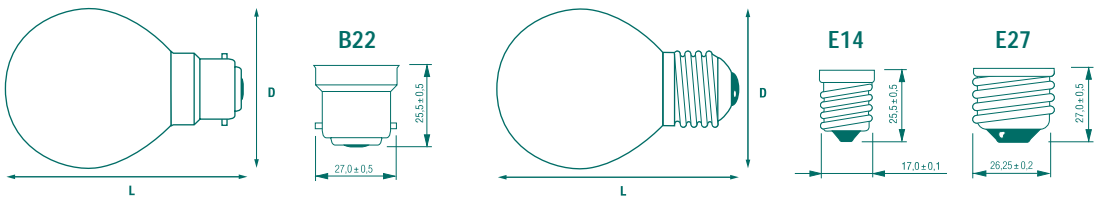


### FEATURES

- Round shaped envelope
- Krypton gas filled
- White envelope finish
- E14, E27 or B22 cap

### APPLICATIONS

- Commercial and domestic lighting, i.e. in offices, shops, hotels



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E14	opal	25	230	E14	72,5	45	215	100	0036760
25W 230V E27	opal	25	230	E27	71	45	215	100	0036761
25W 230V B22	opal	25	230	B22	70	45	215	100	0036762
40W 230V E14	opal	40	230	E14	72,5	45	410	100	0036920
40W 230V E27	opal	40	230	E27	71	45	400	100	0036921
40W 230V B22	opal	40	30	B22	70	45	400	100	0036922
60W 230V E14	opal	60	230	E14	72,5	45	700	100	0036970
60W 230V B22	opal	60	230	B22	70	45	680	100	0036972
60W 230V E27	opal	60	230	E27	71	45	680	100	0036971



## ROUND COLOUR AND VACUUM

Small round incandescent lamps with coloured envelope finish.

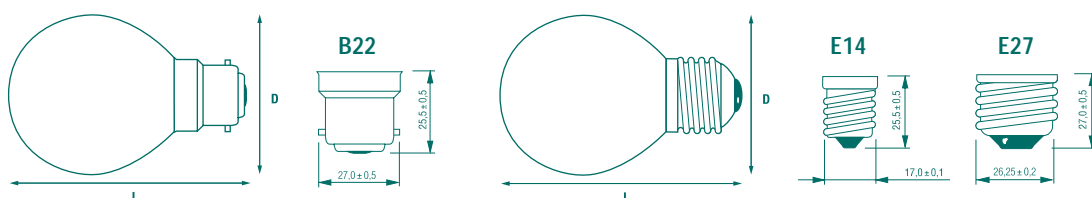


### FEATURES

- Round lamp envelope
- Choice of five colours: White, Blue, Red, Green and Yellow
- Also available with clear or pearl envelope finish
- Weather resistant (vacuum only)
- E14, E27 or B22 cap

### APPLICATIONS

- To create a festive atmosphere, e.g. lighting Christmas trees, fairs, carnivals, festivals, etc.
- Outdoor lighting (vacuum only)



Item description	Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
15W 230V B22 red	15	230	B22	70	45	100	0008658
15W 230V B22 green	15	230	B22	70	45	100	0008764
15W 230V B22 yellow	15	230	B22	70	45	100	0008660
15W 230V B22 clear	15	230	B22	70	45	100	0005421
15W 230V B22 pearl	15	230	B22	70	45	100	0005397
15W 230V B22 white	15	230	B22	70	45	100	0008668
25W 230V E14 yellow	25	230	E14	72,5	45	100	0008755
25W 230V E14 blue	25	230	E14	72,5	45	100	0008752
25W 230V E14 red	25	230	E14	72,5	45	100	0008753
25W 230V E14 green	25	230	E14	72,5	45	100	0008754
25W 230V E27 blue	25	230	E27	71	45	100	0008757
25W 230V E27 red	25	230	E27	71	45	100	0008758
25W 230V E27 green	25	230	E27	71	45	100	0008759
25W 230V E27 yellow	25	230	E27	71	45	100	0008760

GLOBE DECOR

Large round incandescent lamps, with opal globe shaped lamp envelope.

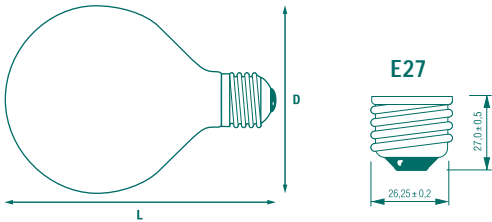


FEATURES

- Round envelope
- Opal finish
- Available in three envelope diameters: 80, 95 and 120 mm
- E27 cap

APPLICATIONS

- Commercial and domestic decorative lighting
- For use in surface mounted ceiling luminaires



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
60W 230V E27	opal	60	230	E27	117	80	670	20	0018561
100W 230V E27	opal	100	230	E27	117	80	1260	20	0018562
60W 230V E27	opal	60	230	E27	136	95	580	20	0018571
100W 230V E27	opal	100	230	E27	136	95	1090	20	0018572
60W 230V E27	opal	60	230	E27	165	120	580	20	0018580
100W 230V E27	opal	100	230	E27	165	120	1090	20	0018581

## REFLECTORS STANDARD

Incandescent, blown glass, parabolic reflector lamps. Part of the envelope has an aluminium coating which acts as an integral reflector to form the beam.

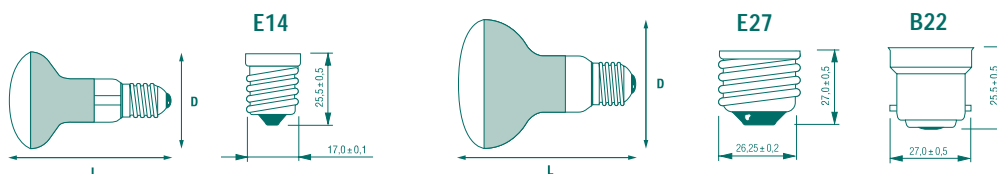


## FEATURES

- Pearl crown and integral aluminium reflector
- Available in seven diameters: 39, 50, 63, 80, 90, 95 and 125 mm
- E14 or E27 cap

## APPLICATIONS

- Accent lighting in commercial and domestic applications
- Shop windows, displays, discos and clubs as well as in the home
- For use in track or surface mounted spotlights or in recessed downlights



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Packing Quantity	Ordering Code
				L	D			
25W 230V R50 pearl	25	230	E14	85	50	35°	100	0015531
25W 240V R50 pearl	25	240	E14	85	50	35°	100	0015535
30W 230V R39 pearl	30	230	E14	65	39	40°	100	0015918
30W 240V R39 pearl	30	240	E14	65	39	40°	100	0015908
40W 230V R50 pearl	40	230	E14	85	50	35°	100	0015534
40W 240V R50 pearl	40	240	E14	85	50	35°	100	0015537
40W 230V R63 pearl	40	230	E27	103	63	35°	100	0015568
40W 240V R63 pearl	40	240	E27	103	63	35°	100	0015550
40W 230V R80 pearl	40	230	E27	110	80	80°	100	0015558
40W 240V R80 pearl	40	240	E27	110	80	80°	100	0015570
40W 230V R90 pearl	40	230	E27	115	90	80°	100	0016174
60W 230V R63 pearl	60	230	E27	103	63	35°	100	0015569
60W 240V R63 pearl	60	240	E27	103	63	35°	100	0015560
60W 240V R63 pearl	60	240	B22	103	63	35°	100	0015563
60W 230V R80 pearl	60	230	E27	110	80	80°	100	0015576
60W 240V R80 pearl	60	240	E27	110	80	80°	100	0015580
60W 240V R80 pearl	60	240	B22	110	80	80°	100	0015590
60W 230V R90 pearl	60	230	E27	115	90	35°	100	0016185
75W 230V R80 pearl	75	230	E27	110	80	80°	100	0015577
75W 240V R80 pearl	75	240	E27	110	80	80°	100	0015584
75W 230V R95 pearl	75	230	E27	132	95	35°	20	0015601
75W 240V R95 pearl	75	240	E27	132	95	35°	20	0015600
100W 230V R80 pearl	100	230	E27	110	80	80°	100	0015578
100W 240V R80 pearl	100	240	E27	110	80	80°	100	0015585
100W 240V R80 pearl	100	240	B22	110	80	80°	100	0015593
100W 230V R90 pearl	100	230	E27	115	90	35°	20	0016196
100W 230V R95 pearl	100	230	E27	132	95	35°	20	0015603
100W 240V R95 pearl	100	240	E27	132	95	35°	20	0015620
150W 230V R125 pearl	150	230	E27	180	125	80°	20	0015628
150W 240V R125 pearl	150	240	E27	180	125	80°	20	0015630

REFLECTOR COLOURED

Incandescent reflector lamps. The crown of the lamp has a coloured finish, while the rest of the envelope has an aluminium coating, acting as an integral reflector.

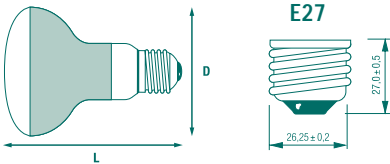


FEATURES

- Coloured crown and integral aluminium reflector
- Choice of four colours: Blue, Green Red, and Yellow
- Available in two diameters: 63 and 80 mm
- E27 cap

APPLICATIONS

- Mainly used in entertainment, leisure and display lighting
- To create special lighting effects in bars, clubs and discos as well as in shop windows
- For use in track or surface mounted spotlights or in recessed downlights



Item description		Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
					L	D		
40W 240V	blue	40	240	E27	103	63	100	0015660
40W 240V	red	40	240	E27	103	63	100	0015661
40W 240V	green	40	240	E27	103	63	100	0015662
40W 240V	yellow	40	240	E27	103	63	100	0015663
60W 240V	blue	60	240	E27	110	80	100	0015700
60W 240V	red	60	240	E27	110	80	100	0015701
60W 240V	green	60	240	E27	110	80	100	0015702
60W 240V	yellow	60	240	E27	110	80	100	0015703

NEODYMIUM

Incandescent reflector lamps with an envelope made of neodymium glass which filters out yellow rays and produces a light that closely simulates natural daylight and increases the contrast between colours.

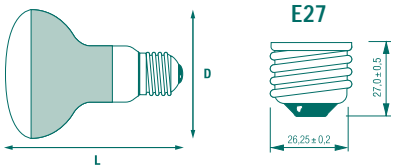


FEATURES

- Lamp envelope is made of special neodymium glass
- Improved light quality enhancing colours
- E27 cap

APPLICATIONS

- Commercial and domestic decorative lighting. Particularly suitable for craft and hobby work
- In shops selling fabrics, paints, jewels, food, etc.



Item description	Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
60W 240V E27 50° pearl	60	240	E27	110	80	100	0015564
100W 240V E27 50° pearl	100	240	E27	110	80	100	0015587



CROWN SILVERED

GLS or round shaped incandescent lamps with a silvered crown and clear envelope finish. When used in a parabolic reflector spotlight the silver crown of the lamp reflects the light back into the parabolic reflector where it can be focused.

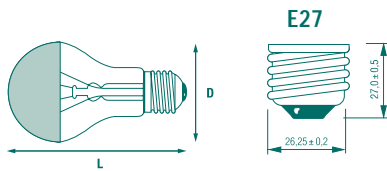
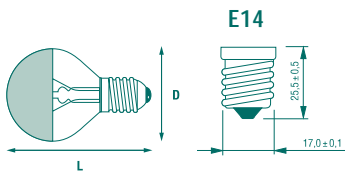


FEATURES

- Standard pear or round shaped envelope
- Silvered crown
- E14 or E27 cap

APPLICATIONS

- Commercial display lighting and domestic decorative lighting
- For use in parabolic reflector spotlights or for special effect in ceiling or table luminaires



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 240V E14	clear	25	240	E14	72,5	45	185	100	0017743
40W 240V E14	clear	40	240	E14	72,5	45	360	100	0017744
40W 240V E27	clear	40	240	E27	104	60	360	100	0017739
60W 240V E27	clear	60	240	E27	104	60	620	100	0017740
75W 240V E27	clear	75	240	E27	104	60	800	100	0017741
100W 240V E27	clear	100	240	E27	128	68	1170	100	0017742

PAR38 / PAR38 COOL BEAM

Incandescent PAR lamps made from heat resistant boro-silicate glass with sealed integral parabolic reflector.

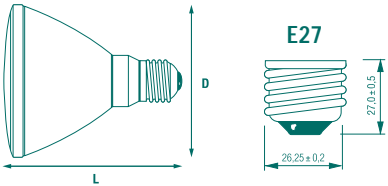


FEATURES

- Parabolic-shape made from hard glass
- Clear front lens
- Two beam angles: Spot 12° and Flood 30°
- Weather resistant (not PAR38 Cool Beam)
- Cool Beam version has an integral dichroic reflector
- E27 cap

APPLICATIONS

- Accent lighting in commercial and domestic applications
- Shop windows, displays, etc.
- Outdoor lighting (not PAR38 Cool Beam)
- Cool Beam version is especially suitable for lighting objects sensitive to heat



Item description		Watt	Volt	Cap	Dimensions (mm)		Beam angle	Packing Quantity	Ordering Code
					L	D			
PAR38									
60W/SP/12° PAR38	clear	60	240	E27	136	124	12°	10	0019690
60W/FL/30° PAR38	clear	60	240	E27	136	124	30°	10	0019691
80W/SP/12° PAR38	clear	80	240	E27	136	124	12°	10	0019710
80W/FL/30° PAR38	clear	80	240	E27	136	124	30°	10	0019711
120W/SP/12° PAR38	clear	120	240	E27	136	124	12°	10	0019720
120W/FL/30° PAR38	clear	120	240	E27	136	124	30°	10	0019721
PAR38 Cool Beam									
120W/SP/12° PAR38	clear	120	220-230	E27	136	124	-	15	0020054
120W/FL/30° PAR38	clear	120	220-230	E27	136	124	-	15	0020055

REFLECTORS

PAR38 COLOURED

Incandescent PAR lamps with integral parabolic reflector and coloured front lens.

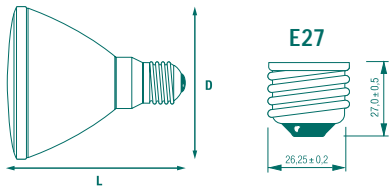


FEATURES

- Parabolic-shaped made from hard glass
- Coloured front lens
- Choice of four colours: Blue, Green Red, and Yellow
- E27 cap

APPLICATIONS

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



Item description		Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
					L	D		
80W/FL30°PAR38	blue	80	240	E27	136	124	15	0019650
80W/FL30°PAR38	green	80	240	E27	136	124	15	0019651
80W/FL30°PAR38	red	80	240	E27	136	124	15	0019652
80W/FL30°PAR38	yellow	80	240	E27	136	124	15	0019653

## TUBULAR

*Tubular shaped incandescent lamps.*

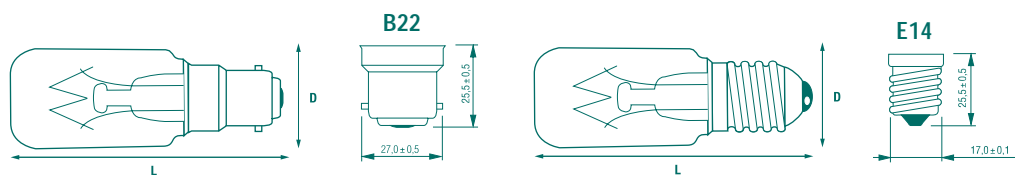


## FEATURES

- Clear or opal envelope finish
- Tubular envelope shape
- E14 or B22 cap

## APPLICATIONS

- Domestic and commercial lighting, in homes, offices, shops and hotels
- For use in small, compact luminaires
- Suitable for integration into furniture (cabinets etc.)



Item description		Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
					L	D			
25W 230V E14	opal	25	230	E14	92	28	210	100	0007344
25W 230V E14	clear	25	230	E14	92	28	230	100	0007352
25W 230V B22	clear	25	230	B22	88	28	230	100	0007342
40W 230V E14	opal	40	230	E14	92	28	400	100	0007364
40W 230V E14	clear	40	230	E14	92	28	415	100	0007360
40W 230V B22	opal	40	230	B22	88	28	400	100	0007366
40W 230V B22	clear	40	230	B22	88	28	415	100	0007362
60W 230V E14	opal	60	230	E14	92	28	660	100	0007374
60W 230V E14	clear	60	230	E14	92	28	680	100	0007370
60W 230V B22	opal	60	230	B22	88	28	660	100	0007376
60W 230V B22	clear	60	230	B22	88	28	680	100	0007372

# SPECIAL LAMPS

## PYGMY / PYGMY OVEN

Small, compact, incandescent lamps for special applications.

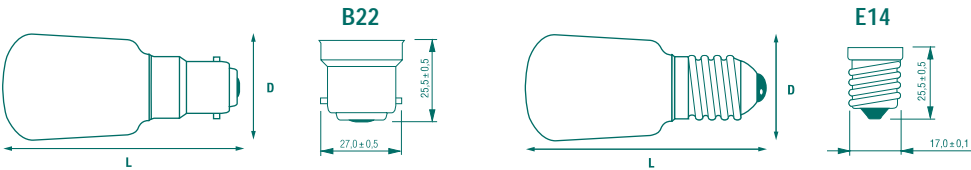


### FEATURES

- Clear lamp envelope finish
- High temperature resistant (Oven)
- E14 or B22 cap

### APPLICATIONS

- Switchboards
- Compact luminaires
- Appliances: ovens (up to 300°C)



Item description	Watt	Volt	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
<b>Pygmy</b>								
15W 240-250V B22 clear	15	240-250	B22	58	28	100	100	0008086
15W 240V E14 clear	15	240	E14	63	28	100	100	0008100
15W 230V E14 pearl	15	230	E14	63	28	105	100	0008020
15W 230V E14 clear	15	230	E14	63	28	105	100	0008021
25W 240V E14 clear	25	240	E14	63	28	225	100	0008120
25W 230V E14 pearl	25	230	E14	63	28	230	100	0008022
25W 230V E14 clear	25	230	E14	63	28	230	100	0008023
<b>Pygmy Oven</b>								
15W 240V E14 oven clear	15	240	E14	49	22	100	100	0008072
15W 240V E14 oven clear	15	240	E14	63	28	100	100	0008076



## STRIPLIGHTS

Double-ended 221mm and 284mm tubular incandescent lamps.



### FEATURES

- Clear or opal coating
- 221 or 284 mm
- Tubular envelope shape

### APPLICATIONS

- Shop windows
- Bathroom and kitchen luminaires
- Cupboards, over mirrors, etc.

## LINEAR

Double-ended linear decorative incandescent lamps.

