



Photo Optic Catalogue 2004/2005



SYLVANIA

by Sylvania Lighting International

BRITEARC SINGLE ENDED NON HOT RESTRIKE (BA SE NHR)

BriteArc Single Ended Non Hot Restrike lamps are compact light sources with excellent performance, specially designed for a wide variety of audio-visual applications. The BriteArc lamps are filled with mercury and rare earth elements to obtain a high efficacy and a stable colour with a very good rendering index. They can be re-struck after 10 minutes. These lamps can be operated in any position.



BA 575 SE NHR

BA 1200 SE NHR

FEATURES

- High luminous efficacy
- Low infrared
- Colour stability
- Excellent lumen maintenance
- Physical ruggedness

APPLICATIONS

- Show lighting
- Theatre
- Discotheque lighting
- Follow spots
- Effect lighting
- Architectural

DIRECTIONS FOR USE

- Burning position: universal
- Restrike after 10 minutes
- Only use in closed fixtures
- Can be operated on an electronic power supply or on a magnetic ballast

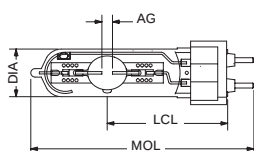


Fig. 1

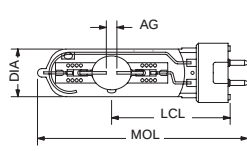


Fig. 2

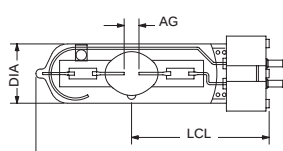


Fig. 3

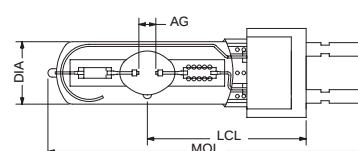


Fig. 4

Item description	Watt	Voltage	Current	Ignition	Average	Replacement	Luminous	Colour	CRI	Total
	W	V	A	Pulse	Life	Time	Flux	Temp.		UV-output
				kV	hrs	hrs	lm	K		W

BA SE NHR

BA 150 SE NHR	150	95	1.80	1.9	750	1000	12000	5600	90	15
BA 400 SE NHR	400	67	6.90	2.2	650	750	33000	6200	92	40
BA 575 SE NHR	575	95	6.95	2.2	750	1000	49000	5600	90	60
BA 700 SE NHR	700	72	11.00	3.4	1000	1200	56000	5600	95	70
BA 1200 SE NHR	1200	100	13.80	2.5	750	1000	110000	6000	95	100

BA SE D (Long Life)

BA 150 SE D	150	95	1.80	3	6000	8000	9300	6200	60	15
BA 200 SE D	200	70	3.30	1.9	2000	2300	13700	5600	70	15
BA 250 SE D	250	95	3.30	1.9	2000	2300	18800	5800	80	18
BA 575 SE D	575	95	6.95	2.2	2000	2500	49000	5600	90	60

Item description	Cap	MOL	Dimensions	Max.bulb	Max. pinch	Figure	Packing	Ordering
		mm	AG Dia LCL	Temp. C°	Temp. C°	Nr.	Quantity	Code
			mm mm mm mm					

BA SE NHR

BA 150 SE NHR	GY9.5	80	5	17	37	700	350	2	10	0023987
BA 400 SE NHR	GX9.5	112	6	23	62	700	350	3	10	0023958
BA 575 SE NHR	GX9.5	125	7	30	65	700	350	3	10	0023960
BA 700 SE NHR	G22	155	8	30	75	700	350	4	10	0023961
BA 1200 SE NHR	G22	175	10	40	85	700	350	4	10	0023935

BA SE D (Long Life)

BA 150 SE D	G12	105	5	23	56	500	350	1	10	0023976
BA 200 SE D	GY9.5	108	5	23	55	500	350	2	10	7220168
BA 250 SE D	GY9.5	108	5	23	55	500	350	2	10	7220169
BA 575 SE D	GX9.5	125	7	30	65	600	350	3	10	0023981

Nominal values measured at rated wattage in horizontal position.

BRITEARC SINGLE ENDED HIGH COLOUR TEMPERATURE (BA/2 SE)

BriteArc Single Ended/2 lamps are compact light sources with a very high colour temperature offering stable crisp bright light during the complete lamp life. They can be re-struck after about 10 minutes. These lamps can be operated in any position.



BA 250/2 SE D 8.5



BA 575/2 SE NHR 8.5

FEATURES

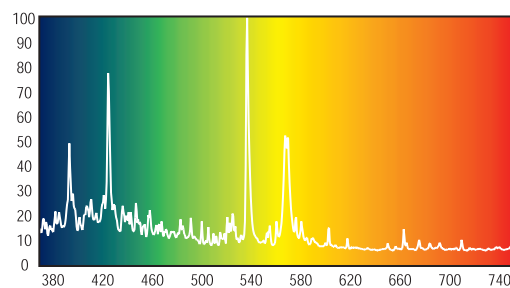
- Crisp bright light
- High luminous efficacy
- Low infrared
- Colour stability
- Excellent lumen maintenance
- Physical ruggedness

APPLICATIONS

- Show lighting
- Theatre
- Discotheque lighting
- Effect lighting

DIRECTIONS FOR USE

- Burning position: universal
- Restrike after 10 minutes
- Only use in closed fixtures
- Can be operated on an electronic power supply or on a magnetic ballast



BA/2 8500 K

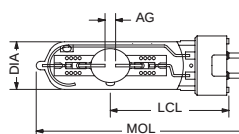


Fig. 1

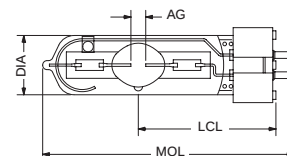


Fig. 2

Item description	Watt W	Voltage V	Current A	Ignition Pulse kV	Average Life hrs	Replacement Time hrs	Luminous Flux lm	Colour Temp. K	CRI	Total UV-output W
BA 250/2 SE D 8.5	250	95	3.30	2.2	2000	2300	18000	8500	65	30
BA 575/2 SE NHR 7.2	575	95	6.95	2.2	1000	1200	45000	7200	85	65
BA 575/2 SE NHR 8.5	575	95	6.95	2.2	1000	1200	44000	8500	80	65

Item description	Cap	Dimensions				Max.bulb Temp. C°	Max. pinch Temp. C°	Figure Nr.	Packing Quantity	Ordering Code
	MOL mm	AG mm	Dia mm	LCL mm						
BA 250/2 SE D 8.5	GY9.5	108	5	23	55	500	350	1	10	0023998
BA 575/2 SE NHR 7.2	GX9.5	125	7	30	65	700	350	2	10	0024002
BA 575/2 SE NHR 8.5	GX9.5	125	7	30	65	700	350	2	10	0024000

Nominal values measured at rated wattage in horizontal position.

BRITEARC SINGLE ENDED HOT RESTRIKE (BA SE HR)

BriteArc Single Ended Hot Restrike lamps are compact light sources, designed for optimum optical efficiency. The BriteArc lamps are filled with mercury and rare earth elements to obtain a high efficacy and a stable colour with a very good rendering index. They can be re-struck at any time with a voltage peak from 25 to 55 kV. These lamps can be operated in any position.



BA 200 SE HR



BA 575 SE HR



BA 1200 SE HR

FEATURES

- High luminous efficacy
- Low infrared
- Colour stability
- Excellent lumen maintenance
- Physical ruggedness
- Hot restrike

APPLICATIONS

- TV-Studio lighting
- Photo studios
- Show lighting
- Theatre
- Follow spots

DIRECTIONS FOR USE

- Burning position: universal
- Only use in closed fixtures
- Can be operated on an electronic power supply or on a magnetic ballast

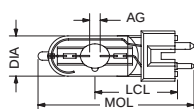


Fig. 1

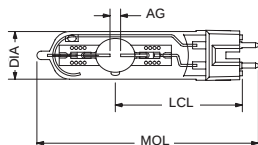


Fig. 2

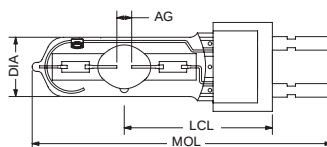


Fig. 3

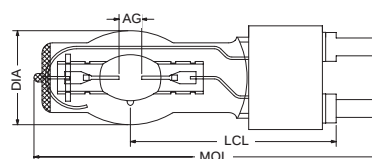


Fig. 5

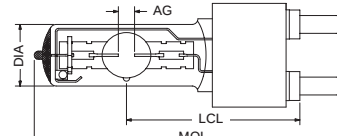


Fig. 4

Item description	Watt W	Voltage V	Current A	Ignition Pulse kV	Average Life hrs	Replacement Time hrs	Luminous Flux lm	Colour Temp. K	CRI	Total UV-output W
BA 200 SE HR	200	70	3.3	25.0	200	450	15000	5600	95	20
BA 400 SE HR	400	67	6.9	25.0	650	750	33000	6200	92	40
BA 575 SE HR	575	95	6.9	25.0	750	1000	49000	5600	90	50
BA 800 SE HR	800	95	8.5	25.0	1000	1500	64000	6000	95	(*)
BA 1200 SE HR	1200	100	13.8	45.0	750	1000	110000	6000	95	100
BA 2500 SE HR	2500	115	25.6	45.0	500	750	240000	6000	95	200

Item description	Cap		Dimensions			Max.bulb Temp. C°	Max. pinch Temp. C°	Figure Nr.	Packing Quantity	Ordering Code
	MOL mm	AG mm	Dia mm	LCL mm						
BA 200 SE HR	GZY9.5	80	5	20	39	700	350	1	10	0023941
BA 400 SE HR	GZZ9.5	110	6	23	60	700	350	2	10	0023883
BA 575 SE HR	G22	145	7	30	70	700	350	3	10	0023932
BA 800 SE HR	G22	145	7	31	70	700	350	3	10	0023992
BA 1200 SE HR	G38	200	10	40	107	700	350	4	10	0023933
BA 2500 SE HR	G38	240	14	60	127	700	450	5	10	0023934

* BA800 SE HR is a UV-stop lamp.

Nominal values measured at rated wattage in horizontal position.

BRITEARC DOUBLE ENDED (BA DE)

BriteArc Double Ended lamps are metal halide light sources with excellent performance, specially designed for a wide variety of audio-visual applications. The BriteArc lamps are filled with mercury and rare earth elements to obtain a high efficacy and a stable colour. They can be re-struck at any time with a voltage peak from 25 to 55 kV.