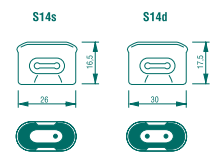
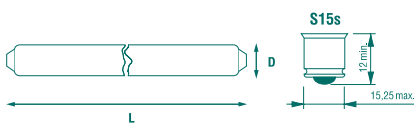


### FEATURES

- Double - ended with caps on site
- Tubular envelope shape
- Opal coating
- Choice of size

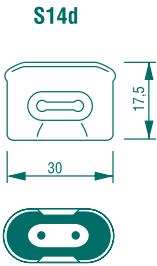
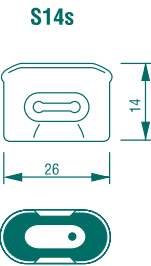
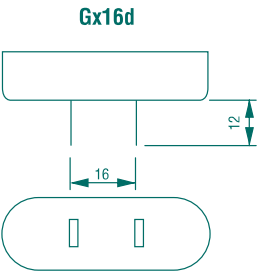
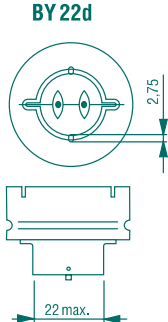
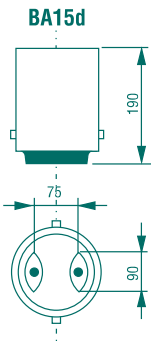
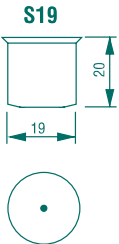
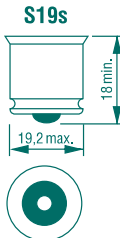
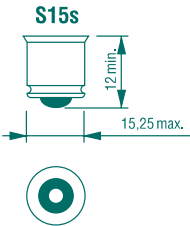
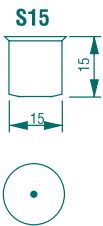
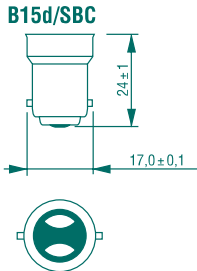
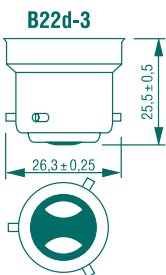
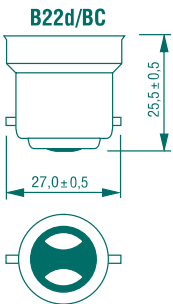
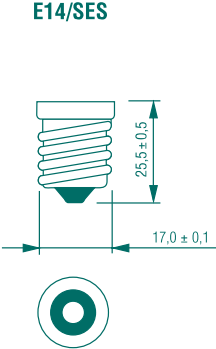
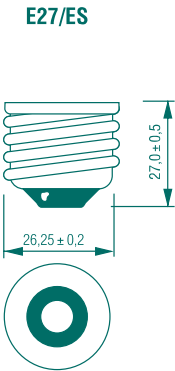
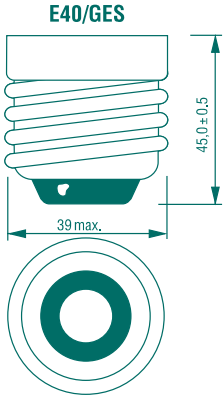
### APPLICATIONS

- Bathroom, bedroom and kitchen luminaires
- Cupboard lighting and over mirrors



Item description		Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
					L	D		
Striplights								
30 W 240-250V S15s	clear	30	240-250	S15s	221	25	50	0007550
30 W 240-250V S15s	opal	30	240-250	S15s	221	25	50	0007551
60 W 240-250V S15s	clear	60	240-250	S15s	284	25	25	0007597
60 W 240-250V S15s	opal	60	240-250	S15s	284	25	25	0007596
Linear								
35W 220-235V S14d	opal	35	220-235	S14d	300	30	25	0007433
35W 220-235V S14s	opal	35	220-235	S14s	300	26	25	0007435
60W 220-235V S14d	opal	60	220-235	S14d	500	30	25	0007448
60W 220-235V S14s	opal	60	220-235	S14s	500	26	25	0007450
120W 220-235V S14s	opal	120	220-235	S14s	999	26	16	0007463

LAMP CAPS







**INTRODUCTION 8**

**LOW VOLTAGE HALOGEN LAMPS**

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**MAINS VOLTAGE HALOGEN LAMPS**

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LOW VOLTAGE HALOGEN LAMPS



**Capsules** are the smallest low voltage halogen lamps.  
**Superia/Dichroic** have become the preferred choice of many specifiers and end users.  
**Dichroic** have become a reliable, cost effective favourite with specifiers, contractors and end users.  
**Coolfit** sealed front 50 mm low voltage lamps have an aluminised reflector that dissipates heat and light forward.

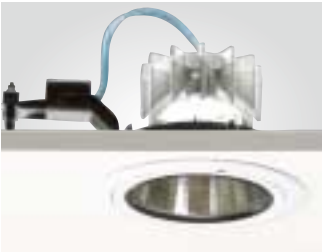
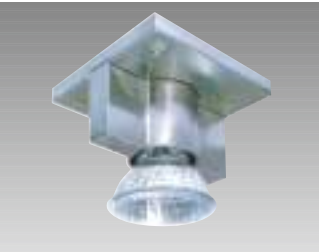
MAINS VOLTAGE HALOGEN LAMPS



Sylvania mains voltage halogen lamps, including the innovative and highly successful **Hi-Spot®** range, combine beautiful bright halogen light with all of the advantages of operating on mains voltage.

Mains voltage halogen lamps operate direct from the mains, without the need for a transformer, and can be dimmed: making them quick and easy to install, simple to operate and lowering installation and user costs.

All **Hi-Spot®** mains voltage halogen lamps are rated UV-Stop and are manufactured from materials which dramatically reduce UV emissions.





LOW VOLTAGE HALOGEN LAMPS

LOW PRESSURE FILAMENT CAPSULE LAMPS (5W TO 50W)

Low pressure, low voltage (12V) halogen capsule lamps offer compact size, high performance and low internal pressure making them ideal for use in open luminaires without any need for additional protection.



G4 5W



G4 10W



G4 20W



GY 6.35

FEATURES

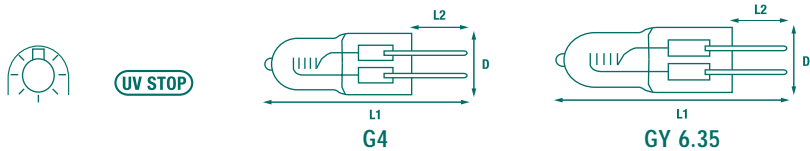
- Compact size for optimum luminaire design
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2000 hours

APPLICATIONS

- Interior display, shop window, restaurant and discotheque lighting
- Precision task lighting

DIRECTIONS FOR USE

- Suitable for use in open luminaires following the new Luminaire Standard EN 60598



Item description	Watt	Volt	Cap	Dimensions (mm)			Light output lm	Average life h	Packing Quantity	Ordering Code
				L1	L2	D				
12V/5W LP	5	12	G4	33	7.50	9	60	2000	50	0022165
12V/10W LP	10	12	G4	33	7.50	9	140	2000	50	0022241
12V/20W LP	20	12	G4	33	7.50	9	320	2000	50	0022242
12V/35W LP	35	12	GY 6.35	44	7.50	12	600	2000	50	0021021
12V/50W LP	50	12	GY 6.35	44	7.50	12	950	2000	50	0021022

LOW VOLTAGE FILAMENT CAPSULE LAMPS (10W – 100W)

Low voltage (12V) halogen capsule lamps offer compact size, high-performance and versatility, with three times the life of traditional incandescent lamps and constant light output throughout lamp life. These lamps are designed for use in luminaires with a protective front glass.



FEATURES

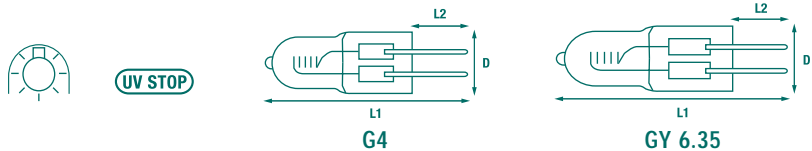
- Compact size for optimum luminaire design
- Platinum coated pins (75W & 100W)
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 3000 hours

APPLICATIONS

- Interior display, shop window, restaurant and discotheque lighting
- Precision task lighting

DIRECTIONS FOR USE

- Must be used in luminaires with protective front glass
- Do not touch the quartz envelope with bare fingers



Item description	Watt	Volt	Cap	Dimensions (mm)			Light output lm	Average life h	Packing Quantity	Ordering Code
				L1	L2	D				
12V/10W	10	12	G4	33	7.50	9	140	3000	50	0021990
12V/20W	20	12	G4	33	7.50	9	350	3000	50	0021991
12V/35W	35	12	G4	33	7.50	9	650	3000	50	0021992
12V/35W	35	12	GY 6.35	44	7.50	12	650	3000	50	0021920
12V/50W	50	12	GY 6.35	44	7.50	12	1000	3000	50	0021993
12V/75W	75	12	GY 6.35	44	7.50	12	1600	3000	50	0021994
12V/100W	100	12	GY 6.35	44	7.50	12	2300	3000	50	0021995

## SUPERIA 35 MM & 50 MM

A comprehensive range of professional low voltage (12V) halogen lamps with a dichroic reflector that dissipates the heat towards the rear of the lamp. Superia lamps deliver 10% more crisp white light, with superior light distribution, and maintain constant colour and light output for longer.



### FEATURES

- Sealed, flat front, lens protects capsule and reflector from dust, and offers extra safety
- 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
- Excellent colour rendering
- Burning position: universal
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 5000 hours

### APPLICATIONS

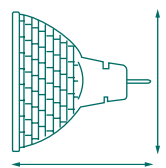
- Accent and decorative lighting in retail, commercial and domestic applications
- Professional lighting of objects and displays, sensitive to heat

### DIRECTIONS FOR USE

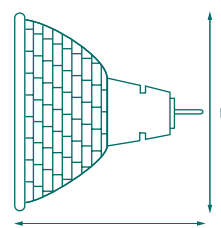
- Must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



UV STOP



GZ4/GU4



GX/GU5.3

Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
<b>Diameter 35 mm</b>											
FTB 12V/20W	20	12	GZ4/GU4	41	35	10°/SP	2925	4000	4000	10	0022336
FTD 12V/20W	20	12	GZ4/GU4	41	35	30°/FL	2925	700	4000	10	0022338
FTE 12V/35W	35	12	GZ4/GU4	41	35	10°/SP	3000	6600	4000	10	0022339
FTH 12V/35W	35	12	GZ4/GU4	41	35	30°/FL	3000	1300	4000	10	0022341
<b>Diameter 50 mm</b>											
ESX 12V/20W	20	12	GX/GU5.3	49	50	10°/SP	2925	4000	5000	10	0022301
BAB 12V/20W	20	12	GX/GU5.3	49	50	38°/WFL	2925	790	5000	10	0022302
FMT 12V/35W	35	12	GX/GU5.3	49	50	10°/SP	3000	7700	5000	10	0022305
FMW 12V/35W	35	12	GX/GU5.3	49	50	38°/WFL	3000	1450	5000	10	0022306
EXT 12V/50W	50	12	GX/GU5.3	49	50	10°/SP	3050	11500	5000	10	0022311
EXZ 12V/50W	50	12	GX/GU5.3	49	50	24°/FL	3050	3600	5000	10	0022312
EXN 12V/50W	50	12	GX/GU5.3	49	50	38°/WFL	3050	2250	5000	10	0022314
FNV 12V/50W	50	12	GX/GU5.3	49	50	60°/WFL	3050	1000	5000	10	0022315

COOLFIT 50 MM

A sealed front low voltage (12V) halogen lamp with an aluminium reflector and clear flat front lens. Heat and light are dissipated forward, reducing fixture/ceiling discolouration making Coolfit the perfect choice for use in small ceiling voids or where no rear light spillage is wanted.



FEATURES

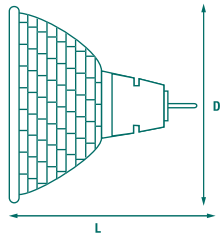
- Heat and light are dissipated forward away from the back of the lamp
- Sealed flat front lens protects capsule and reflector from dust, and offers extra safety
- Wear resistant aluminium reflector for constant light output and colour temperature throughout lamp life
- Dimmable using a suitable dimmer for operation with a transformer
- Constant colour and light output throughout lamp life
- Excellent colour rendering
- Easily recognisable by blue cement in lamp cap
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 5000 hours

APPLICATIONS

- Accent lighting in retail, commercial and domestic applications where heat dissipation towards the back of the lamp is not acceptable
- Can replace any 12V 50 mm diameter dichroic low voltage lamp
- Suitable for use in open ceilings or in luminaires featuring the lamp



UV STOP



GX/GU5.3

Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
20W/12V 38°	20	12	GX/GU5.3	49	51	38°/WFL	3000	660	5000	10	0022516
35W/12V 38°	35	12	GX/GU5.3	49	51	38°/WFL	3000	1200	5000	10	0022517
50W/12V 38°	50	12	GX/GU5.3	49	51	38°/WFL	3000	1950	5000	10	0022519
50W/12V 60°	50	12	GX/GU5.3	49	51	60°/WWFL	3000	900	5000	10	0022520

DICHROIC 50 MM

A contractor favourite, sealed front low voltage (12V) halogen lamp with dichroic reflector and sealed flat front lens, offering outstanding performance and reliability.



FEATURES

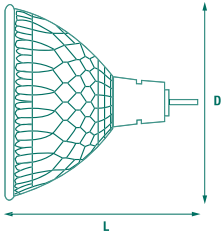
- Sealed, flat front, lens protects capsule and reflector from dust, and offers extra safety
- Cool Beam - 66% of the heat produced is radiated through the back of the lamp
- Dimmable using a suitable dimmer for operation with a transformer
- Constant colour and light output throughout lamp life
- Excellent colour rendering
- Burning position: universal
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 4000 hours

APPLICATIONS

- Accent and decorative lighting in retail, commercial and domestic applications
- Professional lighting of objects and displays, sensitive to heat

DIRECTIONS FOR USE

- Diamond Dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



GX/GU5.3

Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	GX/GU5.3	
				L	D					Packing quantity	Ordering Code
ESX 20W/12V 10°	20	12	GX/GU5.3	49	51	10°/SP	2925	3600	4000	10	0022580
FMT 35W/12V 10°	35	12	GX/GU5.3	49	51	10°/SP	3000	7000	4000	10	0022581
EXT 50W/12V 10°	50	12	GX/GU5.3	49	51	10°/SP	3050	10500	4000	10	0022582
BAB 20W/12V 38°	20	12	GX/GU5.3	49	51	38°/WFL	2925	660	4000	10	0021765
FMW 35W/12V 38°	35	12	GX/GU5.3	49	51	38°/WFL	3000	1200	4000	10	0021766
EXN 50W/12V 38°	50	12	GX/GU5.3	49	51	38°/WFL	3050	1950	4000	10	0021767
FNV 50W/12V 60°	50	12	GX/GU5.3	49	51	60°/WWFL	3050	900	4000	10	0022390

## HI-SPOT® ES50 & ESD50

Another, highly successful, innovation from Sylvania, Hi-Spot® ES50 mains voltage halogen lamps with GU10 cap, can be used in many applications and offer new, cost effective possibilities for fixture designs and lighting solutions. ES50 has the same diameter as a 12V MR16 lamp but, due to its revolutionary design, operates straight from the mains without the need for a transformer or special wiring.



### FEATURES

- Halogen light without the need for a transformer
- Installing and changing lamps has never been easier thanks to the "turn and lock" GU10 and GZ10 caps
- Unique, patented, computer designed spiral faceted aluminised reflector
- Wattages 35W and 50W
- Beam angles 25° and 50°
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2500 hours

### APPLICATIONS

- For use in mains voltage GU10 / GZ10 downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water

### DIRECTIONS FOR USE

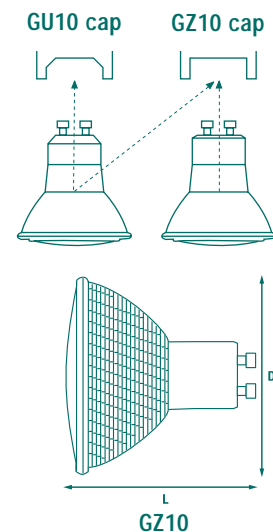
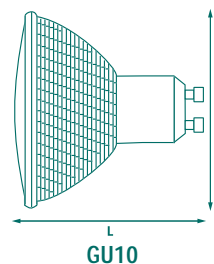
- ESD50 dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



For greater flexibility and added safety, Sylvania also offers the dichroic Hi-Spot® ESD50 with GZ10 cap. The ESD50 lamp has the same physical dimensions as the ES50 lamp but has a higher light output and being dichroic means that more heat is dissipated towards the rear of the lamp. However the GZ10 cap will not fit into a GU10 socket and prevents the use of the ESD50 lamp in temperature sensitive luminaires designed for the aluminium reflector ES50 lamp.



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Average life h	Max light intensity cd	Packing quantity	Ordering Code
				L	D						
<b>HI-SPOT ES 50</b>											
HI-SPOT ES 50 35W/FL25°	35	230	GU10	55	51	25°	2700	2500	800	15	0021100
HI-SPOT ES 50 35W/FL25°	35	240	GU10	55	51	25°	2700	2500	800	15	0021102
HI-SPOT ES 50 50W/FL25°	50	230	GU10	55	51	25°	2750	2500	1300	15	0021071
HI-SPOT ES 50 50W/WFL50°	50	230	GU10	55	51	50°	2750	2500	500	15	0021065
HI-SPOT ES 50 50W/FL25°	50	240	GU10	55	51	25°	2750	2500	1300	15	0021074
HI-SPOT ES 50 50W/WFL50°	50	240	GU10	55	51	50°	2750	2500	500	15	0021068
<b>HI-SPOT ESD 50</b>											
HI-SPOT ESD 50 50W/FL25°	50	230	GZ10	55	51	25°	2800	2500	1300	15	0021091
HI-SPOT ESD 50 50W/WFL50°	50	230	GZ10	55	51	50°	2800	2500	500	15	0021096
HI-SPOT ESD 50 50W/FL25°	50	240	GZ10	55	51	25°	2800	2500	1300	15	0021094
HI-SPOT ESD 50 50W/WFL50°	50	240	GZ10	55	51	50°	2800	2500	500	15	0021099



## HI-SPOT® ES63 & ESD63

Hi-Spot® ES63 (GU10/Aluminium) and Hi-Spot® ESD63 (GZ10/Dichroic) mains voltage halogen lamps have a diameter of 63mm and deliver a higher light output compared to the ES50 and ESD50 lamps making them an ideal choice for the demands of more professional lighting applications.



### FEATURES

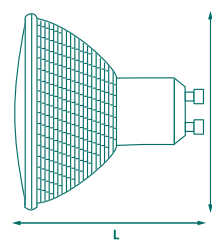
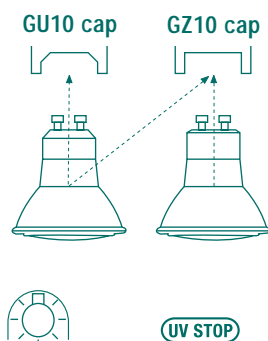
- Halogen light without the need for a transformer
- Installing and changing lamps has never been easier thanks to the “turn and lock” GU10 and GZ10 caps
- Unique, patented, computer designed spiral facettted aluminised reflector
- Wattages 50W and 75W
- Beam angles 25° and 50°
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2500 hours

### APPLICATIONS

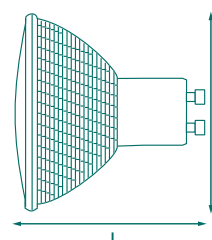
- For use in mains voltage GU10/GZ10 downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water

### DIRECTIONS FOR USE

- ESD63 dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



GU10



GZ10

Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Average life h	Max light intensity cd	Packing quantity	Ordering Code
				L	D						
<b>HI-SPOT ES 63</b>											
HI-SPOT ES 63 50W/FL25°	50	230	GU10	62	64	25°	2750	2500	1500	15	0022266
HI-SPOT ES 63 50W/FL25°	50	240	GU10	62	64	25°	2750	2500	1500	15	0022268
HI-SPOT ES 63 75W/FL25°	75	230	GU10	62	64	25°	2800	2500	2500	15	0022271
HI-SPOT ES 63 75W/WF50°	75	230	GU10	62	64	50°	2800	2500	1000	15	0022261
HI-SPOT ES 63 75W/FL25°	75	240	GU10	62	64	25°	2800	2500	2500	15	0022274
HI-SPOT ES 63 75W/WF50°	75	240	GU10	62	64	50°	2800	2500	1000	15	0022264
<b>HI-SPOT ESD 63</b>											
HI-SPOT ESD 63 75W/FL25°	75	230	GZ10	62	64	25°	2850	2500	2500	15	0022281
HI-SPOT ESD 63 75W/WF50°	75	230	GZ10	62	64	50°	2850	2500	1000	15	0022291
HI-SPOT ESD 63 75W/FL25°	75	240	GZ10	62	64	25°	2850	2500	2500	15	0022284
HI-SPOT ESD 63 75W/WF50°	75	240	GZ10	62	64	50°	2850	2500	1000	15	0022294

## HI-SPOT® ES111 AG AND ESD111 AG

The latest additions to the Hi-Spot® range ES111 AG (GU10/Aluminium) and Hi-Spot® ESD111 AG (GZ10/Dichroic) with Anti-Glare shield, offer fixture manufacturers a mains voltage alternative to the low voltage QR111/G53 cap display lamps which require a transformer.

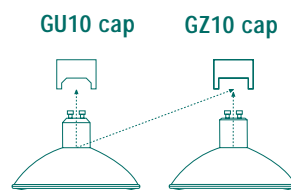


### FEATURES

- Halogen light without the need for a transformer
- Installing and changing lamps has never been easier thanks to the "turn and lock" GU10 and GZ10 caps
- Unique, patented, computer designed spiral faceted aluminised reflector
- Incorporated anti-glare shield.
- Wattages and Beam Angles - ES111 AG 75W/24° and ESD111 AG 100W/10° and 24°
- Luminous intensity - ES111 up to 3000 cd. ESD111 up to 12000 cd
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2000 hours

### APPLICATIONS

- For use in mains voltage GU10/GZ10 downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications

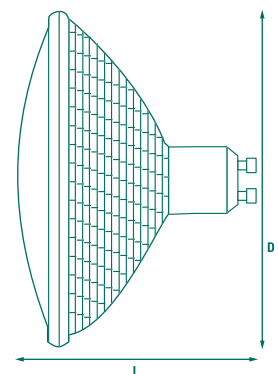


### DIRECTIONS FOR USE

- ESD111 dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Average life h	Max light intensity cd	Packing quantity	Ordering Code
				L	D						
<b>HI-SPOT ES 111</b>											
75W Flood 230V 24°	75	230	GU10	70	110	24°	2800	2000	3000	15	0022224
75W Flood 240V 24°	75	240	GU10	70	110	24°	2800	2000	3000	15	0022225
<b>HI-SPOT ESD 111</b>											
100W Spot 230V 10°	100	230	GZ10	70	110	10°	2900	2000	12000	15	0022229
100W Flood 230V 24°	100	230	GZ10	70	110	24°	2900	2000	5000	15	0022227
100W Spot 240V 10°	100	240	GZ10	70	110	10°	2900	2000	12000	15	0022228
100W Flood 240V 24°	100	240	GZ10	70	110	24°	2900	2000	5000	15	0022226

MAINS VOLTAGE HALOGEN LAMPS

HI-SPOT® 50

Hi-Spot® 50 mains voltage halogen lamps with E14 cap are completely interchangeable with R50 incandescent reflector lamps. Upgrading to beautiful halogen light could not be quicker or easier.



FEATURES

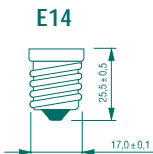
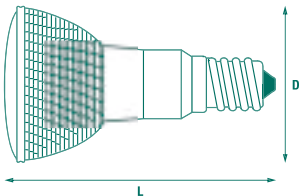
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral facettted aluminised reflector
- Wattages 25W and 40W
- Beam angle 25°
- Twice the life compared to incandescent lamp
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2000 hours

APPLICATIONS

- For use in mains voltage SES/E14 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Average life h	Max light intensity cd	Packing quantity	Ordering Code
				L	D						
HI-SPOT 50 25W/FL25°	25	230	E14	79	50	25°	2700	1500	500	15	0021103
HI-SPOT 50 40W/FL25°	40	230	E14	79	50	25°	2700	2000	950	15	0021081
HI-SPOT 50 40W/FL25°	40	240	E14	79	50	25°	2700	2000	950	15	0021084

## HI-SPOT® 63

Hi-Spot® 63 mains voltage halogen lamps with E27 cap are completely interchangeable with R63 incandescent reflector lamps. Upgrading to beautiful halogen light could not be quicker or easier.



### FEATURES

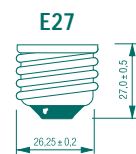
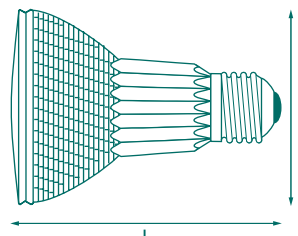
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral faceted aluminised reflector
- Wattage 50W
- Beam angles 10° and 25°
- Excellent colour rendering
- Up to 2.5 times the life of incandescent lamp
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2500 hours

### APPLICATIONS

- For use in mains voltage ES/E27 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
HI-SPOT 63 50W/SP10°	50	230	E27	88	65	10°	2900	3000	2500	15	0021125
HI-SPOT 63 50W/FL25°	50	230	E27	88	65	25°	2900	1000	2500	15	0021126
HI-SPOT 63 50W/SP10°	50	240	E27	88	65	10°	2900	3000	2500	15	0021127
HI-SPOT 63 50W/FL25°	50	240	E27	88	65	25°	2900	1000	2500	15	0021128

HI-SPOT® 80

Hi-Spot® 80 mains voltage halogen lamps with E27 cap are completely interchangeable with R80 incandescent reflector lamps. Upgrading to beautiful halogen light could not be quicker or easier.



FEATURES

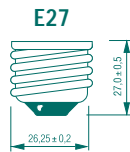
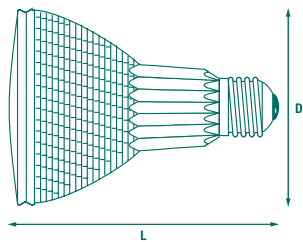
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral facettted aluminised reflector
- Wattages 50W and 75W
- Beam angles 10° and 25°
- Excellent colour rendering
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: up to 3000 hours

APPLICATIONS

- For use in mains voltage ES/E27 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
HI-SPOT 80 50W/SP10°	50	230	E27	108	81	10°	2900	4000	2500	15	0021131
HI-SPOT 80 50W/FL25°	50	230	E27	108	81	25°	2900	1100	2500	15	0021132
HI-SPOT 80 50W/SP10°	50	240	E27	108	81	10°	2900	4000	2500	15	0021161
HI-SPOT 80 50W/FL25°	50	240	E27	108	81	25°	2900	1100	2500	15	0021162
HI-SPOT 80 75W/SP10°	75	230	E27	108	81	10°	2900	5500	3000	15	0021133
HI-SPOT 80 75W/FL25°	75	230	E27	108	81	25°	2900	1300	3000	15	0021134
HI-SPOT 80 75W/SP10°	75	240	E27	108	81	10°	2900	5500	3000	15	0021163
HI-SPOT 80 75W/FL25°	75	240	E27	108	81	25°	2900	1300	3000	15	0021164

## HI-SPOT® 95

Hi-Spot® 95 mains voltage halogen lamps with E27 cap and aluminium reflector are interchangeable with R95 incandescent reflector lamps. Upgrading to beautiful halogen light could not be quicker or easier. Also available Hi-Spot® 95 Dichroic.



### FEATURES

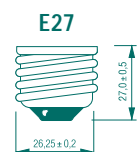
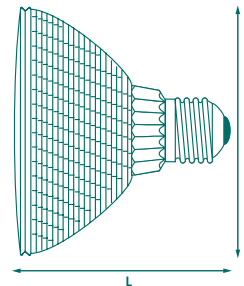
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral faceted aluminised reflector
- Wattages 75W and 100W
- Beam angles 10° and 30°
- Excellent colour rendering
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 3000 hours

### APPLICATIONS

- For use in mains voltage ES/E27 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Use dichroic lamps for lighting food, textiles and other objects sensitive to heat
- Suitable for outdoor use when protected from direct contact with water

### DIRECTIONS FOR USE

- Dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
<b>Aluminised reflector</b>											
HI-SPOT 95 75W/SP10°	75	230	E27	91	97	10°	2900	6900	3000	15	0021230
HI-SPOT 95 75W/FL30°	75	230	E27	91	97	30°	2900	2200	3000	15	0021231
HI-SPOT 95 100W/SP10°	100	230	E27	91	97	10°	2900	10000	3000	15	0021234
HI-SPOT 95 100W/FL30°	100	230	E27	91	97	30°	2900	3500	3000	15	0021235
HI-SPOT 95 75W/SP10°	75	240	E27	91	97	10°	2900	6900	3000	15	0021232
HI-SPOT 95 75W/FL30°	75	240	E27	91	97	30°	2900	2200	3000	15	0021233
HI-SPOT 95 100W/SP10°	100	240	E27	91	97	10°	2900	10000	3000	15	0021236
HI-SPOT 95 100W/FL30°	100	240	E27	91	97	30°	2900	3500	3000	15	0021237
<b>Dichroic reflector</b>											
HI-SPOT 95 75W/SP10° DIC	75	230	E27	91	97	10°	2900	7500	3000	15	0021290
HI-SPOT 95 75W/FL30° DIC	75	230	E27	91	97	30°	2900	2400	3000	15	0021291
HI-SPOT 95 75W/SP10° DIC	75	240	E27	91	97	10°	2900	7500	3000	15	0021292
HI-SPOT 95 75W/FL30° DIC	75	240	E27	91	97	30°	2900	2400	3000	15	0021293

HI-SPOT® 120

Hi-Spot® 120 mains voltage halogen lamps with E27 cap and aluminium reflector are completely interchangeable with R120 incandescent reflector lamps. Upgrading to beautiful halogen light could not be quicker or easier.



FEATURES

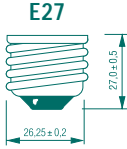
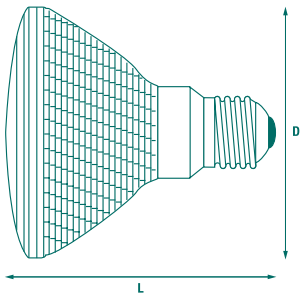
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral facettted aluminised reflector
- Wattages 75W and 100W
- Beam angles 10° and 30°
- Excellent colour rendering
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 3000 hours

APPLICATIONS

- For use in mains voltage ES/E27 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water



UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Beam angle	Colour temp. K	Luminous intensity cd	Average life h	Packing quantity	Ordering Code
				L	D						
HI-SPOT 120 75W/SP10°	75	230	E27	136	124	10°	2900	6900	3000	15	0021140
HI-SPOT 120 75W/FL30°	75	230	E27	136	124	30°	2900	2200	3000	15	0021141
HI-SPOT 120 100W/SP10°	100	230	E27	136	124	10°	2900	10000	3000	15	0021144
HI-SPOT 120 100W/FL30°	100	230	E27	136	124	30°	2900	3500	3000	15	0021145
HI-SPOT 120 75W/SP10°	75	240	E27	136	124	10°	2900	6900	3000	15	0021142
HI-SPOT 120 75W/FL30°	75	240	E27	136	124	30°	2900	2200	3000	15	0021143
HI-SPOT 120 100W/SP10°	100	240	E27	136	124	10°	2900	10000	3000	15	0021146
HI-SPOT 120 100W/FL30°	100	240	E27	136	124	30°	2900	3500	3000	15	0021147



## DLX-T (TUBULAR)

Halogen lamps that operate on mains voltage and are designed to replace standard incandescent lamps. DLX-T lamps offer double the life and 20% more light compared to equivalent incandescent lamps. Available with tubular shaped outer envelope in clear or satin.



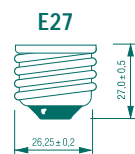
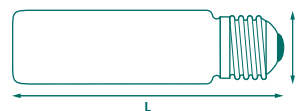
### FEATURES

- Top quality halogen light maintained throughout life of lamp
- Retrofit for standard incandescent lamps
- No handling precautions needed
- Dimmable using standard dimming switches
- E27 cap
- Burning position: universal
- Double the life compared to GLS incandescent lamps
- Gives more light and consumes 20% less energy compared to an equivalent incandescent lamp

### APPLICATIONS

- All domestic and commercial indoor applications using incandescent lamps

UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Average life h	Packing Quantity	Ordering Code
				L	D					
DLX/T Clear 60W	60	230	E27	103	33	2800	840	2000	40	0021424
DLX/T Satin 60W	60	230	E27	103	33	2800	780	2000	40	0021425
DLX/T Clear 100W	100	230	E27	103	33	2900	1600	2000	40	0022052
DLX/T Satin 100W	100	230	E27	103	33	2900	1525	2000	40	0022053
DLX/T Clear 150W	150	230	E27	103	33	2900	2550	2000	40	0021416
DLX/T Satin 150W	150	230	E27	103	33	2900	2450	2000	40	0021417
DLX/T Clear 60W	60	240	E27	103	33	2800	840	2000	40	0021426
DLX/T Satin 60W	60	240	E27	103	33	2800	780	2000	40	0021427
DLX/T Clear 100W	100	240	E27	103	33	2900	1600	2000	40	0022054
DLX/T Satin 100W	100	240	E27	103	33	2900	1525	2000	40	0022055
DLX/T Clear 150W	150	240	E27	103	33	2900	2550	2000	40	0021438
DLX/T Satin 150W	150	240	E27	103	33	2900	2450	2000	40	0021439

DLX-BTT

Halogen lamps, with a BTT shaped outer envelope, operating on mains voltage and designed to replace standard incandescent lamps. DLX-BTT lamps offer double the life and 20% higher light output compared to equivalent incandescent lamps.



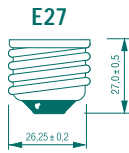
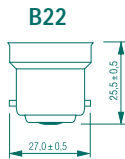
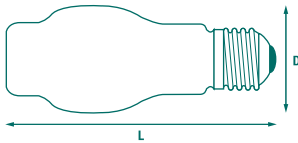
FEATURES

- Top quality halogen light maintained throughout life of lamp
- Retrofit for standard incandescent lamps
- No handling precautions needed
- Dimmable using standard dimming switches
- E27 or B22 cap
- Burning position: universal
- Double the life compared to GLS incandescent lamps
- Gives more light and consumes 20% less energy compared to an equivalent incandescent lamp

APPLICATIONS

- All domestic and commercial indoor applications using incandescent lamps

UV STOP



Item description	Watt	Volt	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Average life h	Packing Quantity	Ordering Code
				L	D					
DLX/BTT Clear 60W	60	230	E27	109	47	2900	840	2000	40	0021368
DLX/BTT Clear 60W	60	240	E27	109	47	2900	840	2000	40	0021372
DLX/BTT Clear 60W	60	240	B22	109	47	2900	840	2000	40	0021460
DLX/BTT Satin 60W	60	230	E27	109	47	2900	750	2000	40	0021369
DLX/BTT Satin 60W	60	240	E27	109	47	2900	780	2000	40	0021373
DLX/BTT Satin 60W	60	240	B22	109	47	2900	780	2000	40	0021463
DLX/BTT Clear 100W	100	230	E27	109	47	2900	1600	2000	40	0022048
DLX/BTT Clear 100W	100	240	E27	109	47	2900	1600	2000	40	0022050
DLX/BTT Clear 100W	100	240	B22	109	47	2900	1600	2000	40	0021461
DLX/BTT Satin 100W	100	230	E27	109	47	2900	1450	2000	40	0022049
DLX/BTT Satin 100W	100	240	E27	109	47	2900	1450	2000	40	0022051
DLX/BTT Satin 100W	100	240	B22	109	47	2900	1450	2000	40	0021464
DLX/BTT Clear 150W	150	230	E27	109	47	2900	2550	2000	40	0021472
DLX/BTT Clear 150W	150	240	E27	109	47	2900	2550	2000	40	0021440
DLX/BTT Satin 150W	150	230	E27	109	47	2900	2350	2000	40	0021473
DLX/BTT Satin 150W	150	240	E27	109	47	2900	2350	2000	40	0021441

## DLX-C (CANDLE) / DLX-TC (TWISTED CANDLE) / HI-GLOBE

Halogen lamps operating on mains voltage, designed to replace incandescent candle lamps, twisted candle lamps or globe lamps. Offer double the life and higher light output compared to equivalent incandescent lamps .

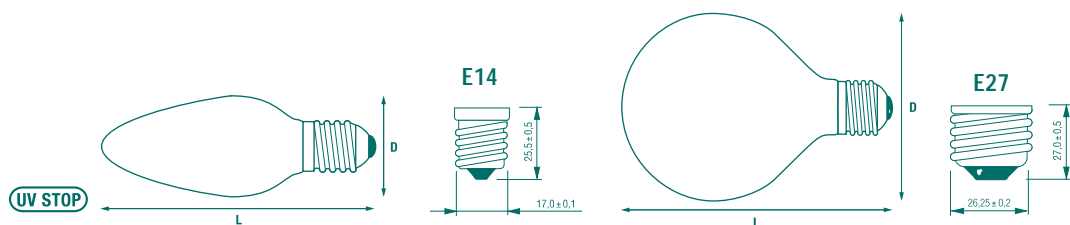


### FEATURES

- Top quality halogen light maintained throughout life of lamp
- Retrofit for incandescent candle lamps, twisted candle lamps or globe lamps
- No handling precautions needed
- Dimmable using standard dimming switches
- E14 cap (DLX-C and DLX-TC) or E27 (Hi-Globe)
- Burning position: universal
- Double the life compared to candle incandescent lamps
- Gives more light and consumes 20% less energy compared to an equivalent incandescent candle, twisted candle or globe shaped lamps

### APPLICATIONS

- All domestic and commercial indoor applications using incandescent candle or twisted candle lamps
- Globe lamps in many decorative applications and ceiling (pendant) luminaires



Item description	Watt	Volt	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Average life h	Packing Quantity	Ordering Code
				L	D					
DLX-C (Candle)										
DLX/C Clear 40W	40	230	E14	100	35	3000	840	2000	40	0021390
DLX-TC (Twisted Candle)										
DLX/TC Clear 40W	40	230	E14	100	35	3000	840	2000	40	0021388
Hi-Globe										
DLX/Hi-Globe Opal 60W	60	230	E27	140	95	3000	800	2000	40	0021360
DLX/Hi-Globe Opal 100W	100	230	E27	140	95	3000	1500	2000	40	0021361

## LINEAR DOUBLE ENDED

A comprehensive range of double-ended halogen lamps to meet most flood lighting, up lighting and display lighting applications.