FEATURES

- High luminous efficacy
- Low infrared
- Colour stability
- Excellent lumen maintenance
- Physical ruggedness
- Hot restrike

APPLICATIONS

- Show lighting
- Theatre
- Discotheque lighting
- Follow spots
- Effect lighting
- Studio lighting

DIRECTIONS FOR USE

- Burning position: universal for 575 W and 1200 W; horizontal plus or minus 30 degrees for 2500 W; horizontal plus or minus 15 degrees for 4000 W, 6000 W and 12000 W
- Only use in closed fixtures
- Can be operated on an electronic power supply or on a magnetic ballast

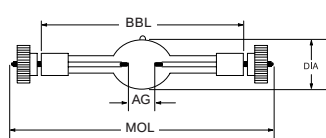


Fig. 1

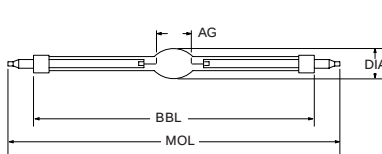


Fig. 2

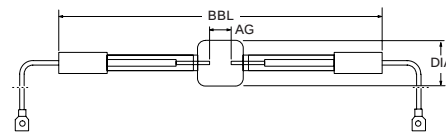


Fig. 3

Item description	Watt W	Voltage V	Current A	Average Life hrs	Replacement Time hrs	Luminous Flux lm	Colour Temp. K	CRI	Total UV-output W
BA 575 DE	575	95	7.0	750	1000	49000	5600	70	70
BA 1200 DE	1200	100	13.8	750	1000	110000	5600	80	140
BA 1200 DE S	1200	100	13.8	750	1000	95000	7200	77	160
BA 2500 DE	2500	115	26.6	500	750	240000	5600	90	310
BA 4000 DE	4000	200	24.0	500	750	380000	6000	85	640
BA 6000 DE	6000	123	55.0	350	450	570000	6000	90	1000
BA 12000 DE	12000	160	82.0	500	550	1100000	6000	90	2200

Item description	Cap	MOL mm	Dimensions AG mm	Dia mm	BBL mm	Max.bulb Temp. C°	Max. pinch Temp. C°	Figure Nr.	Packing Quantity	Ordering Code
BA 575 DE	SFc10-4	136	7	21	115	800	230	1	10	0023921
BA 1200 DE	SFc15.5-6	220	10	28	180	800	230	1	10	0023922
BA 1200 DE S	SFc10-4*	136	7	21	115	800	230	1	10	0023996
BA 2500 DE	SFa21-12	355	20.5	32	290	800	230	2	1	0023923
BA 4000 DE	SFa21-21	405	34	40	340	800	230	2	1	0023924
BA 6000 DE	S25.5X60		22	52	450	900	230	3	1	0023925
BA 12000 DE	S30X70		32	65	470	900	230	3	1	0023927

* Pre-focused base

Nominal values measured at rated wattage in horizontal position.

SYLVANIA

BRITEARC SHORT ARC (BA SA)

BriteArc Short Arc Lamps are very compact high performance lamps, designed for the highest optical efficiency. These lamps can be operated in any position.



BA 600 DE SA



BA 700 SE SA

FEATURES

- Highest optical efficiency
- Low infrared
- Colour stability
- Excellent lumen maintenance
- Physical ruggedness

APPLICATIONS

- Show lighting
- Theatre
- Discotheque lighting
- Effect lighting
- Studio lighting

DIRECTIONS FOR USE

- Burning position: universal
- Only use in closed fixtures
- Can be operated on an electronic power supply or on a magnetic ballast

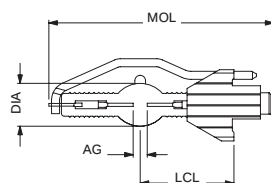


Fig. 1

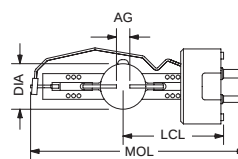


Fig. 2

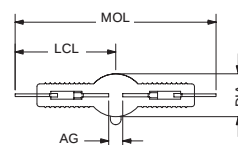


Fig. 3

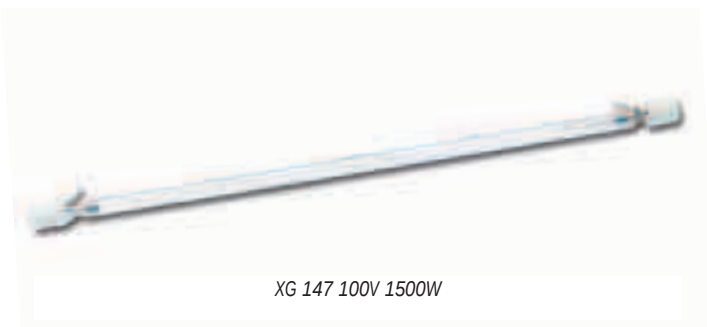
Item description	Watt W	Voltage V	Current A	Ignition Pulse kV	Average Life hrs	Replacement Time hrs	Luminous Flux lm	Colour Temp. K	CRI	Total UV-output W
BA 600 SE SA (*)	600	95	6.3	3	300	350	48000	5300	90	50
BA 700 SE SA	700	70	11.0	2.5	500	700	50000	6600	75	80
BA 600 DE SA (*)	600	95	7.0	3	300	350	48000	5300	90	50

Item description	Cap	Dimensions				Max.bulb Temp. C°	Max. pinch Temp. C°	Figure Nr.	Packing Quantity	Ordering Code
		MOL mm	AG mm	Dia mm	LCL mm					
BA 600 SE SA (*)	FaX1.5	84	5	16	35	900	350	1	10	0023965
BA 700 SE SA	GY9.5	85	4	17	39	1000	450	2	10	0024003
BA 600 DE SA (*)	Mo pins	75	5	16		900	350	3	10	0023966

* Can be re-struck any time with a voltage peak of 25 kV.
Nominal values measured at rated wattage in horizontal position.

PULSED XENON

Instant ignition lamps creating a strobe effect.



FEATURES

- Near continuous spectrum ranging from 200-1000nm
- Colour temperature: 5400K. Xenon spectrum, similar to daylight
- Instant ignition, no warming up time
- Can be dimmed

APPLICATIONS

- Strobe lights in disco's

DIRECTIONS FOR USE

- Operate on a semi resonant ballast
- Ignitor providing a starting pulse of 10kV required
- Forced –air cooling needed
- Due to the high starting voltage, use only insulated lampholders
- The UV radiation must be cut out with a filter glass

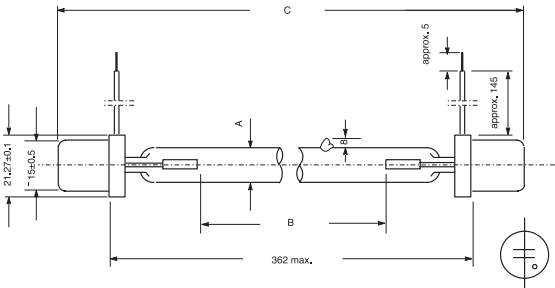


Fig. 1

Item description	Voltage	Watt	Base	Burning Position	Rated Av.Life h	Lamp Current A
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XG 147 100V 1500W	100	1500	CAP15.8/14.7CABLE	Any	500(1)	15
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Item description	Dimensions (mm)			Max.perm. base temp. C	Max.perm. scal temp. C	Figure Nr.	Packing Quantity	Ordering Code
	A Diameter	B Arc Gap	C MOL					

XG 147 100V 1500W	12	307	391	180	350	1	1	9023475
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(1) At continuous operation

DICHROIC REFLECTOR 50 MM GZ6.35



EFP 12V 100W

FEATURES

- Compact filament
- Highly efficient reflector/lamp combination
- Dichroic reflector, which radiates 75% of heat rearwards

APPLICATIONS

- Film projectors
- Fiber optics
- Enlargers
- Overhead projectors
- Slide projectors

DIRECTIONS FOR USE

- No dimming lower than 10% of rated voltage

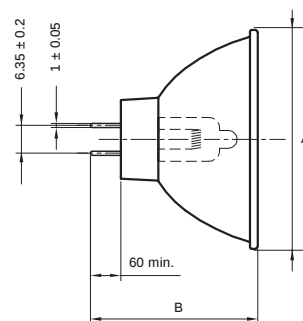


Fig. 1

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions		Working distance	Colour Temp.	Rated Av. Life
						A mm	B mm	mm	K	h
EFM 8V 50W	EFM	A1/229	GZ6.35	8	50	50	42	32	3400	50
EFN 12V 75W	EFN	A1/230	GZ6.35	12	75	50	42	32	3400	50
EFP 12V 100W	EFP	A1/231	GZ6.35	12	100	50	42	32	3400	50
EFR 15V 150W	EFR	A1/232	GZ6.35	15	150	50	42	32	3400	50

Item description	Reflector Surface	Burning Position	Max. Perm. pinch temp. degr.C	Max. Perm. bulb temp. degr.C	Light Output lm	Figure Nr.	Packing Quantity	Ordering Code
EFM 8V 50W	Smooth	S105	400	900	380	1	50	0061341
EFN 12V 75W	Smooth	S105	400	900	550	1	50	0061342
EFP 12V 100W	Smooth	S105	400	900	650	1	50	0061344
EFR 15V 150W	Smooth	S105	400	900	800	1	50	0061350

DICHROIC REFLECTOR 42/50 MM GX5.3

EKE 21V 150W



ELC 24V 250W



EXR 82V 300W

FEATURES

- Compact filament
- Perfect alignment of the burner
- Highly efficient reflector/lamp combination
- Dichroic reflector, which radiates 75% of heat rearwards

APPLICATIONS

- Microfilm readers
- Medical equipment
- Fiber optic applications
- Enlargers
- Overhead projectors
- Slide projectors

DIRECTIONS FOR USE

- No dimming lower than 10% of rated voltage

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions		Filament Type	Working distance	Colour Temp.	Rated Av. Life
						A	B		mm	K	h
						mm	mm				
DED 13.8V 85W	DED		GX5.3	13.8	85	50.7	44.5	C-8	165	3150	1000
DDM 19V 80W	DDM		GX5.3	19	80	50.7	44.5	CC-6	152.4	3350	50
DDS 21V 80W	DDS		GX5.3	21	80	50.7	44.5	CC-6	165	3125	1000
DDL 20V 150W	DDL		GX5.3	20	150	50.7	44.5	CC-6	194.5	3150	500
EJM 21V 150W	EJM		GX5.3	21	150	50.7	44.5	CC-6	38.1	3400	40
EJV 21V 150W	EJV		GX5.3	21	150	50.7	44.5	CC-6	44.5	3400	40
ELD 21V 150W	ELD		GX5.3	21	150	50.7	44.5	CC-6	165	3400	40
EKE 21V 150W	EKE		GX5.3	21	150	50.7	44.5	CC-6	44.5	3250	200
EJA 21V 150W	EJA		GX5.3	21	150	50.7	44.5	CC-6	28	3400	40
EWf 24V 200W	EWf		GX5.3	24	200	50.7	44.5	CC-8	298.5	3350	50
EJL 24V 200W	EJL	A1/252	GX5.3	24	200	50.7	44.5	CC-6	31.7	3400	50
ELC 24V 250W	ELC	A1/259	GX5.3	24	250	50.7	44.5	CC-6	31.7	3400	50
ELC 24V 250W 500H	ELC/5H		GX5.3	24	250	50.7	44.5	CC-6	31.8	3400	500
EXY 82V 250W	EXY		GX5.3	82	250	42	44.5	CC-8	152.4	3200	250
EXR 82V 300W	EXR		GX5.3	82	300	42	44.5	CC-8	152.4	3350	35
FHS 82V 300W	FHS		GX5.3	82	300	42	44.5	CC-8	152.4	3300	70

DICHROIC REFLECTOR 42/50 MM GX5.3

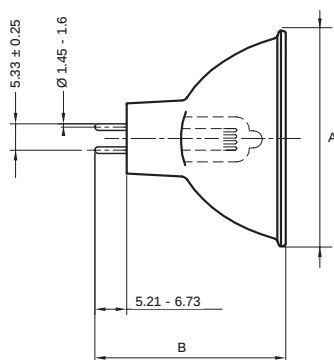


Fig. 1

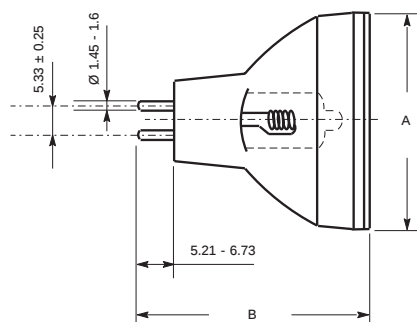
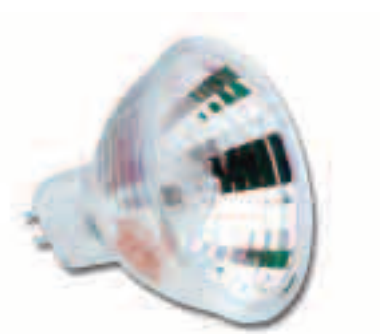


Fig. 2

Item description	Reflector Surface	Burning Position	Max.perm. pinch temp. degr.C	Max.perm. bulb temp. degr.C	Min.centre intensity lux	Corner centre ratio %	Figure Nr.	Packing Quantity	Ordering Code
DED 13.8V 85W	Smooth	S105	350	900	1000	75	1	10	9060967
DDM 19V 80W	Faceted	S90	350	900	680	15	1	10	9060954
DDS 21V 80W	Faceted	S105	350	900	250	50	1	10	9060668
DDL 20V 150W	Faceted	S105	350	900	400	90	1	10	9060984
EJM 21V 150W	Smooth	S90	400	900	1200	50	1	10	9061181
EJV 21V 150W	Smooth	S90	400	900	1500	40	1	10	9060833
ELD 21V 150W	Stippled	S90	400	900	320	30	1	10	9060957
EKE 21V 150W	Smooth	S90	400	900	750	40	1	10	9060943
EJA 21V 150W	Smooth	S90	400	900	1200	50	1	10	9060921
EWf 24V 200W	Faceted	S90	400	900	800	32	1	10	9060890
EJL 24V 200W	Smooth	S90	400	900	1100	50	1	100	0061011
ELC 24V 250W	Smooth	S90	400	900	1500	50	1	100	0061740
ELC 24V 250W 500H	Smooth	S90	350	900	960	50	1	100	0061741
EXY 82V 250W	Faceted	S90	350	900	610	46	2	10	9061182
EXR 82V 300W	Faceted	S90	400	900	1100	46	2	10	9061039
FHS 82V 300W	Faceted	S90	400	900	1000	46	2	10	9060850

DICHROIC REFLECTOR 50 MM GY5.3



ENH 120V 250W

FEATURES

- Compact filament
- Perfect alignment of the burner
- Highly efficient reflector/lamp combination
- Dichroic reflector, which radiates 75% of heat rearwards

APPLICATIONS

- Microfilm readers
- Medical equipment
- Fiber optic applications
- Enlargers
- Overhead projectors
- Slide projectors

DIRECTIONS FOR USE

- No dimming lower than 10% of rated voltage

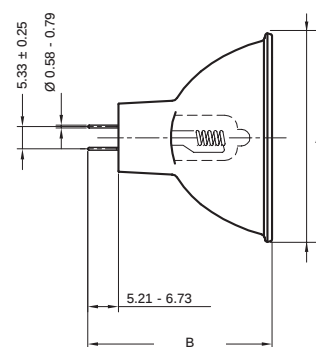


Fig. 1

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions A mm	Dimensions B mm	Filament Type	Working distance mm	Colour Temp. K	Rated Av.Life h
EWV 82V 250W	EWV		GY5.3	82	250	50.7	44.5	CC-8	298.5	3300	50
ENX 82V 360W	ENX		GY5.3	82	360	50.7	44.5	CC-8	298.5	3300	75
FXL 82V 410W	FXL		GY5.3	82	410	50.7	44.5	CC-8	298.5	3300	50
JCR 100V 300W			GY5.3	100	300	50.7	44.5	CC-8	298.5	3200	50
ESD 120V 150W	ESD		GY5.3	120	150	50.7	44.5	CC-8	44.5		12
ENH 120V 250W	ENH		GY5.3	120	250	50.7	44.5	CC-8	152.4	3250	175
ELH 120V 300W	ELH		GY5.3	120	300	50.7	44.5	CC-8	152.4	3350	35
ENG 120V 300W	ENG		GY5.3	120	300	50.7	44.5	CC-8	152.4	3450	15

Item description	Reflector Surface	Burning Position	Max. Perm. pinch temp. degr.C	Max. Perm. bulb temp. degr.C	Min.Centre intensity lux	Corner centre ratio %	Figure Nr.	Packing Quantity	Ordering Code
EWV 82V 250W	Faceted	S90	400	900	1250	40	1	10	9000017
ENX 82V 360W	Faceted	S90	400	900	4300	25	1	10	9060846
FXL 82V 410W	Faceted	S90	400	900	4700	34	1	10	9061768
JCR 100V 300W	Faceted	S90	400	900	5000	20	1	10	9061063
ESD 120V 150W	Faceted	S90	400	900			1	10	9061358
ENH 120V 250W	Faceted	S90	400	900	800	40	1	10	9060940
ELH 120V 300W	Faceted	S90	400	900	850	45	1	10	9060813
ENG 120V 300W	Stippled	S90	400	900	1350	35	1	10	9061183

DICHROIC REFLECTOR 35/44/57 MM



DNF 21V 150W



EMM 24V 250W



FLT 13.8V 25W

FEATURES

- Compact filament
- Perfect alignment of the burner
- Highly efficient reflector/lamp combination
- Dichroic reflector, which radiates 75% of heat backwards

APPLICATIONS

- Film projectors
- Microfilm readers
- Medical equipment
- Enlargers
- Overhead projectors
- Slide projectors

DIRECTIONS FOR USE

- No dimming lower than 10% of rated voltage.

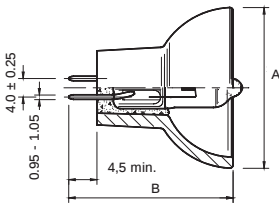


Fig. 1

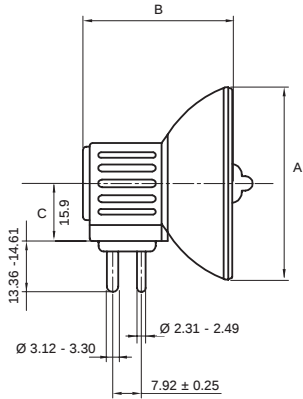


Fig. 2

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions			Filament Type	Working distance mm	Colour Temp. K	Rated Av. Life h
						A mm	B mm	C mm				
DNF 21V 150W	DNF	A1/266	GX7.9	21	150	57.2	45.1	15.9	CC-6	69.1	3400	25
EMM/EKS 24V 250W	EMM/EKS	A1/258	GX7.9	24	250	44.5	47.5	15.9	CC-6	65.8	3400	50
FLT 13.8V 25W/S	FLT		GZ4	13.8	25	35.3	38		CC-6	51.5	3100	400

Item description	Reflector Surface	Burning Position	Max. Perm. pinch temp. degr.C	Max. Perm. bulb temp. degr.C	Min. Centre intensity lux	Corner centre ratio %	Figure Nr.	Packing Quantity	Ordering Code
DNF 21V 150W	Smooth	P4	400	900	2100	50	2	10	9060743
EMM/EKS 24V 250W	Smooth	P4	400	900	750	55	2	10	9060918
FLT 13.8V 25W/S	Faceted	S105	350	900	1300	700	1	10	9060877

CAPSULE LAMPS LOW VOLTAGE



FCS 24V 150W G6.35



FCR 12V 100W



FDS 24V 150W

FEATURES

- Low voltage, quartz halogen lamp
- Flat filament
- Constant high light output
- Pre-focused based lamps have a better defined filament position

APPLICATIONS

- Studio lighting
- Film lighting
- Theatre lighting
- Microfilm readers
- Film projectors
- Overhead projectors
- Slide projectors

DIRECTIONS FOR USE

- No dimming lower than 10% of rated voltage

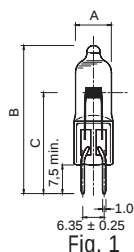


Fig. 1

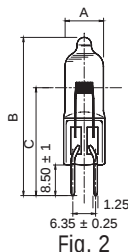


Fig. 2

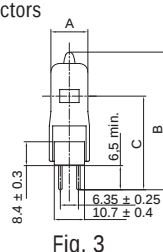


Fig. 3

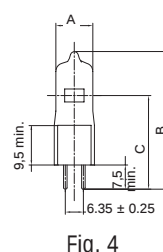


Fig. 4

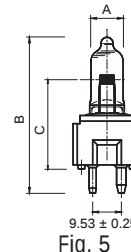
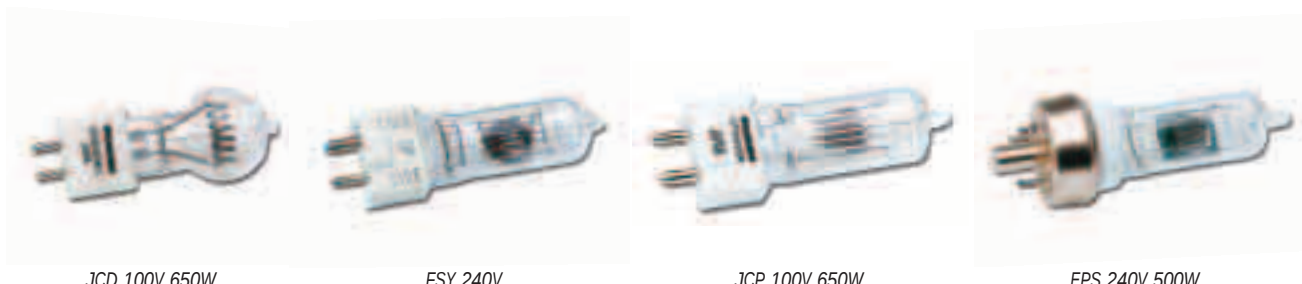