### FEATURES

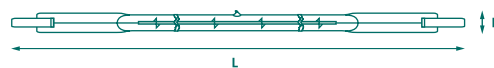
- Instant illumination
- Colour temperature: 2900°K
- Excellent colour rendition
- Excellent lumen maintenance
- Universal burning position for all 78.3 mm lamps(\*)
- Horizontal burning  $\pm 15^\circ$  for all other types
- Average rated life: up to 2000 hours

### APPLICATIONS

- Outdoor: floodlighting/security lighting
- Indoor: Flood lighting, uplighting and wall washing

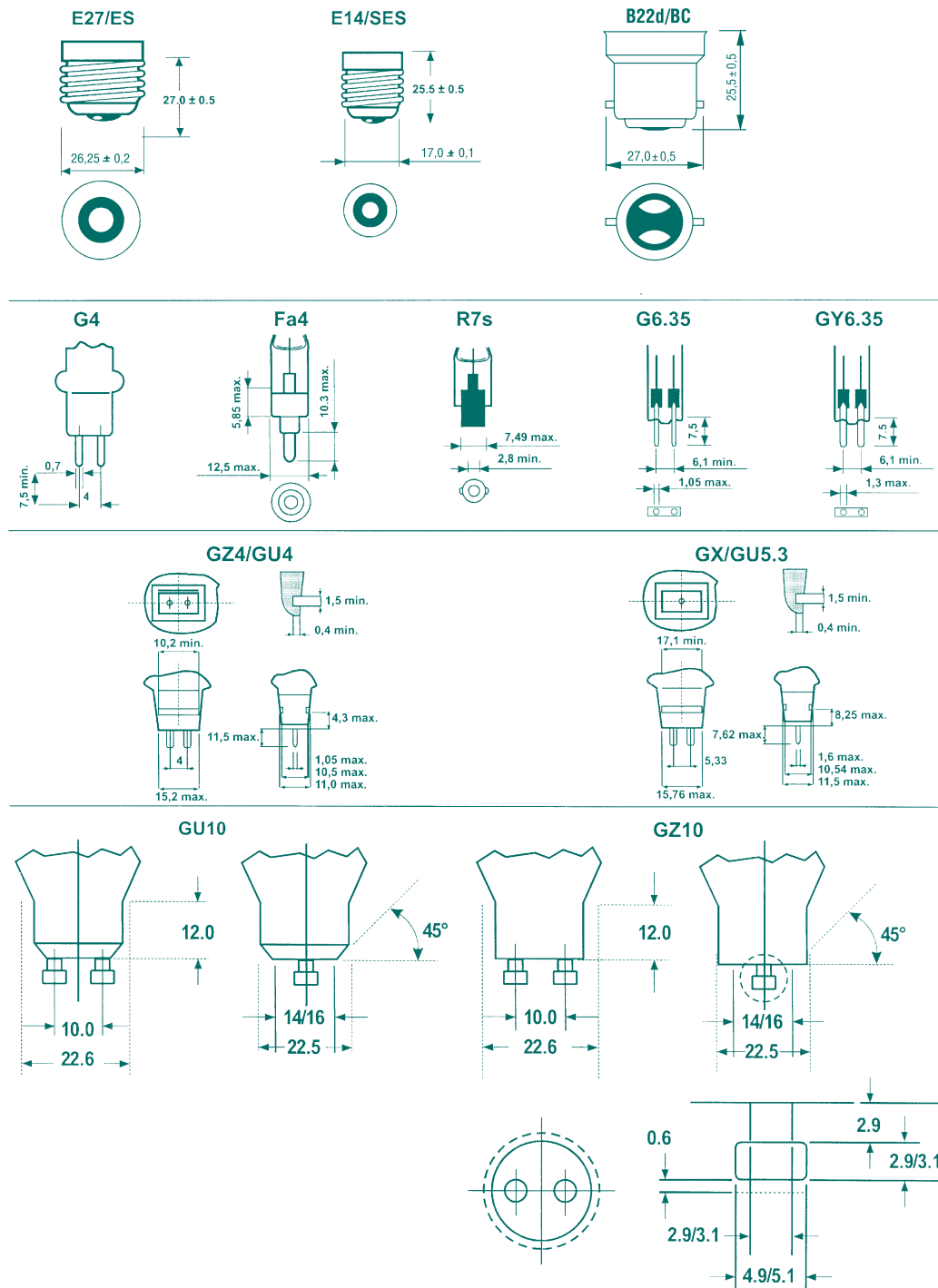
### DIRECTIONS FOR USE

- For use in luminaires with toughened front glass
- Use quick-action fuses in the external circuit
- Do not touch the quartz envelope with bare fingers
- Do not apply excessive force during insertion or removal



Item description	Watt	Volt	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Average life h	Packing Quantity	Ordering Code
				L	D					
230V 60W(*)	60	230	R7s	78.30	10	2900	840	2000	12	0022780
240V 60W(*)	60	240	R7s	78.30	10	2900	840	2000	12	0022781
230V 100W(*)	100	230	R7s	78.30	10	2900	1600	2000	12	0021400
240V 100W(*)	100	240	R7s	78.30	10	2900	1600	2000	12	0021402
230V 150W(*)	150	230	R7s	78.30	10	2900	2600	2000	12	0021401
240V 150W(*)	150	240	R7s	78.30	10	2900	2600	2000	12	0021403
230V 150W	150	230	R7s	117.60	8	2900	1875	2000	10x10	0021545
230V 200W	200	230	R7s	117.60	8	2900	3000	2000	10x10	0021550
240V 200W	200	240	R7s	117.60	8	2900	3000	2000	10x10	0021551
240V 250W	250	240	R7s	117.60	8	2900	4000	2000	10x10	0021743
230V 300W	300	230	R7s	117.60	8	2900	5000	2000	10x10	0021681
240V 300W	300	240	R7s	117.60	8	2900	5000	2000	10x10	0021653
230V 500W	500	230	R7s	117.60	8	2900	9500	2000	10x10	0021620
240V 500W	500	240	R7s	117.60	8	2900	9500	2000	10x10	0021621
230V 750W	750	230	R7s	189.10	12	2900	15000	2000	10x10	0021622
240V 750W	750	240	R7s	189.10	12	2900	15000	2000	10x10	0021623
230V 1000W	1000	230	R7s	189.10	12	2900	22000	2000	10x10	0021624
240V 1000W	1000	240	R7s	189.10	12	2900	22000	2000	10x10	0021625
230V 1500W	1500	230	R7s	254.10	12	2900	33000	2000	10x10	0021626
240V 1500W	1500	240	R7s	254.10	12	2900	33000	2000	10x10	0021628
230V 2000W	2000	230	R7s	331.00	12	2900	44000	2000	50	0021629
230V 2000W	2000	230	Fa4	331.00	12	2900	44000	2000	50	0021630
240V 2000W	2000	240	Fa4	331.00	12	2900	44000	2000	50	0021652

LAMP CAPS



## CABLE CROSS SECTIONS

### Cable cross for low volt installations

To operate a lamp at the same power from a 12 volt supply compared to a 240V supply, 20 times the current is required. All the components on the 12 volt side of a step down transformer supplying low voltage dichroic lamps, for example, need to be sized accordingly. Therefore a 12V 50W lamp will draw about 200 mill amperes from the 240V primary supply but will deliver 4.2 amperes to the lamp on the secondary 12V low voltage side.

It is generally accepted that the correct choice of cable cross section is 6 amperes per square mm. maximum. Voltage drop between the lamps and transformer may also become a problem over long cable runs. For example a 3.5% drop in voltage at the lamp cap will cause lamp light output from a 12V lamp to reduce by 10%.

To calculate the minimum cable cross section for a given cable length the following formula is used (where the voltage drop will be 3.5% maximum):

Copper cable:  $A \text{ (mm}^2\text{)} = P(\text{lamp power in Watt}) \times L \text{ (cable run in metres)} \times 0.007$

Aluminium cable:  $A = P \times L \times 0.011$

The tables below list typical values of A (cross section) for total lamp load (W), the current (I) and cable run length of L metres for each conductor type.

$$A = \text{Power (W)} \times r \times L / 2.52$$

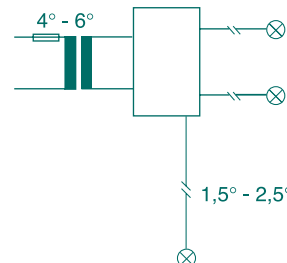
A in mm<sup>2</sup>

r specific resistance of the cable material

... 0.018 for copper

... 0.028 for aluminium

L distance between transformer and lamp(s)



### Copper wire

Cable Cross Sections (mm<sup>2</sup>) for 12V lamps (max. 3.5% Voltage Drop)

Power (W)	20	40	50	80	100	120	150	200	250
Current (A)	1.7	3.3	4.2	6.7	8.3	10	12.5	16.6	20.8
Distance Transformer – Lamp (m)									
1	0.75	0.75	0.75	0.75	0.75	1.5	1.5	1.5	2.5
2	0.75	0.75	0.75	1.5	1.5	2.5	2.5	4.0	4.0
3	0.75	1.5	1.5	2.5	2.5	2.5	4.0	6.0	6.0
5	0.75	1.5	2.5	4.0	4.0	6.0	6.0	10.0	10.0
8	1.5	2.5	4.0	6.0	6.0	10.0	10.0	16.0	16.0
10	1.5	4.0	4.0	6.0	10.0	10.0	16.0	16.0	25.0
12	2.5	4.0	6.0	10.0	10.0	10.0	16.0	25.0	25.0
15	2.5	6.0	6.0	10.0	16.0	16.0	16.0	25.0	25.0

### Aluminium wire

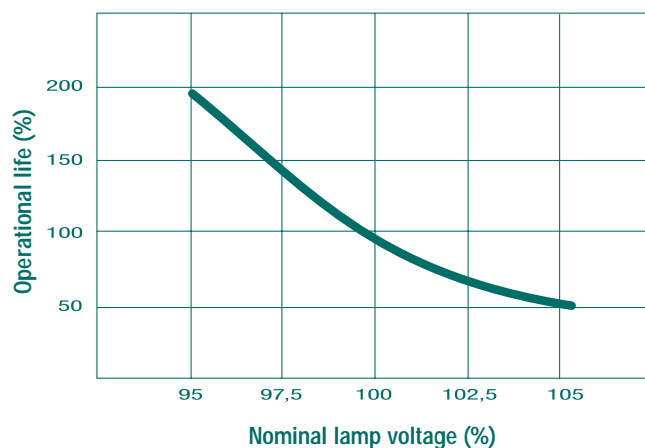
Cable Cross Sections (mm<sup>2</sup>) for 12V lamps (max. 3.5% Voltage Drop)

Power (W)	20	40	50	80	100	120	150	200	250
Current (A)	1.7	3.3	4.2	6.7	8.3	10	12.5	16.6	20.8
Distance Transformer – Lamp (m)									
1	0.75	0.75	0.75	1.5	1.5	1.5	2.5	2.5	4.0
2	0.75	1.5	1.5	2.5	2.5	4.0	4.0	6.0	6.0
3	0.75	1.5	2.5	4.0	4.0	4.0	6.0	10.0	10.0
5	1.5	2.5	4.0	6.0	6.0	10.0	10.0	16.0	16.0
8	2.5	4.0	6.0	10.0	10.0	16.0	16.0	25.0	25.0
10	2.5	6.0	6.0	10.0	16.0	16.0	25.0	25.0	
12	4.0	6.0	10.0	16.0	16.0	16.0	25.0		
15	4.0	10.0	10.0	16.0	25.0	25.0	25.0		

## DIRECTIONS FOR USE

### Operational life

The operational life of a low voltage incandescent halogen lamp depends on the voltage applied.



$$LD_2 = LD_1 \left( \frac{U_1}{U_2} \right)^{13}$$

$LD_1$  = Lamp life at nominal supply voltage

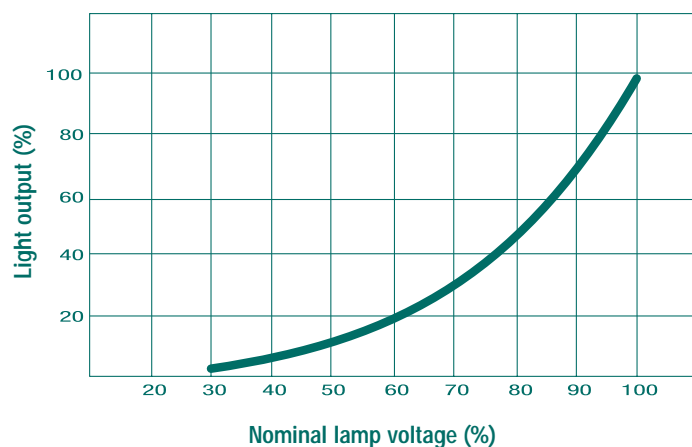
$LD_2$  = Lamp life at varying supply voltage

$U_1$  = Nominal lamp voltage

$U_2$  = Deviation from nominal lamp voltage

### Light level variations

The light output from low voltage incandescent halogen lamps may be varied to an infinite degree. When selecting a dimmer, ensure that it is suitable for inductive loads (only use dimmer switches intended for use with low voltage halogen lamps).



$$\phi_2 = \phi_1 \left( \frac{U_2}{U_1} \right)^{3.4}$$

$\phi_1$  = Light output at nominal lamp voltage

$\phi_2$  = Light output at varying supply voltage

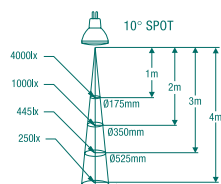
$U_1$  = Nominal lamp voltage

$U_2$  = Deviation from nominal lamp voltage

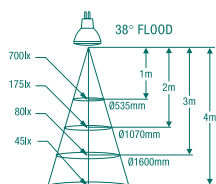


## CONE DIAGRAMS

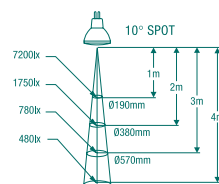
**Superia 35 / 20W / 10°**



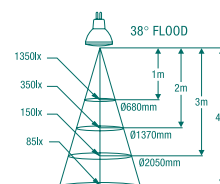
**Superia 35 / 20W / 38°**



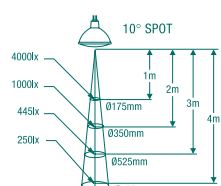
**Superia 35 / 35W / 10°**



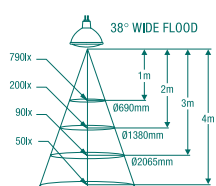
**Superia 35 / 35W / 38°**



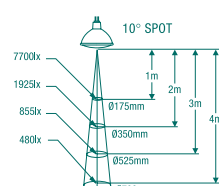
**Superia 50 / 20W / 10°**



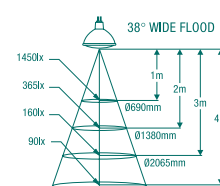
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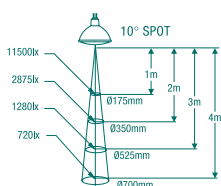
**Superia 50 / 35W / 10°**



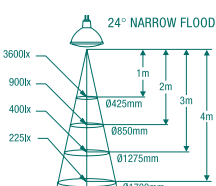
**Superia 50 / 35W / 38°**



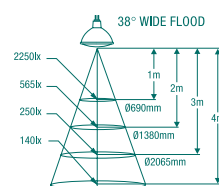
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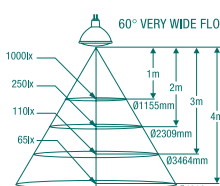
**Superia 50 / 50W / 24°**



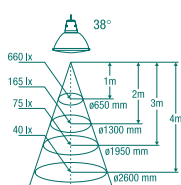
**Superia 50 / 50W / 38°**



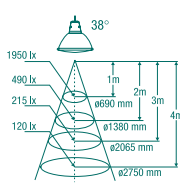
**Superia 50 / 50W / 60°**



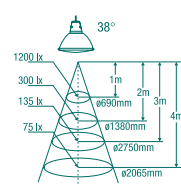
**Coolfit 20W / 38°**



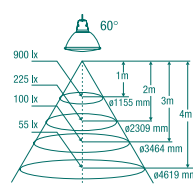
**Coolfit 35W / 38°**



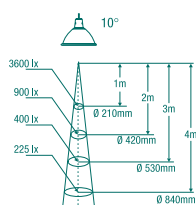
**Coolfit 50W / 38°**



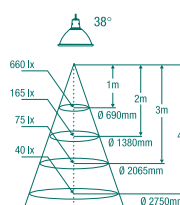
**Coolfit 50W / 60°**



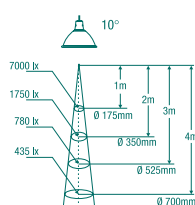
**Dichroic 20W / 10°**



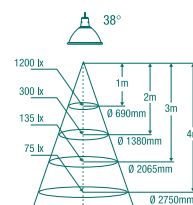
**Dichroic 20W / 38°**



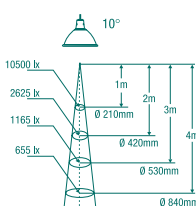
**Dichroic 35W / 10°**



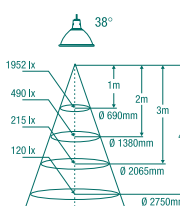
**Dichroic 35W / 38°**



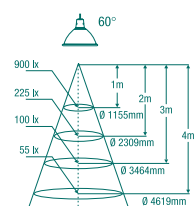
**Dichroic 50W / 10°**



**Dichroic 50W / 38°**

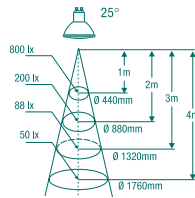


**Dichroic 50W / 60°**

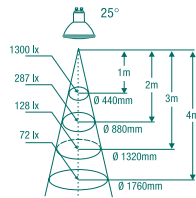


## CONE DIAGRAMS

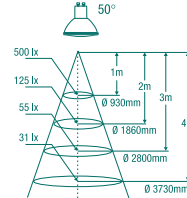
Hi-Spot ES50 35W / 25°



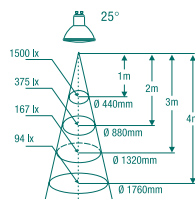
Hi-Spot ES(D)50 50W / 25°



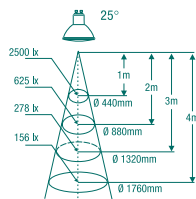
Hi-Spot ES(D)50 50W / 50°



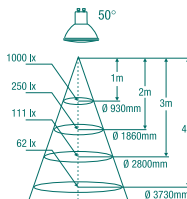
Hi-Spot ES63 50W / 25°



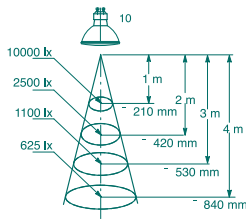
Hi-Spot ES(D)63 75W / 25°



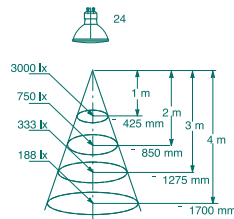
Hi-Spot ES(D)63 75W / 50°



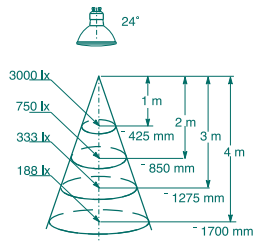
Hi-Spot ES111 75W / 10°



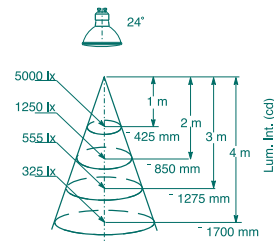
Hi-Spot ES111 75W / 24°



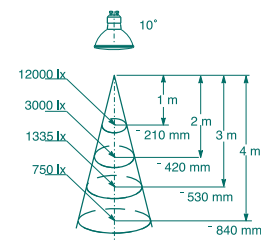
Hi-Spot ES111 75W / 24°



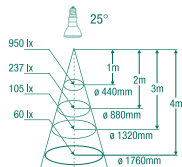
Hi-Spot ESD111 100W / 24°



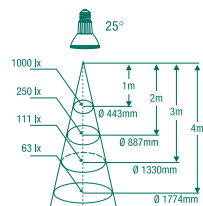
Hi-Spot ESD111 100W / 10°



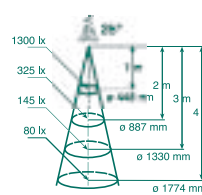
## Hi-Spot 50 40W/25°



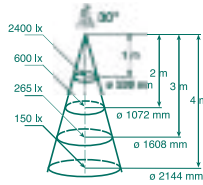
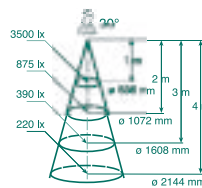
## Hi-Spot 63 50W/25°