Fig. 5

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions			Filament Type	Filament Dimensions	
						A mm	B mm	C mm		W mm	H mm
EVB/BRJ 15V 150W	EVB/BRJ	A1/234	G6.35	15	150	11.5	44	30	CF-6	5.0	3.0
FCS 24V 150W	FCS	A1/216	G6.35	24	150	13.5	50	32	CF-6	6.1	3.0
EHJ 24V 250W	EHJ	A1/223	G6.35	24	250	13.5	55	33	CF-6	7.1	3.5
FGX 24V 250W	FGX	M33	G6.35	24	250	13.5	55	33	CF-6	10.0	5.0
EWX 24V 250W	EWX		G6.35	24	250	11.5	44	29	CC	5.6	3.15
FNT 24V 275W	FNT		G6.35	24	275	13.5	55	33	CF-6	7.2	3.5
EVD 36V 400W	EVD	A1/239	G6.35	36	400	18.0	60	36	CF-6	9.5	4.7
FCR 12V 100W	FCR	A1/215	GY6.35	12	100	11.5	44	30	CF-6	6.7	4.6
FLW 24V 300W	FLW		GY6.35	24	300	13.5	55	33	CF-6	6.7	4.6
JC 24V 300W			GY6.35	24	300	13.5	55	33	CF-6	6.7	4.6
FDS/FDT 24V 150W	FDS/FDT	A1/262	GZ9.5	24	150	13.5	57	27	CF-6	5.8	2.9

Item description	Approx. Lumens lm	Colour Temp. K	Rated Av.Life h	Burning Position	Max. pinch temp. degr.C	Max. bulb temp. degr.C	Figure Nr.	Packing Quantity	Ordering Code
EVB/BRJ 15V 150W	5000	3400	50	S90	400	900	1	10	0061303
FCS 24V 150W	6000	3400	50	S90	400	900	1	10	0061374
EHJ 24V 250W	10000	3400	50	S90	400	900	1	10	0061367
FGX 24V 250W	8400	3200	300	S90	350	900	1	10	0061465
EWX 24V 250W	8200	3400	50	S90	400	900	1	10	0061494
FNT 24V 275W	10000	3400	75	S90	400	900	1	10	9061150
EVD 36V 400W	16000	3400	50	S90	400	900	1	10	9060826
FCR 12V 100W	3400	3400	50	S90	400	900	2	10	0061373
FLW 24V 300W	10450	3500	50	S90	400	900	3	10	9061142
JC 24V 300W	9900	3400	50	S90	400	900	4	10	9061010
FDS/FDT 24V 150W	5000	3400	50	S90	400	900	5	10	9060924

CAPSULE LAMPS MAINS VOLTAGE



FEATURES

- Compact quartz halogen lamp
- Maximum light output, but relatively low life
- Pre-focused based lamps have a better defined filament position

APPLICATIONS

- Overhead projectors
- Slide projectors
- Photo printers

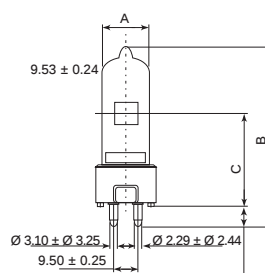


Fig. 6

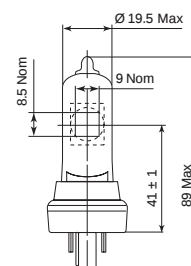


Fig. 7

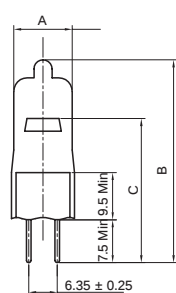


Fig. 1

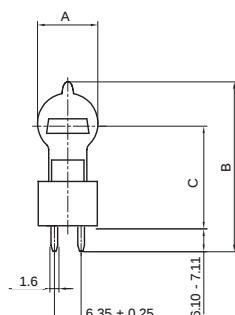


Fig. 2

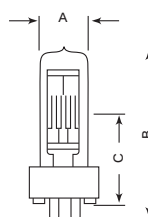


Fig. 3

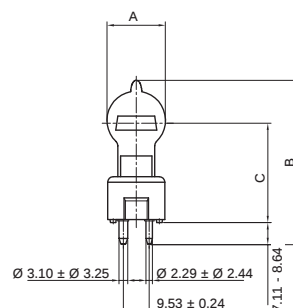


Fig. 4

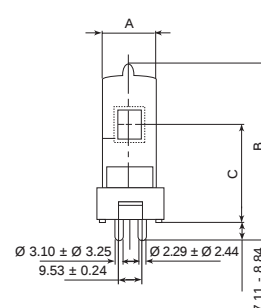


Fig. 5

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions			Filament Type	Dimensions	
						A mm	B mm	C mm		W mm	H mm
ESY 100V 150W	ESY		G6.35	100	150	13.5	50	32	CC-6	8.1	2.8
JCD 100V 650W			G6.35	100	650	22.0	63	36.5	CC-6	14.0	5.3
FSY 240V 400W	FSY		GY9.5	240	400	20.0	77	36.5	C-13D	10.7	12.2
DYS/DYV 120V 600W	DYS/DYV	A1/264	GY9.5	120	600	22.0	63	36.5	CC-6	15.0	5.2
BVA 120V 900W	BVA		GY9.5	120	900	23.0	95	44.5	C-13D	10.5	12.2
JCP 100V 650W			GY9.5	100	650	18.0	76	36.5	C-13D	8.6	8.7
EPS 240V 500W	EPS	A1/268	G17t-7	240	500	19.5	89	41	C-13D	9.0	8.6

Item description	Approx. Lumens lm	Colour Temp. K	Rated Av.Life h	Burning Position	Max. pinch temp. degr.C	Max. bulb temp. degr.C	Figure Nr.	Packing Quantity	Ordering Code
ESY 100V 150W	3300	3050	200	S10	400	900	1	10	9060962
JCD 100V 650W	17500	3200	150	ANY	400	900	2	10	9061060
FSY 240V 400W	(1)	3200	75	S90	400	900	3	24	9060889
DYS/DYV 120V 600W	17000	3200	75	S90	400	900	4	10	9060779
BVA 120V 900W	(1)	3300	75	S90	400	900	5	10	9061306
JCP 100V 650W	18750	3300	75	ANY	400	900	6	10	9061018
EPS 240V 500W	(1)	3250	50	S90	400	900	7	10	9060927

STUDIO/FILM DOUBLE ENDED

Mains voltage double ended halogen lamps mainly used in studio and film.



DXX 240V 800W



FEX 240V 2000W

FEATURES

- High constant light output
- High colour temperature

APPLICATIONS

- Electronic News Gathering (ENG)
- Studio lighting
- Film lighting
- Overhead projectors (FAD type)

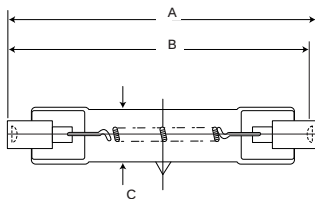


Fig. 1

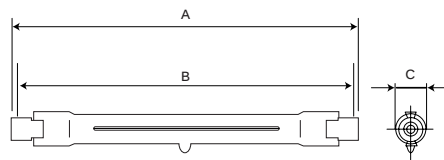


Fig. 2

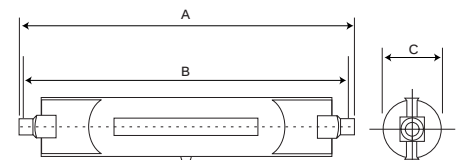


Fig. 3

Item description	ANSI	LIF	Voltage	Watt	Base	Dimensions			Rated Av.Life h
						A max mm	B mm	C mm	
FAD 118V 650W	FAD	P2/6	118	650	R7s	80.3	74.9	14	100
DXX 240V 800W	DXX	P2/13	240	800	R7s	80.3	74.9	14	75
FDG 230V 1000W	FDG	P1/12	230	1000	R7s	127.1	121.7	12	15
EME 230V 800W	EME	P2/11	230	800	R7s	119.6	114.2	12	150
FEX 230V 2000W	FEX	P2/27	230	2000	RX7s	141.5	138.1	28	300

Item description	Filament Type	Lumen Output Lm	Colour Temp. K	Burning Position	Max.Permissible pinch temp.degr.C	Figure Nr.	Packing Quantity	Ordering Code
FAD 118V 650W	CC-8	16500	3200	P4	400	1	50	0061371
DXX 240V 800W	CC-8	20000	3200	P15	400	1	50	0061321
FDG 230V 1000W	CC-8	33000	3400	ANY	450	2	10	0061379
EME 230V 800	CC-8	20000	3200	PIS	400	2	10	9060822
FEX 230V 2000W	CC-8	50000	3200	ANY	400	3	10	0060884

CC= Coiled Coil • SC= Single Coil

SYLVANIA

STUDIO/FILM SINGLE ENDED

Mains voltage halogen lamps with a grid filament in bi-plane for studio and film lighting applications.



CP40-FKJ 240V 1000W



CP70-FVB 240V 1000W



CP82-FRJ 240V 500W

FEATURES

- High light output from a compact filament source
- Compact square filament design
- Colour temperature: 3200K
- Vibration proof

APPLICATIONS

- Studio lighting
- Disco lighting
- Film lighting

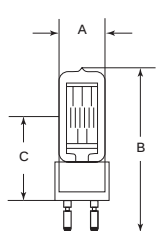


Fig. 1

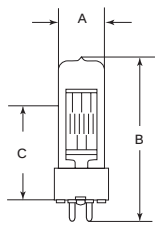


Fig. 2

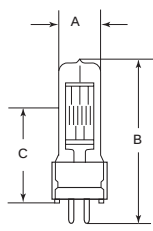


Fig. 3

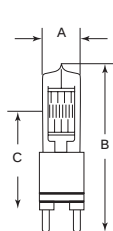


Fig. 4

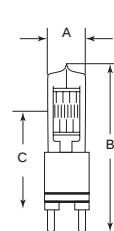


Fig. 5

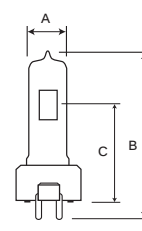


Fig. 6

Item description	ANSI	LIF	Voltage	Watt	Base	Dimensions		
						Diameter A (mm)	MOL B (mm)	LCL C (mm)
FKJ CP40 240V 1000W	FKJ	CP40/CP71	240	1000	G22	35	140	63.5
FKK CP41 240V 2000W	FKK/FKP	CP41/CP73	240	2000	G38	35	210	127.0
FTL CP43 240V 2000W	FTL	CP43/CP72	240	2000	GY16	35	145	70.0
FVB CP70 240V 1000W	FVB	CP70/CP24	240	1000	GX9.5	26	110	55.0
FEP CP77 240V 1000W	FEP	CP77	240	1000	G9.5	20	101	60.5
FSK CP81 240V 300W	FSK	CP81	240	300	GY9.5	18	90	46.3
FRJ CP82 240V 500W	FRJ	CP82	240	500	GY9.5	18	90	46.3
FRM CP89 240V 650W	FRM	CP89	240	650	GY9.5	23	90	46.5

Item description	Filament Type	Filament dimensions		Lumen Output lm	Rated Av.Life h	Burning Position	Max.Perm. pinch temp. degr.C	Figure Nr.	Packing Quantity	Ordering Code
		W mm	H mm							
FKJ CP40 240V 1000W	BP	13	15	26000	200	S90	400	1	20	9061116
FKK CP41 240V 2000W	BP	20	19	52000	400	S90	400	4	1	9061118
FTL CP43 240V 2000W	BP	20	19	52000	400	S90	400	3	20	9061119
FVB CP70 240V 1000W	BP	13	15	26000	200	S90	400	2	20	9061121
FEP CP77 240V 1000W	CC	6	23	26000	250	ANY	500	5	10	9061385
FSK CP81 240V 300W	M	8	13	7050	150	ANY	400	6	10	9061122
FRJ CP82 240V 500W	M	8	18	13500	150	ANY	400	6	10	9061124
FRM CP89 240V 650W	BP	10	10	16250	150	S90	400	6	1	9061126

STAGE/THEATRE SINGLE ENDED

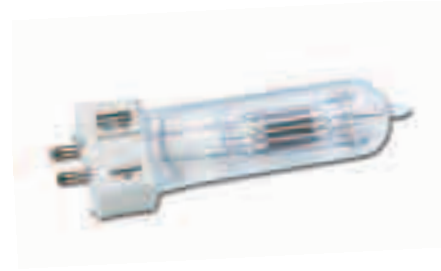
Mains voltage single ended halogen lamps for stage and theatre.