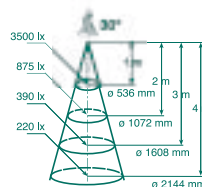
## Hi-Spot 80 75W/25°



## Hi-Spot 95 100W/30°



**Hi-Spot 120 100W/30°**



# TUNGSTEN HALOGEN LAMPS COMPARISON TABLE

Sylvania	Philips	Osram
Superia Dichroic	Masterline Plus	Decostar Titan
Diamond Dichroic	Standardline	Decostar
Coolfit	-	Decostar Alu
Hi Spot ES50	Twistline	Halopar 16 Alu
Hi Spot ESD50	Twistline	Halopar 16 CB
Hi Spot ES63	-	-
Hi Spot ESD63	-	-
Hi Spot ES111	-	-
Hi-Spot ESD 111	-	-
Hi Spot 50	Par 16	-
Hi Spot 63	Par 20	Halopar 20
Hi Spot 80	Par 25	-
Hi Spot 95	Par 30 S	Halopar 30
Hi Spot 120	Par 38	-
DLX	Halogena	Halolux



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HIGH INTENSITY DISCHARGE LAMPS



High Intensity Discharge (HID) lighting offers versatility, outstanding performance and reliability, from energy and cost effective lamps. Comprising four major groups – metal halide, high pressure sodium, mercury and low pressure sodium – HID lamps meet a variety of lighting needs for indoor and outdoor applications.

**Metal Halide** lamps combine excellent colour rendering with good efficacy. The low wattage range is available with conventional quartz technology as well as with ceramic arc tube technology enhancing colour uniformity and stability over lamp life. A complete medium wattage range for compatibility with mercury and high pressure sodium control gear is offered.

**High Pressure Sodium** lamps combine excellent efficacy with extreme long life. The environmental benefits are enhanced by the range of Mercury Free products. The SHP Twinarc lamp uses two arc tubes, to double lamp life and reduce early lamp failures.

H.I.D. LAMPS



**High Pressure Mercury** lamps combine white light and long life. The combination of reliability and ease of use together with the proven lamp technology provide the future potential for this product range.

**Low Pressure Sodium** lamps, although still used for many applications, are increasingly being replaced by High Pressure Sodium and Metal Halide Lamps. Colour appearance and rendering from these monochromatic lamps are poor, but the luminous efficacy is extremely high.

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.





CMI-T / CMI-TC / CMI-TD

CMI lamps are a new family of compact metal halide lamps incorporating a ceramic discharge arc tube which ensures improved performance, colour uniformity and stable colour throughout lamp life.



FEATURES

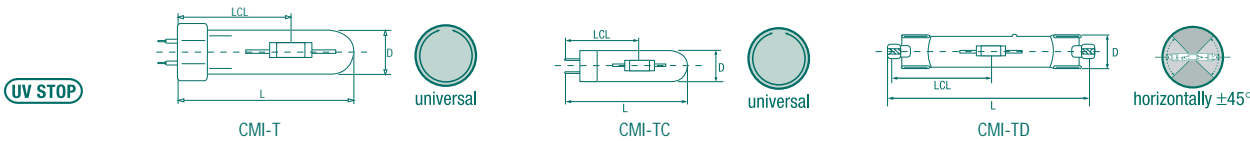
- Superior colour rendering
- Colour stability and uniformity
- High luminous efficacy
- UV stop
- Retrofit for quartz equivalent types

APPLICATIONS

- Indoor lighting: shop wall, floor and window displays, offices, hotel lobbies, etc.
- Outdoor lighting: decorative architectural and accent lighting

DIRECTIONS FOR USE

- External ignitor only
- Only use in luminaire fitted with a protective cover glass
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2



Item description	Watt	Volt	Current	Cap	Dimensions (mm)			Bulb	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D	LCL					
CMI-T												
CMI-T 35W/WDL UVS	39	95	0.53	G12	90	20	56	clear, tubular	3000	3400	10	0020300
CMI-T 70W/WDL UVS	72	95	0.98	G12	90	20	56	clear, tubular	3000	6200	10	0020301
CMI-T 70W/NDL UVS	72	95	0.98	G12	90	20	56	clear, tubular	4200	6000	10	0020305
CMI-T 150W/WDL UVS	146	95	1.82	G12	100	20	56	clear, tubular	3000	13500	10	0020302
CMI-T 150W/NDL UVS	146	95	1.82	G12	100	20	56	clear, tubular	4200	13000	10	0020306
CMI-TD												
CMI-TD 70W/WDL UVS	72	95	0.98	RX7s	117.6	22	57	clear	3000	6200	10	0020307
CMI-TD 70W/NDL UVS	72	95	0.98	RX7s	117.6	22	57	clear	4200	6200	10	0020308
CMI-TD 150W/WDL UVS	146	95	1.82	RX7s-24	135.4	25	66	clear	3000	13500	10	0020309
CMI-TD 150W/NDL UVS	146	95	1.82	RX7s-24	135.4	25	66	clear	4200	12500	10	0020310
CMI-TC												
CMI-TC 35W/WDL UVS	39	90	0.53	G8.5	85	17	52	clear, tubular	3000	3400	12	0020303
CMI-TC 70W/WDL UVS	72	90	0.98	G8.5	85	17	52	clear, tubular	3000	6200	12	0020304

## HSI-MP METALARC

High output quartz metal halide lamps designed for use in open luminaires and characterized by their excellent colour maintenance throughout life. Available in 3 colour temperatures.



### FEATURES

- Elliptical envelope shape
- Compact dimensions, single-ended (E27) design allows maximum freedom for luminaire designers
- Long life: up to 15000 hours

### APPLICATIONS

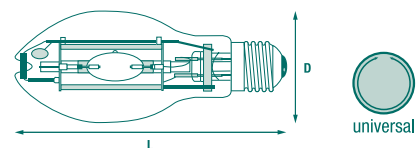
- Display lighting in retail stores
- Public areas, i.e. lobbies, banking halls and airport terminals
- Offices, especially in VDU areas using up-lighters
- Floodlighting

### DIRECTIONS FOR USE

- Burning position: universal
- MP lamps can be used in open luminaires
- Continuous burning is inadvisable. Switch off at least once per week for 15 minutes
- In case of outer jacket breakage - switch off immediately
- 4.0 kV pulse E27 socket may be used
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2



UV STOP



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
HSI-MP 70W CL 3K E27	75	95	1.0	E27	138	54	clear	3000	5500	12	0020810
HSI-MP 70W CO 3K E27	75	95	1.0	E27	138	54	coated	2900	5200	12	0020811
HSI-MP 70W CL 4K E27	75	95	1.0	E27	138	54	clear	4000	5800	12	0020812
HSI-MP 70W CO 4K E27	75	95	1.0	E27	138	54	coated	3800	5500	12	0020813
HSI-MP 100W CL 3K E27	100	100	1.15	E27	138	54	clear	3000	8500	12	0020820
HSI-MP 100W CO 3K E27	100	100	1.15	E27	138	54	coated	2900	7900	12	0020821
HSI-MP 100W CL 4K E27	100	105	1.15	E27	138	54	clear	4000	8500	12	0020822
HSI-MP 100W CO 4K E27	100	105	1.15	E27	138	54	coated	3800	8100	12	0020823
HSI-MP 150W CL 3K E27	150	95	1.8	E27	138	54	clear	3000	13000	12	0020830
HSI-MP 150W CO 3K E27	150	95	1.8	E27	138	54	coated	2900	12500	12	0020831
HSI-MP 150W CL 4K E27	150	95	1.8	E27	138	54	clear	4000	13000	12	0020832
HSI-MP 150W CO 4K E27	150	95	1.8	E27	138	54	coated	3800	12500	12	0020833

HSI-TD METALARC

Double ended quartz metal halide lamps with a clear tubular outer envelope and small, compact dimensions.



FEATURES

- Compact dimensions
- Available in three colour temperatures 3000 K, 4000 K and 5000 K
- High efficiency and long service life
- UV stop glass absorbs nearly all harmful UVB and UVC radiation. Lamps can therefore be used without the need for expensive UV-filters

APPLICATIONS

- Interior lighting: exhibitions, showrooms, shop windows, commercial and reception areas

DIRECTIONS FOR USE

- Burning position: horizontal  $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with a 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 the lamp
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
HSI-TD 70W/WDL 3K UVS	75	95	0.98	Rx7s	117.6	22	Clear UVS	3000	5500	10	0021030
HSI-TD 70W/NDL 4K UVS	75	90	0.98	Rx7s	117.6	22	Clear UVS	4200	5800	10	0021031
HSI-TD 70W/D 5K UVS	75	108	0.98	Rx7s	117.6	22	Clear UVS	5600	5400	10	0021045
HSI-TD 150W/WDL 3K UVS	150	95	1.80	Rx7s	135.4	25	Clear UVS	3000	13000	10	0021033
HSI-TD 150W/NDL 4K UVS	150	95	1.80	Rx7s	135.4	25	Clear UVS	4200	13000	10	0021034
HSI-TD 150W/D 5K UVS	150	102	1.80	Rx7s	135.4	25	Clear UVS	5200	11000	10	0021046
HSI-TD 250W/WDL 3K UVS	250	100	3.00	Fc2	161.6	27.5	Clear UVS	3200	20000	10	0021036
HSI-TD 250W/NDL 4K UVS	250	100	3.00	Fc2	161.6	27.5	Clear UVS	4200	20000	10	0021037
HSI-TD 250W/D 5K UVS	250	112	3.00	Fc2	161.6	27.5	Clear UVS	5200	18000	10	0021047

HSI-T METALARC

Single ended quartz metal halide lamps with a clear tubular envelope.



FEATURES

- Extremely compact metal halide lamps with a high light output
- Small point light source allows even more compact luminaire designs and efficient optics
- Good colour rendering properties - Class 1B
- Available in two colour temperatures 3000 K and 4000 K

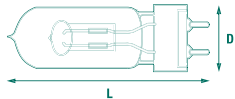
APPLICATIONS

- Ideal for spotlighting where high light intensities are required
- Indoor: accent lighting for shops, hotels, lobbies, museums, etc.
- Outdoor floodlighting: in monuments, parks, facades, etc.

DIRECTIONS FOR USE

- Burning position: universal
- Operates on external ignitor only
- Only use in luminaires fitted with a cover glass
- Ensure lamp jacket is cleaned of finger prints before use
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2

UV STOP



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
HSI-T 70W/WDL 3K UVS	75	95	0.95	G12	76	26	clear	3000	5200	12	0020335
HSI-T 70W/NDL 4K UVS	75	95	0.95	G12	76	26	clear	4200	5200	12	0020340
HSI-T 150W/WDL 3K UVS	146	95	1.82	G12	76	26	clear	3000	12000	12	0020336
HSI-T 150W/NDL 4K UVS	146	95	1.82	G12	76	26	clear	4200	12500	12	0020341

MEDIUM WATTAGE METAL HALIDE LAMPS

HSI-SX AND HSI-TSX BRITELUX

Highly efficient metal halide lamps, which can be used to upgrade from high pressure sodium lighting to a more pleasant and productive white light simply by changing the lamp.



FEATURES

- Compatible with high-pressure sodium control gear
- High lumen output
- Good colour rendering - Class 2B
- Different envelope shapes: elliptical or tubular
- Average rated life: up to 15000 hours
- 'P' protected versions available - no safety front glass required

APPLICATIONS

- Industrial halls
- Shopping areas
- Warehouses

DIRECTIONS FOR USE

- Burning position: universal
- Starting pulse: 2.8 kV maximum
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2/5



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
Elliptical											
Britelux HSI-SX 250W/CL	265	100	2.9	E40	227	90	Clear	4100	23500	12	0020772
Britelux HSI-SX 250W/CL/P	265	100	2.9	E40	227	90	Clear	4500	21000	12	0020776
Britelux HSI-SX 250W/CO	265	100	2.9	E40	227	90	Coated	3800	22300	12	0020771
Britelux HSI-SX 250W/CO/P	265	100	2.9	E40	227	90	Coated	4200	20000	12	0020775
Britelux HSI-SX 400W/CL/P	425	120	4.4	E40	290	120	Clear	4300	42000	6	0020774
Britelux HSI-SX 400W/CO/P	425	120	4.4	E40	290	120	Coated	4200	40000	6	0020773
Tubular Clear											
Britelux HSI-TSX 250W	265	100	2.9	E40	260	48	Clear	4200	21000	12	0024407
Britelux HSI-TSX 400W	425	105	4.4	E40	270	63	Clear	4200	40000	12	0024409

## HSI-HX AND HSI-THX

High brightness metal halide lamps delivering energy efficient high quality white light compatible with mercury control gear.



### FEATURES

- High efficiency and very good colour rendering
- Very high light output
- E40 cap
- Envelope finish: clear tubular/coated elliptical
- Can be operated on mercury lamp control gear with a suitable ignitor
- Average rated life: up to 15000 hours

### APPLICATIONS

- Sports arenas and stadiums
- Car Parks
- Rail and dock yards
- Petrol stations

### DIRECTIONS FOR USE

- Burning position:  
Tubular lamps: horizontal  $\pm 20^\circ$   
Elliptical lamps: vertical  $\pm 15^\circ$
- External soft ignitor except for HSI-HX 250/400W CO/I
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 3 or N° 1 for /I versions



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
<b>Elliptical</b>											
HSI-HX 250W CL	245	130	2.1	E40	227	90	clear	4500	23000	12	0020357
HSI-HX 250W CO	245	130	2.1	E40	227	90	coated	3800	21000	12	0020355
HSI-HX 250W CO/I	245	130	2.1	E40	227	90	coated	3800	21000	12	0020356
HSI-HX 400W CL	400	130	3.4	E40	290	120	clear	4500	37000	12	0020353
HSI-HX 400W CO	400	130	3.4	E40	290	120	coated	3800	35200	12	0020350
HSI-HX 400W CO/I	400	130	3.4	E40	290	120	coated	3800	35200	12	0020351
<b>Tubular Clear</b>											
HSI-THX 250W	245	130	2.1	E40	257	48	clear	4500	20000	12	0020394
HSI-THX 400W	400	130	3.4	E40	270	63	clear	4200	36000	12	0020546



HIGH WATTAGE METAL HALIDE LAMPS

HSI-T

High output metal halide lamps with a clear tubular outer envelope compatible with mercury control gear.



FEATURES

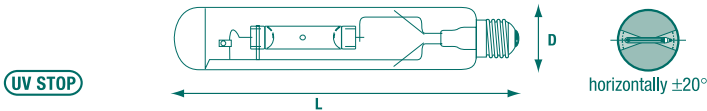
- High light output and good colour characteristics
- E40 cap
- Envelope finish: clear
- Average rated life: up to 7000 hours

APPLICATIONS

- Sports arenas and stadiums
- Car Parks
- Rail and dock yards
- Petrol stations

DIRECTIONS FOR USE

- Burning position: horizontal  $\pm 20^\circ$
- External ignitor except for HSI-T 2000W-S4k 380V/I
- Technical data: p.158
- Circuit diagrams: p. 165 N° 3 or N° 1 for /I version



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
HSI-T 1000W/4K	965	130	8.25	E40	382	47	Clear	4000	81000	4	0020597
HSI-T 2000W-S4K 380V	2000	235	9.00	E40	430	102	Clear	4000	200000	4	0020533
HSI-T 2000W-4K 380V	2000	245	9.00	E40	430	102	Clear	4000	190000	4	0020532
HSI-T 2000W-S4K 380V/I	2000	235	9.00	E40	430	102	Clear	4000	200000	4	0020540

HSI-TD

High output double ended metal halide lamp with cable connectors.



FEATURES

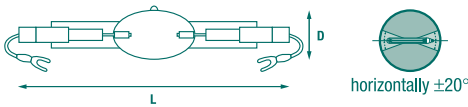
- High efficiency and very good colour rendering
- Very high light output
- Envelope finish: clear
- Average rated life: up to 3000 hrs

APPLICATIONS

- Sports arenas and stadiums
- Car Parks
- Rail and dock yards

DIRECTIONS FOR USE

- Burning position: horizontal  $\pm 20^\circ$
- External electronic ignitor
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Bulb finish	Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D					
HSI-TD 2000W/D	1950	205	11.30	Cable	187	36	Clear	5600	200000	10	0020339

SHP-S AND SHP-TS SUPER

A range of tubular and elliptical high-pressure sodium lamps offering the unique combination of good colour appearance and very high efficacy, higher luminous flux and considerably longer life compared to standard types.