GCJ 240V 500W



FWR 240V 1000W



FWT 240V 1200W

FEATURES

- Compact filament configuration resulting in more light emitted from the focal point
- Longer life than studio and film lamps

APPLICATIONS

- Stage and theatre
- Effect lighting

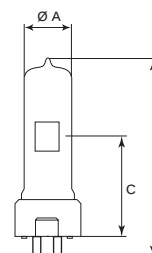


Fig. 1

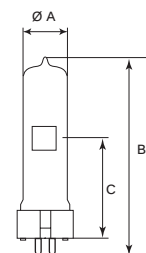


Fig. 2

Item description	ANSI	LIF	Voltage	Watt	Base	Dimensions		
						A mm	B mm	C mm
GCJ T25 240V 500W	GCJ/GCW	T25/T18	240	500	GY9.5	23	46.5	90
GCL T27 240V 650W	GCL/GCS	T27/T26	240	650	GY9.5	23	46.5	90
FWR T19 240V 1000W	FWR	T19/T11	240	1000	GX9.5	26	55	110
FWT T29 240V 1200W	FWT	T29	240	1200	GX9.5	27	67	125

Item description	Filament dimensions			Lumen Output lm	Rated Av.Life h	Burning Position	Max.Perm. pinch temp. degr.C	Figure Nr.	Packing Quantity	Ordering Code
	Type	W mm	H mm							
GCJ T25 240V 500W	BP	10	10	11000	300	S90	400	1	25	9061542
GCL T27 240V 650W	BP	10	10	14500	400	S90	400	1	25	9061545
FWR T19 240V 1000W	BP	15	13	20500	750	S90	350	2	20	9061548
FWT T29 240V 1200W	BP	15	13	28600	400	S90	350	2	20	9061551

BP=Biplane

STUDIO U-SHAPED

Mains voltage U-shaped halogen lamps mainly used in TV and photo studios.



DJE 230V 1000W



FHB 230V 1000W

FEATURES

- U-shaped quartz halogen lamp
- Single coil construction
- Multiple filament supports
- High resistance against vibration

APPLICATIONS

- Studio
- Film
- Photography

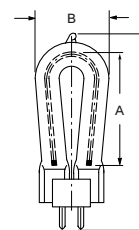


Fig. 1

Item description	ANSI	LIF	Base	Voltage	Watt	Dimensions			
						A mm	B mm	C mm	D mm
EWZ 110V 850W	EWZ		GX 6.35	110V	850W	30.0	24	65	9.5
DJE 230V 1000W	DJE		GX 6.35	230V	1000W	38.5	24	75	9.5
FHB 230V 1000W	FHB		GX 6.35	230V	1000W	30.0	24	65	9.5
FHG 230V 1250W	FHG		GX 6.35	230V	1250W	38.5	24	75	9.5
230V 1250W			GX 6.35	230V	1250W	38.5	24	75	9.5
EYN 240V 650W	EYN		GX 6.35	240V	650W	30.0	24	65	9.5
EYM 240V 1000W	EYM		GX 6.35	240V	1000W	38.5	24	75	9.5
DJC 240V 1000W	DJC		GX 6.35	240V	1000W	30.0	24	65	9.5

Item description	Lumen Output Lm	Rated Av.Life h	Colour Temperature K	Burning Position	Max.Perm. pinch temp. degr.C	Figure Nr.	Packing Quantity	Ordering Code
EWZ 110V 850W	23000	75	3300	BD +- 90°	400	1	50	0061735
DJE 230V 1000W	2600	75	3200	BD +- 90°	400	1	50	0061473
FHB 230V 1000W	33000	15	3400	BD +- 90°	400	1	50	0061391
FHG 230V 1250W	40000	15	3400	BD +- 90°	400	1	50	0061395
230V 1250W	35500	75	3200	BD +- 90°	400	1	50	0061510
EYN 240V 650W	17300	50	3300	BD +- 90°	400	1	50	0061523
EYM 240V 1000W	28300	75	3300	BD +- 90°	400	1	50	0061520
DJC 240V 1000W	3300	15	3400	BD +- 90°	400	1	50	0061458

CONVENTIONAL PROJECTION BA15S (BLUE TOP)



240V 100W BA1



240V 150W BA



FWT 240V 1200W

FEATURES

- Closely-specified colour temperatures
- Tight beam control
- Pre-focused bases allow lamp replacement without adjustment
- High resistance against vibration

APPLICATIONS

- Theatre lighting
- Film projectors
- Slide projectors

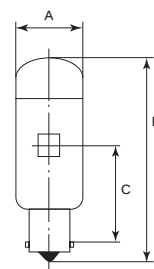


Fig. 1

Item description	ANSI	LIF	Voltage	Watt	Dimensions			Filament Type
					A mm	B mm	C mm	
BXT 12V 100W	BXT	A1/186	12V	100W	25	78	35	CF-6
CJW/CJT 230V 100W	CJW/CJT	A1/021	230V	100W	25	78	35	CC-13
CJW/CJT 240V 100W	CJW/CJT	A1/021	240V	100W	25	78	35	CC-13
CKK 230V 150W	CKK	A1/167	230V	150W	25	90	35	CC-13
CKK 240V 150W	CKK	A1/167	240V	150W	25	90	35	CC-13
CNP 230V 300W	CNP	A1/037	230V	300W	27	105	35	CC-13
BEL 240V 300W	BEL	A1/183	240V	300W	29.5	81	35	CC-13

Item description	Base	Approx. Lumens lm	Colour Temp. K	Rated Av.Life h	Burning Position	Figure Nr.	Packing Quantity	Ordering Code
BXT 12V 100W	Ba15s	2800	3250	25	BD	1	25	9061663
CJW/CJT 230V 100W	Ba15s	1500	2870	50	BD	1	25	9061619
CJW/CJT 240V 100W	Ba15s	1500	2870	50	BD	1	25	9060629
CKK 230V 150W	Ba15s	2700	2920	50	BD	1	25	9061646
CKK 240V 150W	Ba15s	2700	2920	50	BD	1	25	9061051
CNP 230V 300W	Ba15s	6600	3050	25	BD	1	25	9060623
BEL 240V 300W	Ba15s	6600	3050	25	BD	1	25	9060560

CONVENTIONAL PROJECTION G17Q-7/P30S



CSF 240V 300W



8V 50W

FEATURES

- Closely-specified colour temperatures
- Tight beam control
- Pre-focused bases allow lamp replacement without adjustment
- High resistance against vibration

APPLICATIONS

- Theatre lighting
- Film projectors
- Slide projectors

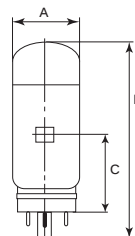


Fig. 1

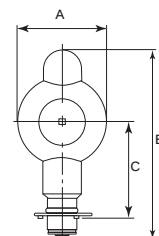


Fig. 2

Item description	ANSI	LIF	Voltage	Watt	Base	Dimensions			Filament Type
						A mm	B mm	C mm	
CYN 24V 150W	CYN	A1/212	24	150	GY17q-7	32	103	39.7	CF-6
CTD 230V 150W	CTD	A1/182	230	150	G17q-7	28.5	79	33.4	CC-13
CTD 240V 150W	CTD	A1/182	240	150	G17q-7	28.5	79	33.4	CC-13
CSF 230V 300W	CSF	A1/178	230	300	G17q-7	32	103	39.7	CC-13
CSF 240V 300W	CSF	A1/178	240	300	G17q-7	32	103	39.7	CC-13
CXR/CXL 8V 50W	CXR/CXL	A1/017	8	50	P30s	43	96	47.0	C-6

Item description	Approx. Lumens lm	Colour Temp. K	Rated Av.Life h	Burning Position	Figure Nr.	Packing Quantity	Ordering Code
CYN 24V 150W	4350	3300	25	BD	1	25	9061676
CTD 230V 150W	3000	3000	25	BD	1	25	9061656
CTD 240V 150W	3000	3000	25	BD	1	25	9060633
CSF 230V 300W	6600	3050	25	BD	1	25	9061652
CSF 240V 300W	6600	3050	25	BD	1	25	9061052
CXR/CXL 8V 50W	36	3200	25	BD	2	25	9061617

BD=Base Down

EXCITER



BRS 4V 075A

FEATURES

- Closely-specified colour temperatures
- Tight beam control
- Pre-focused bases allow lamp replacement without adjustment
- High resistance against vibration

APPLICATIONS

- Films projectors

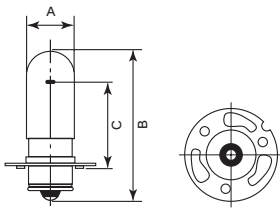


Fig. 1

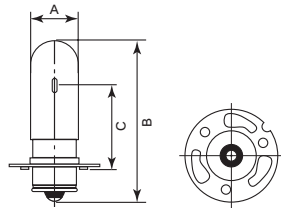


Fig. 2

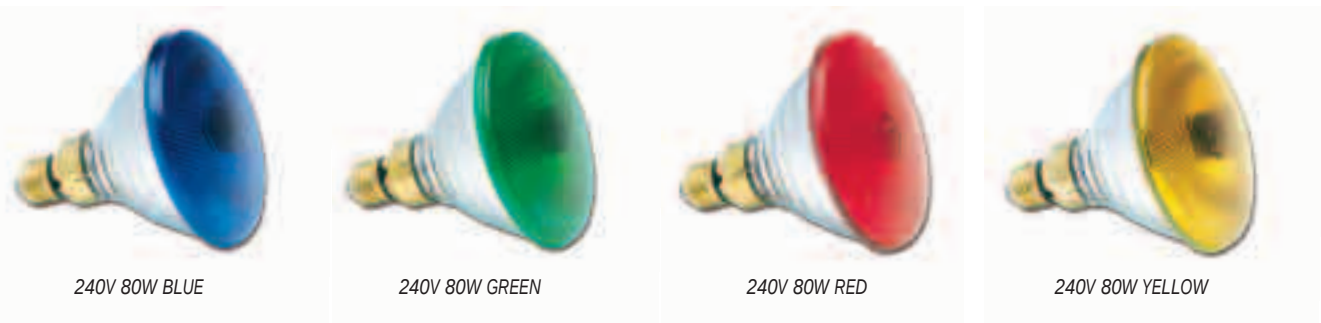
Item description	ANSI	LIF	Voltage	Base	Dimensions			Filament Type
					A mm	B mm	C mm	
BRS 4V 0,75A	BRS	G29	4	P30s	16	50	28.5	C-6
BRK 4V 0,75A	BRK	G27	4	P30s	16	60	28.5	C-8
BSK 6V 1A	BSK	G40	6	P30s	16	50	28.5	C-6
BSS 6V 1A	BSS/BSB	G5	6	P30s	16	55	28.5	C-8

Item description	Approx. Lumens lm	Rated Av.Life h	Burning Position	Figure Nr.	Packing Quantity	Ordering Code
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BRS 4V 0,75A	30	50	any	1	12	9060575
BRK 4V 0,75A	30	50	any	2	12	9060571
BSK 6V 1A	70	100	any	1	12	9060579
BSS 6V 1A	70	100	any	2	24	9060551

PAR38 COLOURED

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



FEATURES

- Parabolic-shaped reflector 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

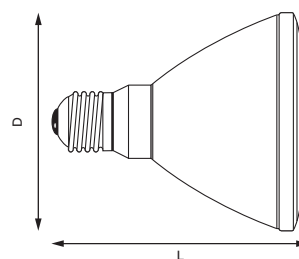


Fig. 1

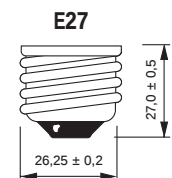


Fig. 2

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

PAR 36/64



PAR36 6V 30W



PAR64 240V 1000W Spot

FEATURES

- Pressed –glass reflector lamps
- Extremely powerful beam (PAR64)
- High illuminance levels

APPLICATIONS

- Theatre lighting
- Displays
- Museums
- Churches
- Towers
- Exhibitions
- Gardens
- Disco's

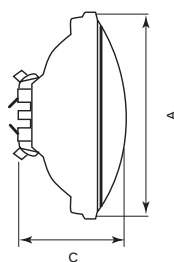


Fig. 1

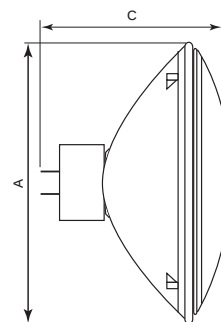


Fig. 2

Item description	ANSI	LIF	Voltage	Watt	Beam type	Approx. Beam Spread		Base
						10% Peak CD	50% Peak CD	
PAR 36 6V 30W			6	30	Spot	5x5		Screw Terminal
PAR 36 12,8V 30W			12.8	30	Spot	5x5		Screw Terminal
PAR 64 1000W NSP	EXC	CP60	240	1000	Narrow Spot	20x17	12x6	GX16d
PAR 64 1000W SP	EXD	CP61	240	1000	Spot	23x20	13x10	GX16d
PAR 64 1000W FL	EXE	CP62	240	1000	Medium Flood	39x24	25x14	GX16d

Item description	Dimensions		Peak Intensity cd	Colour temp. K	Rated Av.Life h	Burning Position	Figure Nr.	Packing Quantity	Ordering Code
	A Diameter mm	C MOL mm							
PAR 36 6V 30W	114	70	55000	3200	35	Any	1	12	9061531
PAR 36 12,8V 30W	114	70	50000	3200	35	Any	1	12	9020167
PAR 64 1000W NSP	204	152.4	400000	3200	300	Any	2	6	9061109
PAR 64 1000W SP	204	152.4	275000	3200	300	Any	2	6	9061127
PAR 64 1000W FL	204	152.4	130000	3200	300	Any	2	6	9061128

PAR 56 SWIMMING POOL



PAR56 12V 300W Swimming Pool

FEATURES

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

APPLICATIONS

- Swimming Pools
- Fountains

DIRECTIONS FOR USE

- High running current (25A)

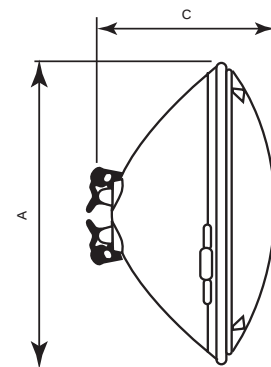


Fig. 1

Item description	ANSI	LIF	Voltage	Watt	Approx. Beam Spread Hor. x Vert. Degrees	Base
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PAR 56 12V 300W Swimming Pool			12	300	50 x 25	Screw
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Item description	Dimensions		Peak Intensity cd	Colour temp. K	Rated Av.Life h	Burning Position	Figure Nr.	Packing Quantity	Ordering Code
	A Diameter mm	C MOL mm							

PAR 56 12V 300W Swimming Pool	178	114	12000	2850	1000	S45	1	12	9061532
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BLACKLIGHT BLUE LAMPS

Blacklight Blue lamps differ from standard fluorescent lamps only in the type and composition of phosphor used. The bulb is made of special dark-blue filter glass that absorbs practically all of the visible light, yet freely transmits the ultraviolet radiation. Fixture requirements are simple since the lamp is a completely self-contained blacklight unit.



F8 T5 BLB 8W



F20 T12 BLB 20W



F18 T8 BLB 18W



LYNX S 11W BLB

FEATURES

- The lamps efficiently emit near ultraviolet radiation at 315nm-400nm with strong photochemical and fluorescent effects
- The special deep blue filter glass absorbs visible rays and transmits near (UV-A) ultraviolet rays only
- Shape, electrical characteristics and lighting circuits similar to general fluorescent lamps

APPLICATIONS

- Special effects
- Counterfeit detection in philately, bank notes, papers, etc.
- Leak and crack detection
- Excitation of fluorescent paints in dark rooms
- Revealing fluorescence of drawings on textiles
- Geological investigation of stones and rocks

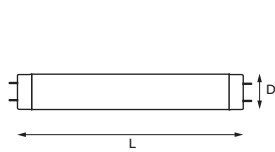
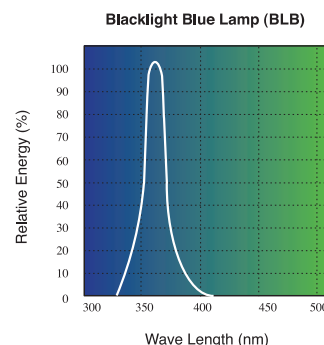


Fig. 1

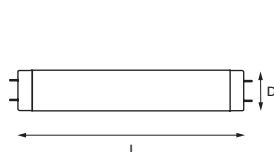


Fig. 2

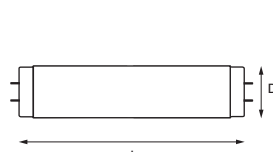


Fig. 3

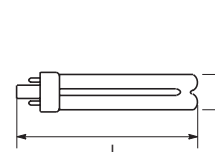


Fig. 4

Item description	Watt W	Voltage V	Current A	Spectral Peak	Cap	Dimensions (mm)		Figure Nr.	Packing Quantity	Ordering Code
						L	D			
F4 T5 BLB	4	29	0.170	368	G5	134.5	15.5	1	50	0000008
F6 T5 BLB	6	42	0.160	368	G5	210.5	15.5	1	50	0000018
F8 T5 BLB	8	56	0.145	368	G5	287	15.5	1	50	0000024
F15 T8 BLB	15	55	0.340	368	G13	436	25.5	2	25	0000077
F18 T8 BLB	18	57	0.360	368	G13	590	26	2	12	0000698
F30 T8 BLB	30	96	0.360	368	G13	895	26	2	20	0000158
F36 T8 BLB	36	100	0.440	368	G13	1200	26	2	12	0000699
F20 T12 BLB	20	57		356	G13	609.6	38.1	3	6	9000358
LYNX-S 9W BLB	9		0.180	368	G23	145	28	4	50	0025053
LYNX-S 11W BLB	11		0.155	368	G23	215	28	4	50	0025052

T8 COLOURED

Standard halophosphor tubes with a coloured coating for special colour effects.



F18 RED 18W



F18 YELLOW 18W



F18 GREEN 18W



F18 BLUE 18W

FEATURES

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

APPLICATIONS

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



Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F18W/T8/R	18	Red	G13	590	26	25	0002560
F18W/T8/Y	18	Yellow	G13	590	26	25	0002561
F18W/T8/G	18	Green	G13	590	26	25	0002562
F18W/T8/B	18	Blue	G13	590	26	25	0002563
F36W/T8/R	36	Red	G13	1200	26	25	0002564
F36W/T8/Y	36	Yellow	G13	1200	26	25	0002565
F36W/T8/G	36	Green	G13	1200	26	25	0002566
F36W/T8/B	36	Blue	G13	1200	26	25	0002567

INCANDESCENT & HALOGEN CROSS REFERENCE: ANSI-SYLVANIA

ANSI Code	SYLVANIA CODE	Page
BEL	9060560	28
BRK	9060571	30
BRS	9060575	30
BSK	9060579	30
BSS/BSB	9060551	30
BVA	9061306	20
BXT	9061663	28
CJW/CJT 230V	9061619	28
CJW/CJT 240V	9060629	28
CKK 230V	9061646	28
CKK 240V	9061051	28
CNP	9060623	28
CSF 230V	9061652	29
CSF 240V	9061052	29
CTD 230V	9061656	29
CTD 240V	9060633	29
CXR/CXL	9061617	29
CYN	9061676	29
DDL	9060984	15-16
DDM	9060954	15-16
DDS	9060668	15-16
DED	9060967	15-16
DJC	0061458	24
DJE	0061473	24
DNF	9060743	18
DXX	0061321	21
DYS/DYV	9060779	20
EFM	0061341	14
EFN	0061342	14
EFP	0061344	14
EFR	0061350	14
EHJ	0061367	19
EJA	9060921	15-16
EJL	0061011	15-16
EJM	9061181	15-16
EJV	9060833	15-16
EKE	9060943	15-16
ELC	0061740	15-16
ELC/5H	0061741	15-16
ELD	9060957	15-16
ELH	9060813	17
EME	9060822	21
EMM/EKS	9060918	18
ENG	9061183	17
ENH	9060940	17