FEATURES

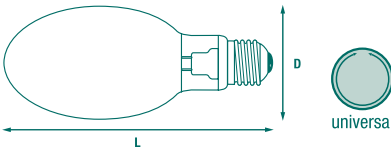
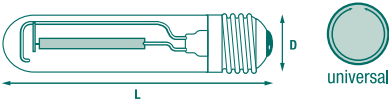
- A pleasant, warm, golden colour light
- High efficacy: up to 150 lm/W
- Colour temperature: 2050 K
- Envelope shape/finish: tubular clear/elliptical coated
- Gro-Lux version available with a special spectrum to aid plant growth
- Average rated life: up to 30000 hours

APPLICATIONS

- Residential street lighting
- Hi-mast multi-level junction lighting
- Safety/security/amenity floodlighting
- Motorway and major road lighting
- Hi-bay industrial lighting
- Plant growing - Gro-Lux 4000 and 600W

DIRECTIONS FOR USE

- Burning position: universal
- Can be operated on ignitors in accordance with IEC 60927
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2/5 (except for 600W only N° 2)



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
Elliptical coated										
SHP-S 35W/CO-E	35	90	0.49	E27	165	72	2050	1800	40	0020448
SHP-S 50W/CO-E	50	85	0.76	E27	165	72	2050	3600	40	0020688
SHP-S 70W/CO-E	70	90	0.98	E27	165	72	2050	6000	40	0020690
SHP-S 100W	100	100	1.20	E40	186	78	2050	9500	40	0020692
SHP-S 150W	150	100	1.80	E40	227	91	2050	15500	12	0020693
SHP-S 250W	255	100	2.95	E40	227	91	2050	30000	12	0020715
SHP-S 400W	410	105	4.40	E40	292	122	2050	52500	12	0020716
Tubular clear										
SHP-TS 50W/CL-E	50	85	0.76	E27	156	39	2050	4200	40	0020687
SHP-TS 70W/CL-E	70	90	0.98	E27	156	39	2050	6800	40	0020678
SHP-TS 100W	100	100	1.20	E40	211	48	2050	10000	12	0020686
SHP-TS 150W	150	100	1.80	E40	211	48	2050	17000	12	0020685
SHP-TS 250W	255	100	2.95	E40	260	48	2050	32000	12	0020713
SHP-TS 400W	400	100	4.50	E40	292	48	2050	55000	12	0020714
SHP-TS 600W	600	110	5.90	E40	292	48	2050	90000	12	0020805
SHP-TS 400W GroLux	425	120	4.0	E40	292	48	2050	58000	12	0020807
SHP-TS 600W GroLux	615	125	5.5	E40	292	48	2050	90000	12	0020808

## SHP-S AND SHP-TS MERCURY FREE

High-pressure sodium lamps, containing no mercury yet offering the same performance characteristics as other high-pressure sodium lamps.



### FEATURES

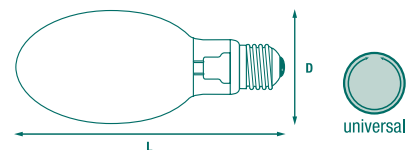
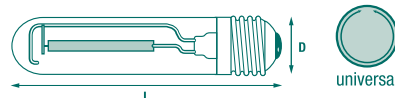
- Contains no mercury; a significant environmental benefit and allowing considerable savings on recycling costs
- High light output
- Faster run up time: 5 minutes
- Envelope shape/finish: tubular clear/elliptical coated
- Average rated life: up to 24000 hours

### APPLICATIONS

- Where luminous efficacy is important for safety and security
- Street lighting, warehouse and workshop lighting, parks, tunnels, industry in general
- Applications with an increased environmental awareness

### DIRECTIONS FOR USE

- Burning position: universal
- Can be operated on all ignitors in accordance with EN 60662
- Technical data: p.158
- Circuit diagrams: p.165 N° 2/5



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
<b>Elliptical coated</b>										
SHP-S 70W Mercury Free	70	90	0.98	E27	165	72	2200	5000	40	0020991
SHP-S 100W Mercury Free	100	100	1.20	E40	186	78	2200	8000	40	0020993
SHP-S 150W Mercury Free	153	100	1.80	E40	227	91	2200	15000	12	0020995
SHP-S 250W Mercury Free	258	100	2.90	E40	227	91	2200	27500	12	0020997
SHP-S 400W Mercury Free	408	100	4.50	E40	292	122	2200	50500	12	0020999
<b>Tubular clear</b>										
SHP-TS 70W Mercury Free	70	90	0.98	E27	156	39	2200	5300	40	0020990
SHP-TS 100W Mercury Free	100	100	1.20	E40	211	48	2200	9000	12	0020992
SHP-TS 150W Mercury Free	153	100	1.80	E40	211	48	2200	16000	12	0020994
SHP-TS 250W Mercury Free	258	100	2.90	E40	260	48	2200	29000	12	0020996
SHP-TS 400W Mercury Free	408	100	4.50	E40	292	48	2200	53000	12	0020998

SHP-S AND SHP-TS TWINARC

Super high pressure sodium lamps with a double arc tube, guaranteeing immediate re-strike after a power cut and doubling lamp life up to 55000 hours.



FEATURES

- Double arc tube lamp
- Standby arc tube restarts immediately after mains failure
- High lumen output with excellent and improved lumen maintenance throughout life
- Only 3% failures at 16000 hours - offering enormous savings in maintenance costs
- Average rated life: up to 55000 hours

APPLICATIONS

- Where access and maintenance is difficult or expensive
- Security floodlighting at airports, military installations, sports arenas, tunnels, harbours and industrial sites
- Street lighting

DIRECTIONS FOR USE

- Burning position: universal
- External ignitor
- Equipped with Super High Pressure Sodium arc tubes
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2/5



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
Elliptical coated										
SHP-S 50W Twinarc	50	85	0.76	E27	165	72	2050	3600	40	0020717
SHP-S 70W Twinarc	70	90	0.98	E27	165	72	2050	6000	40	0020719
SHP-S 100W Twinarc	100	100	1.20	E40	186	78	2050	9500	40	0020725
SHP-S 150W Twinarc	150	100	1.80	E40	227	91	2050	15500	12	0020740
SHP-S 250W Twinarc	255	100	2.90	E40	227	91	2050	30000	12	0020742
SHP-S 400W Twinarc	410	105	4.40	E40	292	122	2050	52500	12	0020744
Tubular clear										
SHP-TS 50W Twinarc	50	85	0.76	E27	156	39	2050	4000	40	0020712
SHP-TS 70W Twinarc	70	90	0.98	E27	156	39	2050	6500	40	0020718
SHP-TS 100W Twinarc	100	100	1.20	E40	211	48	2050	10000	12	0020724
SHP-TS 150W Twinarc	150	100	1.80	E40	211	48	2050	17000	12	0020739
SHP-TS 250W Twinarc	250	100	2.90	E40	260	48	2050	32000	12	0020741
SHP-TS 400W Twinarc	400	100	4.50	E40	292	48	2050	55000	12	0020743

SHP AND SHP-T STANDBY

Standard high-pressure sodium lamps with a double arc tube, guaranteeing immediate re-strike after a power cut and doubling lamp life.



FEATURES

- Double arc tube lamp
- Standby arc tube restarts immediately after mains failure
- Improved lumen maintenance throughout life
- Average rated life: up to 55000 hours

APPLICATIONS

- Where access and maintenance is difficult or expensive
- Security floodlighting at airports, military installations, sports arenas, tunnels, harbours and industrial sites
- Street lighting

DIRECTIONS FOR USE

- Burning position: universal
- Equipped with standard high pressure sodium arc tubes
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2/5



Item description	Watt	Volt	Lamp	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
Elliptical coated										
SHP 70W SBY	70	90	0.98	E27	165	72	2050	5800	40	0020700
SHP 150W SBY	150	100	1.8	E40	227	91	2050	14000	12	0020654
SHP 250W SBY	250	100	3.0	E40	227	91	2050	26000	12	0020653
SHP 400W SBY	400	105	4.45	E40	292	122	2050	47000	12	0020652
Tubular clear										
SHP-T 150W SBY	150	100	1.8	E40	211	48	2050	14500	12	0020670
SHP-T 250W SBY	250	100	3.0	E40	260	48	2050	28000	12	0020559
SHP-T 400W SBY	392	100	4.6	E40	292	48	2050	48000	12	0020596



SHP AND SHP-T STANDARD

Standard high pressure sodium lamps offering the unique combination of good colour appearance and high efficacy coupled with long lamp life.



FEATURES

- Pleasant, warm, golden-white light colour
- High efficacy, up to 130 lm/W
- Envelope shape/finish: tubular clear/elliptical coated

APPLICATIONS

- Residential street lighting
- Hi-mast multi-level junction lighting
- Safety/security/amenity floodlighting
- Motorway and major road lighting
- Hi-bay industrial lighting

DIRECTIONS FOR USE

- Burning position: universal
- Technical data: p. 158
- Circuit diagrams: p. 165 N° 2/5



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
Elliptical coated										
SHP 50W/CO-E	50	85	0.76	E27	165	72	2050	3300	40	0020554
SHP 70W/CO-E	70	90	0.98	E27	165	72	2050	5800	40	0020555
SHP 100W	100	100	1.20	E27	178	78	2050	8500	40	0020563
SHP 150W	150	100	1.80	E40	227	91	2050	14000	12	0020479
SHP 250W	250	100	3.00	E40	227	91	2050	26000	12	0020481
SHP 400W	400	105	4.45	E40	292	122	2050	47000	12	0020484
Tubular Clear										
SHP-T 50W/CL-E	50	85	0.76	E27	156	39	2050	3500	40	0020455
SHP-T 70W	70	90	0.98	E27	156	39	2050	6000	40	0020457
SHP-T 150W	150	100	1.80	E40	211	48	2050	14500	12	0020480
SHP-T 250W	250	100	3.00	E40	260	48	2050	28000	12	0020482
SHP-T 400W	392	100	4.60	E40	292	48	2050	48000	12	0020485
SHP-T 1000W	960	100	10.6	E40	400	68	2050	130000	4	0020504

SHP SELF-STARTING

Elliptical high-pressure sodium lamps, with internal ignitor and offering good efficacy and lumen maintenance plus long life.



FEATURES

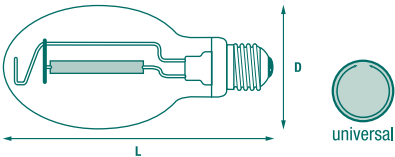
- Integral ignitor
- Offers cost-reduction opportunities: no ignitor or extra wiring needed
- Envelope shape: elliptical
- Envelope finish: clear or coated
- Average rated life: up to 12500 hours

APPLICATIONS

- Can be used in compact luminaires without ignitor
- Residential street lighting
- Old town centre and pedestrian zone lightings
- Parks, gardens, monuments
- Industrial workshops

DIRECTIONS FOR USE

- Burning position: universal
- Technical data: p. 158
- Circuit diagrams: p. 165 n° 1



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
Elliptical coated										
SHP 50W/CO-I	50	85	0.76	E27	165	72	2050	3300	40	0020550
SHP 70W/CO-I	70	90	0.98	E27	165	72	2050	5800	40	0020551
Elliptical clear										
SHP 70W/CL-I	70	90	0.98	E27	165	72	2050	6000	40	0020553

HIGH PRESSURE SODIUM LAMPS

SHX PLUG-IN

High-pressure sodium lamps with integral “probe” type starter and a mixture of Neon and Argon gases in the arc tube requiring a lower starting voltage.



FEATURES

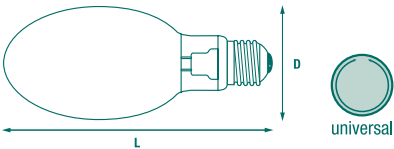
- Offers a warm golden-white light colour
- Direct replacement for mercury (HSL) lamps
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 20000 hours

APPLICATIONS

- Road and industrial applications using mercury lamps

DIRECTIONS FOR USE

- Burning position: universal
- Not recommended for operation on leading power factor circuits
- Technical data: p. 158
- Circuit diagrams: p. 165 N°1



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
SHX 110W E27	110	115	1.22	E27	178	76	2000	8000	40	0020560
SHX 210W E40	210	117	2.25	E40	228	91	2000	18000	12	0020488
SHX 350W E40	350	177	3.60	E40	292	122	2000	34500	12	0020490

SPX ECO ARC

High-pressure sodium lamps with integral ignitor which can be used as a direct retrofit for mercury lamps, enabling up to 16% savings on the energy costs with up to 40% more light.



FEATURES

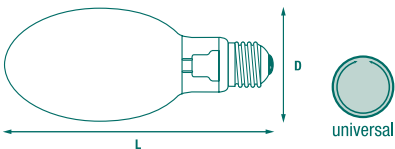
- Direct retrofit for mercury vapour lamps
- Instant energy saving in existing mercury installations:
  - SPX Eco Arc 69/108W replaces HSL-BW 80W or HSL-BW 125W
  - SPX Eco Arc 190W replaces HSL-BW 250W
  - SPX Eco Arc 295W replaces HSL-BW 400W
- Increased light output (up to 40% higher) compared to mercury lamps
- Maintained light output throughout the lamp's life
- Lamps do not cycle at the end of life
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 24000 hours
- Self-starting

APPLICATIONS

- Road lighting/industrial applications using mercury lamps
- To upgrade existing mercury installations to higher lighting levels

DIRECTIONS FOR USE

- Burning position: universal
- Not recommended for operation on leading power factor circuits
- Technical data: p. 158
- Circuit diagrams: p. 165 n°1



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
SPX ECO ARC 69/108W E27	69	100	0.82	E27	176	76	1800	4300	40	0020800
	108	120	1.20	E27	176	76	1900	8800	40	0020800
SPX ECO ARC 190W E40	205	150	1.70	E40	228	91	1800	19000	12	0020801
SPX ECO ARC 295W E40	330	155	2.60	E40	292	122	1900	34000	12	0020802

MERCURY LAMPS

SUPER COMFORT MERCURY LAMPS

Universal use mercury vapour discharge lamps, combining excellent colour rendering with good efficacy and long life.



FEATURES

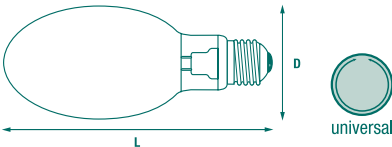
- High colour rendering (Ra 60), offering a warm white light colour (3400 K)
- Operates on standard mercury ballasts
- Excellent starting characteristics
- Efficacies: up to 60 lm/W
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 29000 hours

APPLICATIONS

- Display and floodlighting
- Hotel and office lighting
- Building and monument lighting
- Supermarkets

DIRECTIONS FOR USE

- Burning position: universal
- Technical data: p. 159
- Circuit diagrams: p. 165 N°1



Item description	Watt	Volt	Lamp	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
HSL-SC 50W E27	50	95	0.61	E27	130	56	3400	2000	24	0020895
HSL-SC 80W E27	80	115	0.80	E27	166	71	3400	4000	40	0020890
HSL-SC 125W E27	125	125	1.15	E27	178	76	3400	6500	40	0020891
HSL-SC 250W E40	250	130	2.13	E40	228	91	3400	14000	12	0020892
HSL-SC 400W E40	400	135	3.25	E40	292	122	3400	24000	12	0020893

BRIGHT WHITE STANDARD MERCURY LAMPS

Universal use mercury vapour discharge lamps, combining good efficacy and long life.



FEATURES

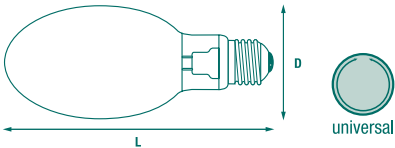
- Colour rendering (Ra 42)
- Operates on simple choke circuits
- Excellent starting characteristics
- Rugged construction to withstand shocks and vibration
- Efficacies: up to 60 lm/W
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 29000 hours

APPLICATIONS

- Road lighting
- Dock, rail-yard and industrial lighting
- Park and garden lighting

DIRECTIONS FOR USE

- Burning position: universal
- Technical data: p. 159
- Circuit diagrams: p. 165 N° 1



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
HSL-BW 50W E27	50	95	0.61	E27	130	56	4000	1800	24	0020405
HSL-BW 80W E27	80	115	0.80	E27	166	71	4000	3800	40	0020406
HSL-BW 80W B22-3 PIN	80	115	0.80	B22d-3	166	71	4000	3800	40	0020518
HSL-BW 125W E27	125	125	1.15	E27	178	76	4000	6300	40	0020407
HSL-BW 125W B22-3 PIN	125	125	1.15	B22d-3	178	76	4000	6300	40	0020447
HSL-BW 250W E40	250	130	2.13	E40	228	91	4000	13000	12	0020408
HSL-BW 400W E40	400	135	3.25	E40	292	122	3800	22000	12	0020409
HSL-BW 700W E40	700	140	5.40	E40	357	152	4000	40000	6	0020410
HSL-BW 1000W E40	1000	145	7.50	E40	411	167	4000	58000	6	0020411



BRIGHT WHITE BLENDED MERCURY LAMPS

Universal self-ballasted mercury vapour discharge lamps combining excellent colour rendering with long life.



FEATURES

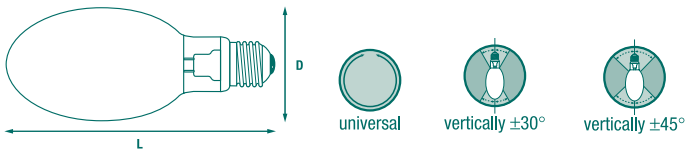
- Direct plug-in replacement for incandescent lamps, lasting sixteen times longer
- Low initial cost: no control gear needed
- Pleasant white light
- Reliable starting down to minus 18°C
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 16000 hours

APPLICATIONS

- Simple energy saving replacement for incandescent lamps
- Old town centres and boulevards
- Pedestrian zones, parks and gardens
- Home lighting in cellars and garages

DIRECTIONS FOR USE

- Burning position: 160W: vertical ±30°  
250W: vertical ±45°  
500W: universal
- No control gear required
- Minimum supply voltage of 220V at +20°C  
Increase by 10% for temperatures down to -18°C
- No ballast or ignitor required
- Technical data: p. 158
- Circuit diagram: p. 165 n°1



Item description	Watt	Volt	Lamp	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
HSB-BW 230V										
HSB-BW 160W 230V E27	160	230	0.80	E27	178	76	3500	3100	40	0020414
HSB-BW 250W 230V E40	250	230	1.20	E40	228	91	3500	5600	12	0020415
HSB-BW 250W 230V E27	250	230	1.20	E27	233	91	3500	5600	12	0020449
HSB-BW 500W 230V E40	500	230	2.40	E40	292	122	3500	14000	12	0020456
HSB-BW 240V										
HSB-BW 160W 240V E27	160	240	0.80	E27	178	76	3500	3100	40	0020475
HSB-BW 160W 240V B22	160	240	0.75	B22d	178	76	3500	3100	40	0020476
HSB-BW 250W 240V E40	250	240	1.20	E40	228	91	3500	5600	12	0020477
HSB-BW 500W 240V E40	500	240	2.20	E40	292	122	3500	14000	12	0020478

LOW PRESSURE SODIUM LAMPS

Monochromatic low pressure sodium discharge lamps with a very high luminous efficacy.