ANSI Code	SYLVANIA CODE	Page
ENX	9060846	17
EPS	9060927	20
ESD	9061358	17
ESY	9060962	20
EVB/BRJ	0061303	19
EVD	9060826	19
EVW	9000017	17
EWf	9060890	15-16
EWX	0061494	19
EWZ	0061735	24
EXC	9061109	32
EXD	9061127	32
EXE	9061128	32
EXR	9061039	15-16
EXY	9061182	15-16
EYM	0061520	24
EYN	0061523	24
FAD	0061371	21
FCR	0061373	19
FCS	0061374	19
FDG	0061379	21
FDS/FDT	9060924	19
FEP	9061385	22
FEX	0060884	21
FGX	0061465	19
FHB	0061391	24
FHG	0061395	24
FHS	9060850	15-16
FKJ	9061116	22
FKK/FKP	9061118	22
FLT	9060877	18
FLW	9061142	19
FNT	9061150	19
FRJ	9061124	22
FRM	9061126	22
FSK	9061122	22
FSY	9060889	20
FTL	9061119	22
FVB	9061121	22
FWR	9061548	23
FWT	9061551	23
FXL	9061768	17
GCJ /GCW	9061542	23
GCL/GCS	9061545	23
JCR	9061063	17

ANSI=American National Standards Institute

INCANDESCENT & HALOGEN CROSS REFERENCE: LIF-SYLVANIA

LIF Code	SYLVANIA CODE	Page
A1/017	9061617	29
A1/021 230V	9061619	28
A1/021 240V	9060629	28
A1/037	9060623	28
A1/167 230V	9061646	28
A1/167 240V	9061051	28
A1/178 230V	9061652	29
A1/178 240V	9061052	29
A1/182 230V	9061656	29
A1/182 240V	9060633	29
A1/183	9060560	28
A1/186	9061663	28
A1/212	9061676	29
A1/215	0061373	19
A1/216	0061374	19
A1/223	0061367	19
A1/229	0061341	14
A1/230	0061342	14
A1/231	0061344	14
A1/232	0061350	14
A1/234	0061303	19
A1/239	9060826	19
A1/252	0061011	15-16
A1/258	9060918	18
A1/259	0061740	15-16
A1/262	9060924	19
A1/264	9060779	20

LIF Code	SYLVANIA CODE	Page
A1/266	9060743	18
A1/268	9060927	20
CP40/CP71	9061116	22
CP41/CP73	9061118	22
CP43/CP72	9061119	22
CP60	9061109	32
CP61	9061127	32
CP62	9061128	32
CP70/CP24	9061121	22
CP77	9061385	22
CP81	9061122	22
CP82	9061124	22
CP89	9061126	22
G27	9060571	30
G29	9060575	30
G40	9060579	30
G5	9060551	30
M33	0061465	19
P1/12	0061379	21
P2/11	9060822	21
P2/13	0061321	21
P2/27	0060884	21
P2/6	0061371	21
T19/T11	9061548	23
T25/T18	9061542	23
T27/T26	9061545	23
T29	9061551	23

LIF=Lighting Industry Federation (UK)

INCANDESCENT & HALOGEN CROSS REFERENCE: PHILIPS-SYLVANIA

PHILIPS	SYLVANIA	ANSI	PAGE
5995	9061181	EJM	15-16
6423	0061350	EFR	14
6550	0061303	EVB/BRJ	19
6834	0061344	EFP	14
6847	0061341	EFM	14
6853	0061342	EFN	14
6958	0061465	FGX	19
7023	0061373	FCR	19
13095	9060940	ENH	17
13158	9060957	ELD	15-16
13160	9060668	DDS	15-16
13164	0061011	EJL	15-16
13194	9060967	DED	15-16
13629	9060943	EKE	15-16
13630	9060890	EWf	15-16
13632	9061182	EXY	15-16
13634	9060850	FHS	15-16
13700	9061150	FNT	19
13824	9060846	ENX	17
13830	9000017	EVW	17
14501	9060984	DDL	15-16
14502	9061039	EXR	15-16
14526	9061768	FXL	17
14527	9060921	EJA	15-16
14529	9060743	DNF	18
14530	9061142	FLW	19
13120C	9061617	CXR/CXL	29
13162R	0061321	DXX	21
13477R	9060822	EME	21
6365R	0061371	FAD	21
6638P	9061126	FRM	22
6820P	9061542	GCJ/GCW	23
6823P	9061545	GCL/GCS	23
6872P	9061122	FSK	22
6873P	9061124	FRJ	22
6897P	9061551	FWT	23
6983P	9061385	FEP	22
6994Z	9061118	FKK/FKP	22
6995Z	9061116	FKJ	22
6996P	9061548	FWR	23
7158 XHP	0061374	FCS	19
7238N/05	9061663	BXT	28
7748S	0061367	EHJ	19
7787 XHP	9060826	EVD	19
PF801R	0061379	FDG	21

INCANDESCENT & HALOGEN CROSS REFERENCE: OSRAM-SYLVANIA

OSRAM	SYLVANIA	ANSI	PAGE
54440	9060877	FLT	18
54574	0061371	FAD	21
54660	9060984	DDL	15-16
54730	0061011	EJL	15-16
54737	9060954	DDM	15-16
54745	9060957	ELD	15-16
54747	9061181	EJM	15-16
54753	9060921	EJA	15-16
54944	9060668	DDS	15-16
54957	9061183	ENG	17
54960	9060918	EMM/EKS	18
54977	9060927	EPS	20
64571	0061321	DXX	21
64607	0061341	EFM	14
64618	9060967	DED	15-16
64643	9060924	FDS/FDT	19
64670	9061542	GCJ	23
64745	9061121	FVB	22
64747	9061116	FKJ	22
64781	0060884	FEX	21
64788	9061119	FTL	22
64789	9061118	FKK	22
93505	9000017	EVW	17
93506	9060940	ENH	17
93510	9061182	EXY	15-16
93515	9061039	EXR	15-16
93518	9060813	ELH	17
93520	9060850	FHS	15-16
93525	9060846	ENX	17
93526	9061768	FXL	17
93531	9060779	DYS/DYV	20
93591	9060889	FSY	20
93631	9060743	DNF	18
93637	9060833	EJV	15-16
93638	9060943	EKE	15-16
93734	9061385	FEP	22
64615HLX	0061342	EFN	14
64625HLX	0061373	FCR	19
64627HLX	0061344	EFP	14
64633HLX	0061303	EVV/BRJ	19
64634HLX	0061350	EFR	14
64640HLX	0061374	FCS	19
64653HLX	0061740	ELC	15-16
64655HLX	0061367	EHJ	19
64656HLX	9061150	FNT	19
64663HLX	9060826	EVD	19
64737/3	9061109	EXC	32
64738/3	9061127	EXD	32
64739/3	9061128	EXE	32

BRITEARC CROSS REFERENCE

Ordering Code	Sylvania	Philips	Osram	Ushio	GE Lighting	Radium
BA SE NHR						
0023987	BA 150 SE NHR	-	-	-	-	-
0023958	BA 400 SE NHR	MSR 400	HSR 400/60	USR-400 NHR	-	RSR 400W
0023960	BA 575 SE NHR	-	HSR 575/60	USR-575 GX9.5	-	RSR 575W
0023961	BA 700 SE NHR	MSR 700	HSR 700/60	USR-700 NHR	-	RSR 700W
0023935	BA 1200 SE NHR	MSR 1200	HSR 1200/60	USR-1200 SE G22	-	RSR 1200W
BA SE D (LONG LIFE)						
0023984	BA 150 SE D	-	HSD 150/70	-	-	-
7220168	BA 200 SE D	MSD 200	HSD 200/60	USD-200 NHR	-	RSD 200W
7220169	BA 250 SE D	MSD 250	HSD 250/60	USD-250 NHR	-	RSD 250W/60
0023981	BA 575 SE D	MSD 575	HSD 575/72	USD-575 NHR	-	RSD 575W
BA SE /2 (HIGH COLOUR TEMPERATURE)						
0023998	BA 250/2 SE D 8.5	MSD 250/2	HSD 250/78	USD-250/2 NHR	CSD 250/2/SE	RSD 250W/78
0024002	BA 575/2 SE NHR 7.2	MSR 575/2	HSR 575/72	USD-575/2 NHR	CSR 575/2/SE	RSR 575W/72
0024000	BA 575/2 SE NHR 8.5	-	-	-	-	-
BA SE HR (HOT RESTRIKE)						
0023941	BA 200 SE HR	MSR 200 HR	HMI 200W/SE	-	CSR 200/SE/HR	RSI 200W/SE
0023883	BA 400 SE HR	MSR 400 HR	HMI 400W/SE	-	-	RSI 400W/SE
0023932	BA 575 SE HR	MSR 575 HR	HMI 575W/SE	USR-575 BE SE	CSR 575/SE/HR	RSI 575W/SE
0023992	BA 800 SE HR	-	-	-	-	-
0023933	BA 1200 SE HR	MSR 1200 HR	HMI 1200 SE	USR-1200 SE G38	CSR 1200/SE/HR	RSI 1200W/SE
0023934	BA 2500 SE HR	MSR 2500 HR	HMI 2500 SE	USR-2500 SE	CSR 2500/SE/HR	RSI 2500W/SE
BA DE (DOUBLE ENDED)						
0023921	BA 575 DE	MSI 575W	HMI 575W/GS	UMI-575	CSR 575/DE	RSI 575W
0023922	BA 1200 DE	MSI 1200W	HMI 1200W GS	UMI-1200	CSR 1200/DE	RSI 1200W
0023996	BA 1200 DE S	MSI 1200W/S	HTI 1200W/D7/60	-	CSR 1200S/DE	-
0023923	BA 2500 DE	MSI 2500W	HMI 2500W GS	UMI-2500	CSR 2500/DE	RSI 2500W
0023924	BA 4000 DE	MSI 4000W	HMI 4000W	UMI-4000	CSR 4000/DE	RSI 4000W
0023925	BA 6000 DE	MSI 6000W	HMI 6000W	UMI-6000	CSR 6000/DE	RSI 6000W
0023927	BA 12000 DE	MSI 12000W	HMI 12000W/GS	UMI-12000	CSR 12000/DE	RSI 12000W/230
BA SE SA (SHORT ARC)						
0023965	BA 600 SE SA	-	HTI 600 W/SE	-	-	-
0024003	BA 700 SE SA	MSR 700 SA	HTI 705 W/SE	-	CSR 700SA	-
0023966	BA 600 DE SA	-	HTI 600 W/D	-	-	-