FEATURES

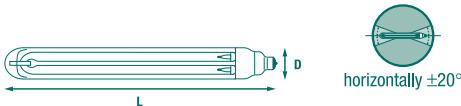
- Highest efficacy available: up to 183 lm/W
- Monochromatic warm yellow light
- Radiates light energy in the most effective part of the visible spectrum to reveal objects, vehicles and obstructions to full advantage
- Envelope shape/finish: tubular/clear

APPLICATIONS

- All road lighting needing maximum light on the road and minimal energy costs
- Safety and security lighting
- Pedestrian crossing lighting for contrast with mercury or fluorescent light sources

DIRECTIONS FOR USE

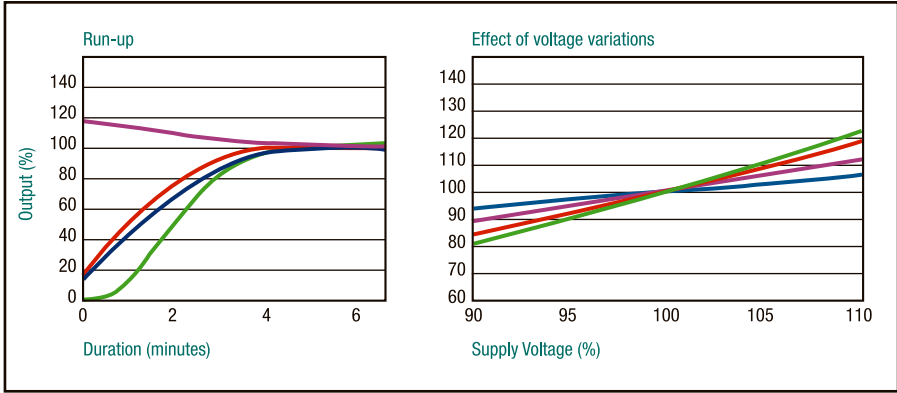
- Burning position: horizontal 20°
- Technical data: p. 159
- Circuit diagrams: p. 165 N° 4



Item description	Watt	Volt	Lamp	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing quantity	Ordering code
					L	D				
SLP 18W	18	57	0.35	BY22d	216	54	1800	1800	20	0020528
SLP 35W	37	70	0.60	BY22d	311	54	1800	4500	12	0020495
SLP 55W	56	109	0.59	BY22d	425	54	1800	7400	9	0020496
SLP 90W	89	112	0.94	BY22d	528	68	1800	13000	9	0020497
SLP 135W	129	164	0.95	BY22d	775	68	1800	21500	9	0020498
SLP 180W	180	240	0.91	BY22d	1120	68	1800	33000	9	0020499

LAMP PERFORMANCE DURING RUN-UP & THE EFFECT OF MAINS VOLTAGE VARIATIONS

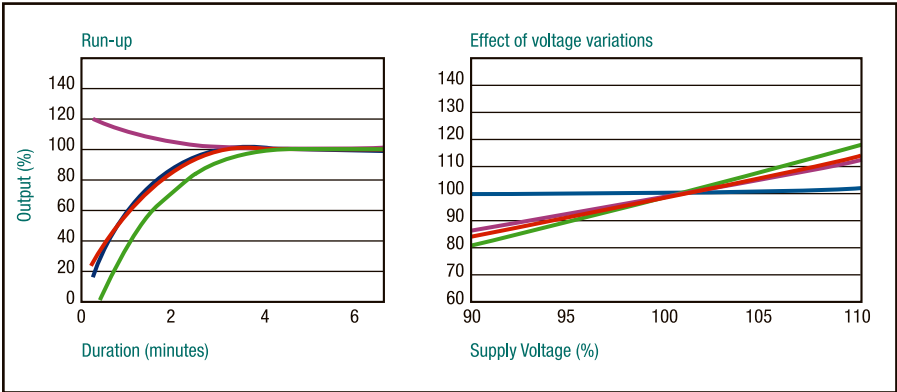
Ceramic Metal Halide



**Re-start time when hot**  
TD versions: immediate with appropriate start up system  
T, TC versions: up to 10 minutes

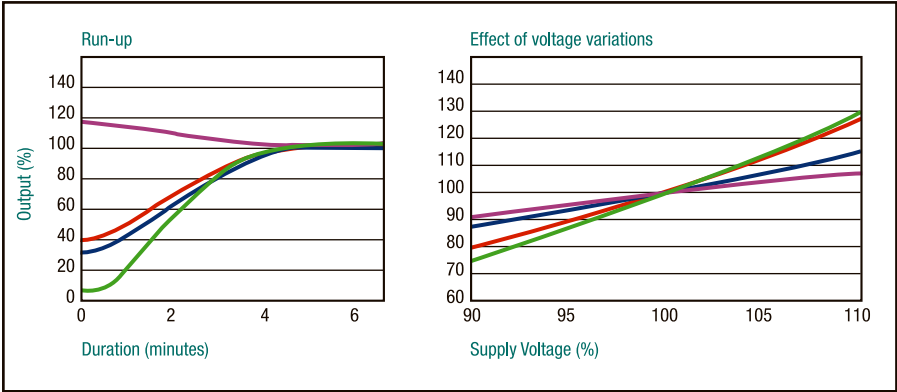
- Lamp Voltage
- Lamp Current
- Lamp Power
- Luminous Flux

Quartz Metal Halide



**Re-start time when hot**  
TD versions: immediate with appropriate start up system  
Other versions: up to 10 minutes

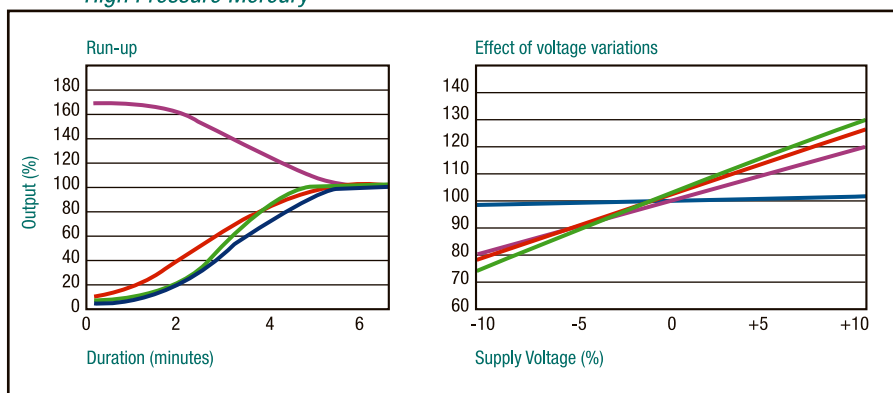
High Pressure Sodium



**Re-start time when hot**  
Twinarc, SBY: immediate re-start  
Standard, Super & MF: up to 1 minute

# LAMP PERFORMANCE DURING RUN-UP & EFFECT OF MAINS VOLTAGE VARIATIONS

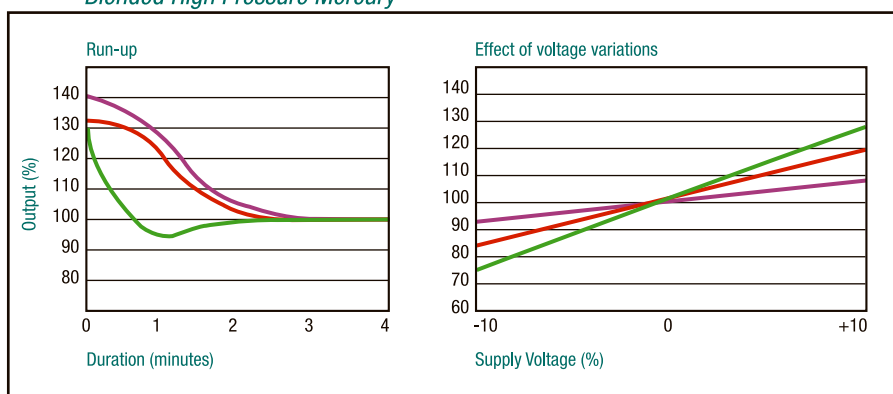
## High Pressure Mercury



Re-start time when hot  
5 to 10 minutes

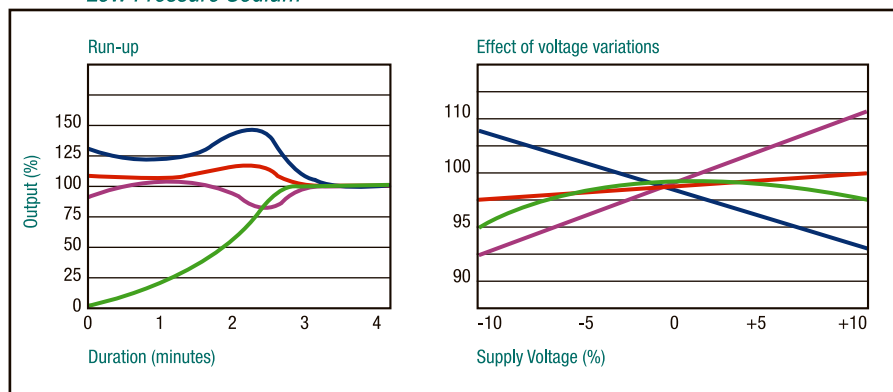
- Lamp Voltage
- Lamp Current
- Lamp Power
- Luminous Flux

## Blended High Pressure Mercury



Re-start time when hot  
5 to 10 minutes

## Low Pressure Sodium



Re-start time when hot  
up to 6 minutes depending on  
interruption time.

Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (μF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
CMI-T 35W/WDL UVS	39	0.53	48	6	2	3400	3000	1B	any
CMI-T 70W/WDL UVS	72	0.98	88	12	2	6200	3000	1B	any
CMI-T 70W/NDL UVS	72	0.98	88	12	2	6000	4200	1A	any
CMI-T 150W/WDL UVS	146	1.82	167	20	2	13500	3000	1B	any
CMI-T 150W/NDL UVS	146	1.82	167	20	2	13000	4200	1A	any
CMI-TD 70W/WDL UVS	72	0.98	86	12	2	6200	3000	1B	hor ± 45°
CMI-TD 70W/NDL UVS	72	0.98	86	12	2	6200	4200	1A	hor ± 45°
CMI-TD 150W/WDL UVS	146	1.82	167	20	2	13500	3000	1B	hor ± 45°
CMI-TD 150W/NDL UVS	146	1.82	167	20	2	12500	4200	1A	hor ± 45°
CMI-TC 35W/WDL UVS	39	0.53	48	6	2	3400	3000	1B	any
CMI-TC 70W/WDL UVS	72	0.98	88	12	2	6200	3000	1B	any
HSI-MP 75W CL 3K E27	75	1.0	90	10	2	5500	3000	2B	any
HSI-MP 75W CO 3K E27	75	1.0	90	10	2	5200	2900	2A	any
HSI-MP 75W CL 4K E27	75	1.0	90	10	2	5800	4000	2A	any
HSI-MP 75W CO 4K E27	75	1.0	90	10	2	5500	3800	2A	any
HSI-MP 75W CL 5K E27	75	1.0	90	10	2	5400	6000	2A	any
HSI-MP 75W CO 5K E27	75	1.0	90	10	2	5000	5800	1B	any
HSI-MP 100W CL 3K E27	100	1.15	115	12	2	8500	3000	2B	any
HSI-MP 100W CO 3K E27	100	1.15	115	12	2	7900	2900	2A	any
HSI-MP 100W CL 4K E27	100	1.15	115	12	2	8500	4000	2A	any
HSI-MP 100W CO 4K E27	100	1.15	115	12	2	8100	3800	2A	any
HSI-MP 100W CL 5K E27	100	1.15	115	12	2	7300	5200	1B	any
HSI-MP 100W CO 5K E27	100	1.15	115	12	2	6800	5200	1B	any
HSI-MP 150W CL 3K E27	150	1.8	170	20	2	13000	3000	2B	any
HSI-MP 150W CO 3K E27	150	1.8	170	20	2	12500	2900	2A	any
HSI-MP 150W CL 4K E27	150	1.8	170	20	2	13000	4000	2A	any
HSI-MP 150W CO 4K E27	150	1.8	170	20	2	12500	3800	2A	any
HSI-MP 150W CL 5K E27	150	1.8	170	20	2	11000	5800	1B	any
HSI-MP 150W CO 5K E27	150	1.8	170	20	2	10000	5400	1B	any
HSI-TD 70W/WDL 3K UVS	75	0.98	90	12	2	5500	3000	1B	hor ± 45°
HSI-TD 70W/NDL 4K UVS	75	0.98	90	12	2	5800	4200	1B	hor ± 45°
HSI-TD 70W/D 5K UVS	75	0.98	90	12	2	5400	5600	1B	hor ± 45°
HSI-TD 150W/WDL 3K UVS	150	1.8	170	20	2	13000	3000	1B	hor ± 45°
HSI-TD 150W/NDL 4K UVS	150	1.8	170	20	2	13000	4200	1B	hor ± 45°
HSI-TD 150W/D 5K UVS	150	1.8	170	20	2	11000	5200	1B	hor ± 45°
HSI-TD 250W/WDL 3K UVS	250	3.0	275	32	2	20000	3200	1B	hor ± 45°
HSI-TD 250W/NDL 4K UVS	250	3.0	275	32	2	20000	4200	1B	hor ± 45°
HSI-TD 250W/D 5K UVS	250	3.0	275	32	2	18000	5200	1A	hor ± 45°

Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (μF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
HSI-T 70W/WDL 3K UVS	75	0.95	90	12	2	5200	3000	1B	any
HSI-T 70W/WDL 4K UVS	75	0.95	90	12	2	5200	4200	1B	any
HSI-T 150W/WDL 3K UVS	146	1.82	167	20	2	12000	3000	1B	any
HSI-T 150W/WDL 4K UVS	146	1.82	167	20	2	12500	4200	1B	any
Britelux HSI-SX 250W/CL	265	2.9	290	40	2 / 5	23500	4100	2B	any
Britelux HSI-SX 250W/CL/P	265	2.9	290	40	2 / 5	21000	4500	2B	any
Britelux HSI-SX 250W/CO	265	2.9	290	40	2 / 5	22300	3800	2A	any
Britelux HSI-SX 250W/CO/P	265	2.9	290	40	2 / 5	20000	4200	2A	any
Britelux HSI-SX 400W/CL/P	425	4.4	465	45	2 / 5	42000	4300	2B	any
Britelux HSI-SX 400W/CO/P	425	4.4	465	45	2 / 5	40000	4200	2A	any
Britelux HSI-TSX 250W	265	2.9	290	40	2 / 5	21000	4200	2B	any
Britelux HSI-TSX 400W	425	4.4	465	45	2 / 5	40000	4200	2B	any
HSI-HX 250W CL	245	2.1	265	18	3	23000	4500	2B	vert ± 15°
HSI-HX 250W CO	245	2.1	265	18	3	21000	3800	2A	vert ± 15°
HSI-HX 250W CO/I	245	2.1	265	18	1	21000	3800	2A	vert ± 15°
HSI-HX 400W CL	400	3.4	420	28	3	37000	4500	2B	vert ± 15°
HSI-HX 400W CO	400	3.4	420	28	3	35200	3800	2A	vert ± 15°
HSI-HX 400W CO/I	400	3.4	420	28	1	35200	3800	2A	vert ± 15°
HSI-THX 250W	245	2.1	265	18	3	20000	4500	2B	hor ± 20°
HSI-THX 400W	400	3.4	420	28	3	36000	4200	2B	hor ± 20°
HSI-T 1000W/4K	965	8.25	985	65	3	81000	4000	2B	hor ± 20°
HSI-T 2000W-S4K 380V	2000	9.0	2022	35	3	200000	4000	2B	hor ± 20°
HSI-T 2000W-4K 380V	2000	9.0	2022	35	3	190000	4000	2B	hor ± 20°
HSI-T 2000W-S4K 380V/I	2000	9.0	2022	35	1	200000	4000	2B	hor ± 20°
HSI-TD 2000W/D	1950	11.3	2030	60	2	200000	5600	1A	hor ± 20°
SHP-S 35W CO/E	35	0.49	42	6	2 / 5	1800	2050	4	any
SHP-S 50W CO/E	50	0.76	60	8	2 / 5	3600	2050	4	any
SHP-S 70W CO/E	70	0.98	82	10	2 / 5	6000	2050	4	any
SHP-S 100W E40	100	1.20	115	12	2 / 5	9500	2050	4	any
SHP-S 150W E40	150	1.80	170	20	2 / 5	15500	2050	4	any
SHP-S 250W E40	255	2.90	285	40	2 / 5	31500	2050	4	any
SHP-S 400W E40	410	4.40	450	45	2 / 5	52500	2050	4	any
SHP-TS 50W CL/E	50	0.76	60	8	2 / 5	4200	2050	4	any
SHP-TS 70W CL/E	70	0.98	82	10	2 / 5	6800	2050	4	any
SHP-TS 100W E40	100	1.20	115	12	2 / 5	10000	2050	4	any
SHP-TS 150W E40	150	1.80	170	20	2 / 5	17000	2050	4	any
SHP-TS 250W E40	255	2.90	285	40	2 / 5	32000	2050	4	any
SHP-TS 400W E40	400	4.50	440	45	2 / 5	55000	2050	4	any
SHP-TS 600W E40	600	6.00	645	60	2	90000	2050	4	any
SHP-TS 400W Grolux	425	4.00	467	45	2	58000	2050	4	any
SHP-TS 600W Grolux	615	5.50	661	60	2	90000	2050	4	any

Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (µF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
SHP-S 70W Mercury Free	70	0.98	82	10	2 / 5	5000	2200	4	any
SHP-S 100W Mercury Free	100	1.20	115	12	2 / 5	8000	2200	4	any
SHP-S 150W Mercury Free	153	1.80	173	20	2 / 5	15000	2200	4	any
SHP-S 250W Mercury Free	258	2.90	288	40	2 / 5	27500	2200	4	any
SHP-S 400W Mercury Free	408	4.50	448	45	2 / 5	50500	2200	4	any
SHP-TS 70W Mercury Free	70	0.98	82	10	2 / 5	5300	2200	4	any
SHP-TS 100W Mercury Free	100	1.20	115	12	2 / 5	9000	2200	4	any
SHP-TS 150W Mercury Free	153	1.80	173	20	2 / 5	16000	2200	4	any
SHP-TS 250W Mercury Free	258	2.90	288	40	2 / 5	29000	2200	4	any
SHP-TS 400W Mercury Free	408	4.50	448	45	2 / 5	53000	2200	4	any
SHP-S 50W Twinarc	50	0.76	60	8	2 / 5	3600	2050	4	any
SHP-S 70W Twinarc	70	0.98	82	10	2 / 5	6000	2050	4	any
SHP-S 100W Twinarc	100	1.20	115	12	2 / 5	9500	2050	4	any
SHP-S 150W Twinarc	150	1.80	170	20	2 / 5	15500	2050	4	any
SHP-S 250W Twinarc	255	2.90	285	40	2 / 5	31500	2050	4	any
SHP-S 400W Twinarc	410	4.40	450	45	2 / 5	52500	2050	4	any
SHP-TS 50W Twinarc	50	0.76	60	8	2 / 5	4000	2050	4	any
SHP-TS 70W Twinarc	70	0.98	82	10	2 / 5	6500	2050	4	any
SHP-TS 100W Twinarc	100	1.20	115	12	2 / 5	10000	2050	4	any
SHP-TS 150W Twinarc	150	1.80	170	20	2 / 5	17000	2050	4	any
SHP-TS 250W Twinarc	255	2.90	285	40	2 / 5	32000	2050	4	any
SHP-TS 400W Twinarc	400	4.50	440	45	2 / 5	55000	2050	4	any
SHP 70W SBY	70	0.98	82	10	2 / 5	5800	2050	4	any
SHP 150W SBY	150	1.80	170	20	2 / 5	14000	2050	4	any
SHP 250W SBY	250	3.0	280	40	2 / 5	26000	2050	4	any
SHP 400W SBY	400	4.45	440	45	2 / 5	47000	2050	4	any
SHP-T 100W SBY	100	1.20	115	12	2 / 5	9000	2050	4	any
SHP-T 150W SBY	150	1.80	170	20	2 / 5	14500	2050	4	any
SHP-T 250W SBY	250	3.0	280	40	2 / 5	28000	2050	4	any
SHP-T 400W SBY	392	4.6	432	45	2 / 5	48000	2050	4	any

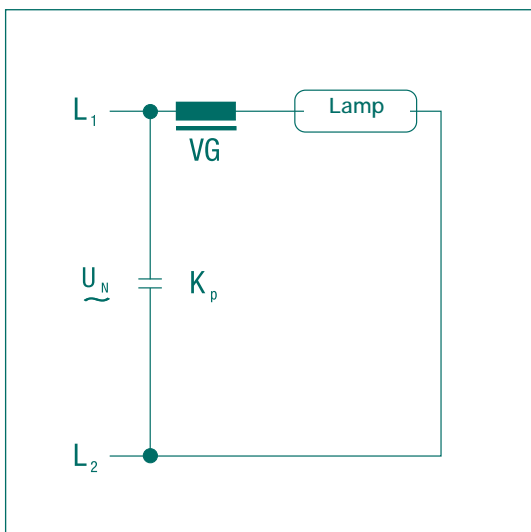


Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (μF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
SHP 50W/CO-E	50	0.76	60	8	2 / 5	3300	2050	4	any
SHP 70W/CO-E	70	0.98	82	10	2 / 5	5800	2050	4	any
SHP 100W	100	1.20	115	12	2 / 5	8500	2050	4	any
SHP 150W	150	1.80	170	20	2 / 5	14000	2050	4	any
SHP 250W	250	3.00	280	40	2 / 5	26000	2050	4	any
SHP 400W	400	4.45	440	45	2 / 5	47000	2050	4	any
SHP-T 50W	50	0.76	60	8	2 / 5	3500	2050	4	any
SHP-T 70W	70	0.98	82	10	2 / 5	6000	2050	4	any
SHP-T 150W	150	1.80	170	20	2 / 5	14500	2050	4	any
SHP-T 250W	250	3.00	280	40	2 / 5	28000	2050	4	any
SHP-T 400W	392	4.60	432	45	2 / 5	48000	2050	4	any
SHP-T 1000W	960	10.6	1020	100	2 / 5	130000	2050	4	any
SHP 50W/CO//E27	50	0.76	60	8	1	3300	2050	4	any
SHP 70W/CO//E27	70	0.98	82	10	1	5800	2050	4	any
SHP 70W/CL//E27	70	0.98	82	10	1	6000	2050	4	any
SHX 110W E27	110	1.22	130	10	1	8000	2000	4	any
SHX 210W E40	210	2.25	243	18	1	18000	2000	4	any
SHX 350W E40	350	3.60	416	25	1	34500	2000	4	any
SPX ECO ARC 69/108W E27	69	0.82	82	8	1	4300	1800	4	any
SPX ECO ARC 69/108W E27	108	1.20	124	10	1	8800	1900	4	any
SPX ECO ARC 190W E27	205	1.70	226	18	1	19000	1800	4	any
SPX ECO ARC 295W E27	330	2.60	363	25	1	34000	1900	4	any
HSL-SC 50W E27	50	0.61	59	7	1	2000	3400	3	any
HSL-SC 80W E27	80	0.80	90	8	1	4000	3400	3	any
HSL-SC 125W E27	125	1.60	140	10	1	6500	3400	3	any
HSL-SC 250W E40	250	2.13	281	18	1	14000	3400	3	any
HSL-SC 400W E40	400	3.25	451	25	1	24000	3400	3	any

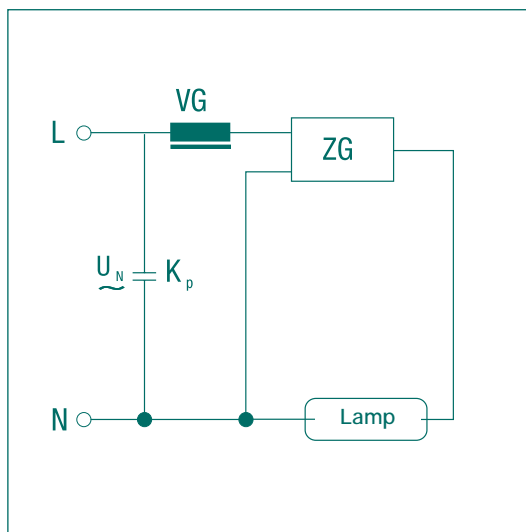
Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (μF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
HSL-BW 50W E27	50	0.61	59	7	1	1800	4000	3	any
HSL-BW 80W E27	80	0.80	90	8	1	3800	4000	3	any
HSL-BW 80W B22-3	80	0.80	90	8	1	3800	4000	3	any
HSL-BW 125W E27	125	1.15	140	10	1	6300	4000	3	any
HSL-BW 125W B22-3	125	1.15	140	10	1	6300	4000	3	any
HSL-BW 250W E40	250	2.13	281	18	1	13000	4000	3	any
HSL-BW 400W E40	400	3.25	451	25	1	22000	3800	3	any
HSL-BW 700W E40	700	5.40	735	40	1	40000	4000	3	any
HSL-BW 1000W E40	1000	7.50	1045	60	1	58000	4000	3	any
HSB-BW 160W 230V E27	160	0.80	160	-	-	3100	3500	2B	vert ± 30°
HSB-BW 250W 230V E40	250	1.20	250	-	-	5600	3500	2B	vert ± 45°
HSB-BW 250W 230V E27	250	1.20	250	-	-	5600	3500	2B	vert ± 45°
HSB-BW 500W 230V E40	500	2.40	500	-	-	14000	3500	2B	any
HSB-BW 160W 240V E27	160	0.80	160	-	-	3100	3500	2B	vert ± 30°
HSB-BW 160W 240V B22	160	0.75	160	-	-	3100	3500	2B	vert ± 30°
HSB-BW 250W 240V E40	250	1.20	250	-	-	5600	3500	2B	vert ± 45°
HSB-BW 500W 240V E40	500	2.20	500	-	-	14000	3500	2B	any
SLP 18W	18	0.35	25	5	4	1800	1800	-	bu ± 110°
SLP 35W	37	0.60	46	20	4	4500	1800	-	bu ± 110°
SLP 55W	56	0.59	77	20	4	7400	1800	-	bu ± 110°
SLP 90W	89	0.94	101	26	4	13000	1800	-	hor ± 20°
SLP 135W	129	0.95	155	45	4	21500	1800	-	hor ± 20°
SLP 180W	180	0.91	211	40	4	33000	1800	-	hor ± 20°

CIRCUIT DIAGRAMS

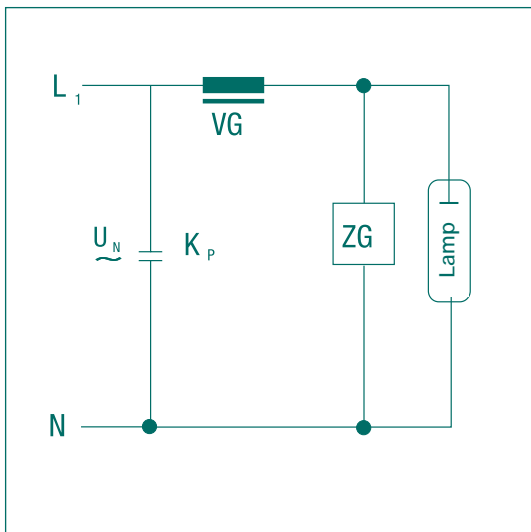
No 1 CROSS-PHASE OPERATION



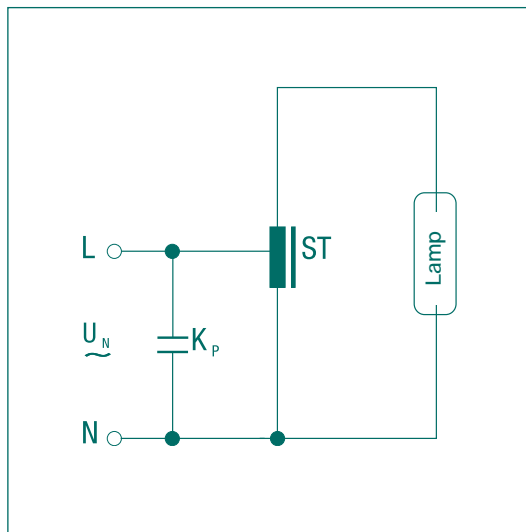
No 2 SINGLE PHASE



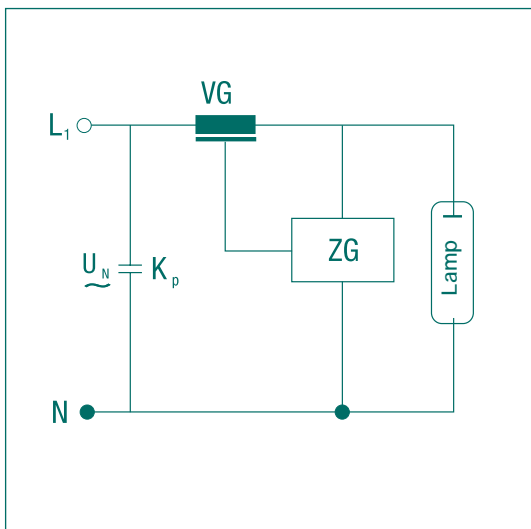
No 3 MONOPULSE IGNITOR STARTING



No 4 SLP CIRCUIT

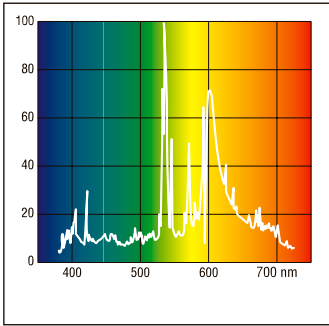


No 5 SLP IGNITOR STARTING

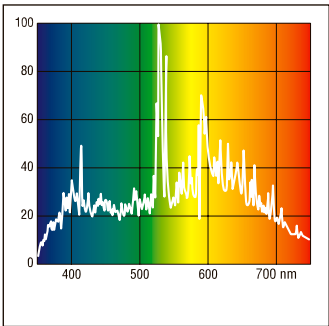


- L Live conductor L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>
- N Neutral conductor
- U<sub>N</sub> power supply voltage 230V ~ (400V ~ for HSI-T 2000V)
- VG ballast
- K<sub>p</sub> lead capacitor
- ZG start-up system
- K<sub>z</sub> start-up capacitor
- ST stray field transformer
- CWA constant wattage autotransformer

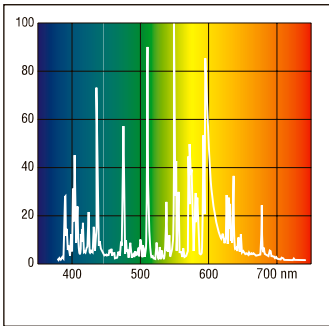
SPECTRAL DISTRIBUTION CURVES



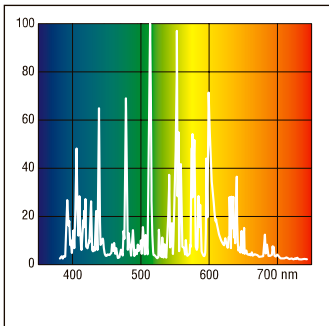
Ceramic Metal Halide: WDL



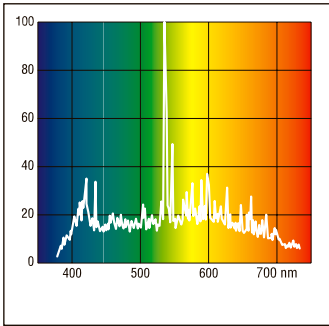
Ceramic Metal Halide: NDL



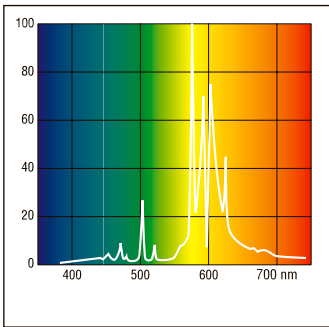
Quartz Metal Halide: WDL



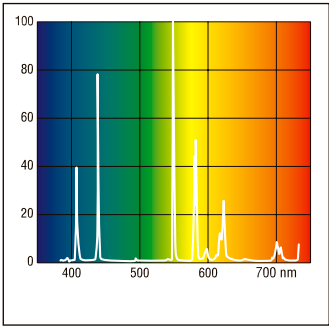
Quartz Metal Halide: NDL



Quartz Metal Halide: Daylight



High Pressure Sodium



High Pressure Mercury

## HID LAMPS COMPARISON TABLE

## Low wattage Metal Halide

Sylvania	Philips	Osram	GE
CDM – TD	CDM – TD	HCI – TS	CMH – TD
CDM – T	CDM – T	HCI – T	CMH – T
CDM – TC	CDM – TC	HCI – TC	CMH – TC
HSI – MP	-	HQI – E	-
HSI – TD	MHN – TD	HQI – TS	ARC / TD
HSI – T	-	HQI – T	ARC / T

## Medium wattage Metal Halide

Sylvania	Philips	Osram	GE
HSI – TSX	-	HQI – T/N	ARC / T / H
HSI – SX	HPI Plus	HQI – E/N	ARC / D / H
HSI – THX	HPI – T	HQI – T/N/SI	-
HSI – HX	HPI Plus	HQI – E/N/SI	-
HSI – HX/I	HPI Plus BUS (-P)	-	-
HSI – T (6 K)	-	HQI – T/D	KRC/T/960

## High wattage Metal Halide

Sylvania	Philips	Osram	GE
HSI – T	HPI – T	HQI – T / N / SN	-
HSI – T / I	-	HQI – T / N	-
HSI – TD / D	-	HQI – TS / D / S	-

## High Pressure Sodium

Sylvania	Philips	Osram	GE
SHP Standard	SON	NAV Standard	Lucalox
SHP Super	SON PLUS	NAV Super	Lucalox HO
SHP Mercury Free	SON Hg FREE	-	-
SHP Twinarc	-	-	-
SHP Standby	-	-	Lucalox Superlife
SHX	SON - H	NAV Plug-In	Lucalox E-Z Lux
SPX Eco Arc	-	-	-

## High Pressure Mercury

Sylvania	Philips	Osram	GE
HSL – BW	HPL – N	HQL	MBF
HSB – BW	ML	HWL	MBTF
HSL - SC	HPL - Comfort	HQL De Luxe	MBF Deluxe

## Low Pressure Sodium

Sylvania	Philips	Osram	GE
SLP	SOX	SOX	SOX

## TROUBLESHOOTING

**General:** When investigating an apparent fault it is imperative for safety reasons that the operating circuit is switched off. Always check the fuse or circuit breaker in the external circuit first. If tripped, reset or replace the fuse cartridge but if the fuse trips out again then it is most likely the fault is in the luminaire (device) or lamp. Check to ensure that the correct lamp has been inserted into the luminaire socket. The ballast maker's label should give the correct information.

Please use the following checklist in order to determine how to rectify the fault:

### A. The lamp will not light or is out

- A1. Check that the supply is switched on and that the external fuse has not tripped. If the fuse trips again then:
- A2. Check that the power factor capacitor has not developed a short circuit condition. You may remove it temporarily to check.
- A3. Check that all wiring insulation is in good condition. An electric strength test with a PAT (portable appliance tester) should be made. Replace any defective wiring. If the lamp still does not start then switch off and verify that all internal wiring connections in the luminaire are properly connected and go to a 2.
- A4. Make sure that there is good 'Earth' continuity between the terminal block and the luminaire frame. Repeat the PAT test and go to 3.
- A5. If no attempt to start the lamp is observed, switch off again and withdraw the device's local fuse, if serviceable. Check or replace the fuse.
- A6. If the lamp still does not start and the operating circuit contains a starter, replace it.
- A7. Isolate the ballast and for choke inductors only perform a continuity check using a multi-meter equipped with a low voltage DC battery. Never 'Megger' test any ballast for any reason. If an open circuit or zero impedance is found then replace the ballast.
- A8. If the lamp still does not start consult the manufacturer.

### B. Lamp does not appear to give its full output

- B1. Ensure the correct lamp is fitted.
- B2. Check the electrical supply voltage and match this to the ballast maker's label information. If ballast taps have been provided make sure the most suitable one has been connected.
- B3. Check that the luminaire is venting properly to avoid heat building up. Many instances of overheating are related to poor design or over-running a luminaire with a lamp and/or ballast combination for which it was never designed. Sometimes restricted ventilation or improper burning position may be the cause. Use all common sense methods to allow the luminaire to thermally stabilise properly. Consult the luminaire manufacturer.

### C. The lamp is not burning in the optimum position in the luminaire/installation

- C1. Consult the manufacturer's data sheets.

### D. Lamp flashes and does not ignite again

- D1. No ballast present - rectify the fault
- D2. Ballast short-circuited - replace the choke
- D3. Check the connections with the manufacturer's label
- D4. Capacitor in parallel with lamp - replace and connect properly.

### E. Lamp does not ignite, but remains in the glow stage

- E1. Lamp damaged after overloading
- E2. Ignitor defective - replace
- E3. Choke open circuit voltage is low - check for correct choke type.

### F. Lamp cycles (ignites but then extinguishes quickly) or shows signs of arc tube blackening

- F1. Lamp is at the end of life - replace as soon as possible
- F2. Luminaire is too hot - go to 3 above
- F3. Line voltage variation is too great - check and consult the electricity supplier.

### G. Lamp develops bulges or crevices in the outer jacket

- G1. Overloaded, check ballast type and all connections. Replace lamp.

### H. Lamps operate with abnormal colour

- H1. Check after 100 hours operation. Then check burning position is within limits prescribed on the data sheets. For HSI-TD lamps check that the arc tube tip-off is not pointing down. If so, then reposition lamps in the lampholder at once before switching on again.

### I. Continuous operation

- I1. It is advisable that for continuous operation, lamps are switched off and on at least once a week.