BA15s



E27



GZ4



GX5.3



GY5.3



G6.35<sup>-13
-15
-20</sup>



GY6.35<sup>-13
-15</sup>



GX6.35



GZ6.35



GX7.9



G9.5



GY5.3



GX9.5



GY16



GX16d



G17t-7



G17q-7



GX17q-7



GY17q-7



G22



G38



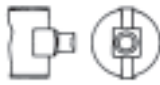
P30s-10.3



R7s



RX7s

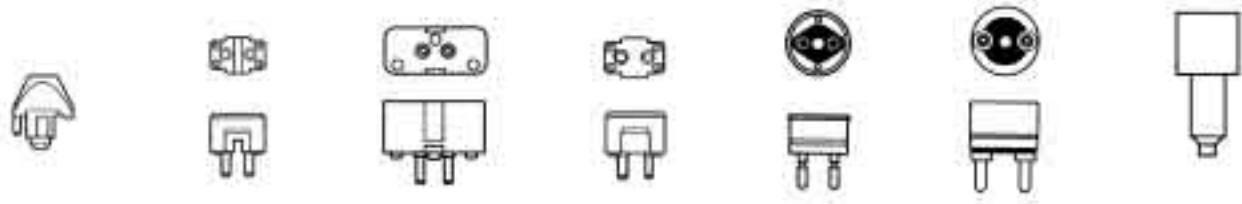


2 screw
Terminals

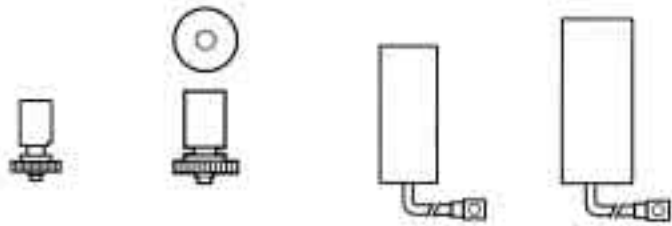


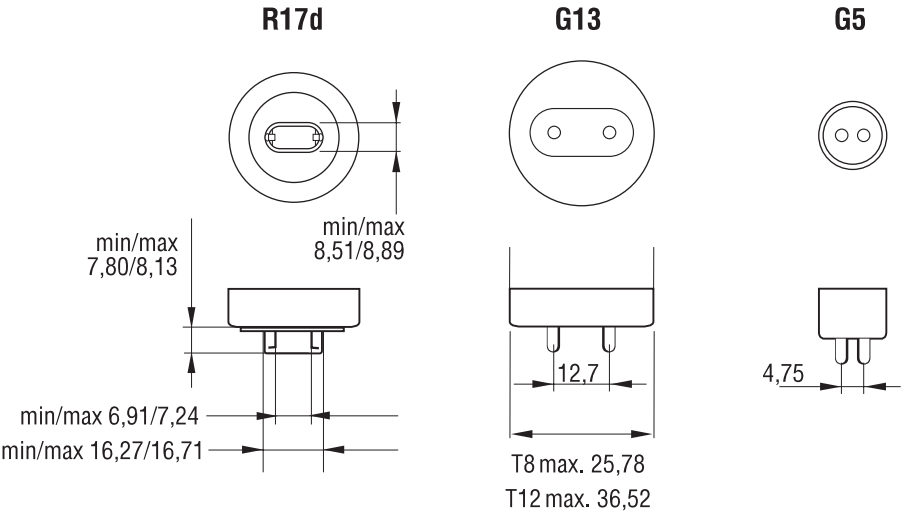
BASE TYPES BRITEARC

FaX1.5-3x1 GZY9.5(GZZ9.5) GX9.5 GY9.5 G22 G38 SFa21-12

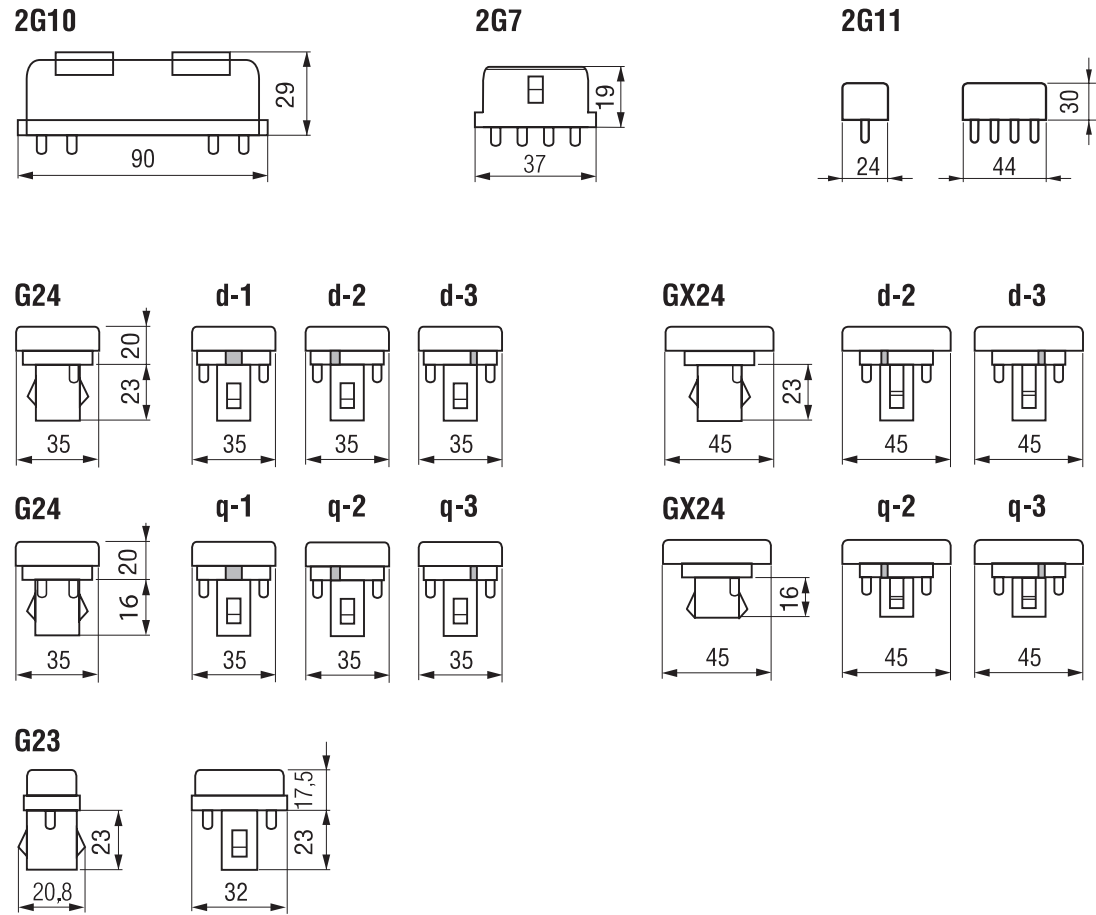


SFc10-4 SFc-15.5-6 S25.5 x60 S30 x70



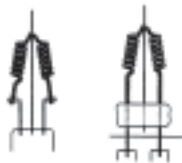


BASE TYPES COMPACT FLUORESCENT



FILAMENT TYPES

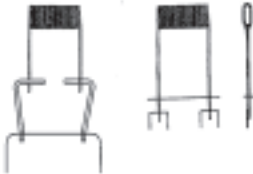
C-2V, CC-2V



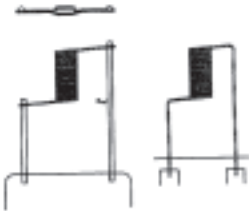
C-6, CC-6



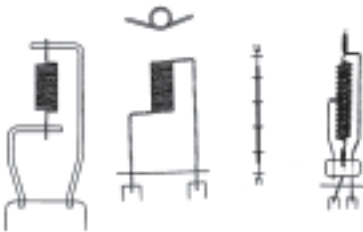
CBar6 (CF-6)



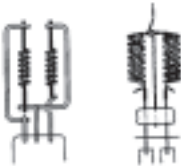
CBar8 (CF-9)



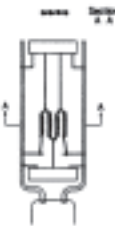
C-8, CC-8



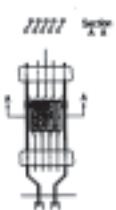
2CC-8



C-13, CC-13



C-13D, CC-13D



C: single Coil
CC: Double Coil (Coiled Coil)
C BAR: Flat Coil

Symbols

S = BASE DOWN

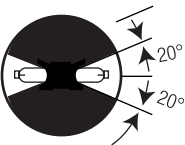
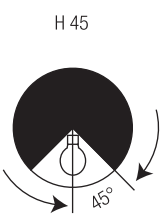
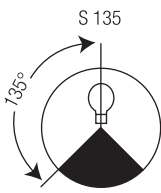
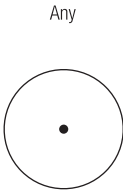
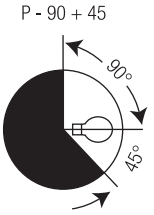
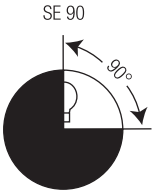
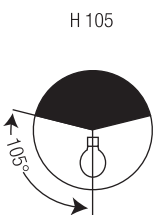
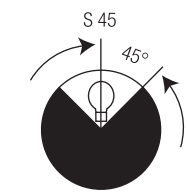
H = BASE UP
(hanging)

SE = BASE DOWN
and one direction of rotation

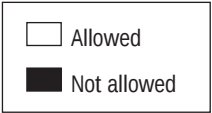
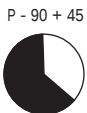
P = HORIZONTAL

ANY

Example



Different
symbols used
for Projection,
Photo, Studio,
Theatre, TV and
Disco lamps



Code	Reference	Section	Page
0000008	F4 T5 BLB	Photo Optic Fluorescent Lamps	36
0000018	F6 T5 BLB	Photo Optic Fluorescent Lamps	36
0000024	F8 T5 BLB	Photo Optic Fluorescent Lamps	36
0000077	F15 T8 BLB	Photo Optic Fluorescent Lamps	36
0000158	F30 T8 BLB	Photo Optic Fluorescent Lamps	36
0000698	F18 T8 BLB	Photo Optic Fluorescent Lamps	36
0000699	F36 T8 BLB	Photo Optic Fluorescent Lamps	36
0002560	F18W/T8/R	Photo Optic Fluorescent Lamps	37
0002561	F18W/T8/Y	Photo Optic Fluorescent Lamps	37
0002562	F18W/T8/G	Photo Optic Fluorescent Lamps	37
0002563	F18W/T8/B	Photo Optic Fluorescent Lamps	37
0002564	F36W/T8/R	Photo Optic Fluorescent Lamps	37
0002565	F36W/T8/Y	Photo Optic Fluorescent Lamps	37
0002566	F36W/T8/G	Photo Optic Fluorescent Lamps	37
0002567	F36W/T8/B	Photo Optic Fluorescent Lamps	37
0019650	80W/FL30°PAR38 blue	Photo Optic Incandescent Lamps	31
0019651	80W/FL30°PAR38 green	Photo Optic Incandescent Lamps	31
0019652	80W/FL30°PAR38 red	Photo Optic Incandescent Lamps	31
0019653	80W/FL30°PAR38 yellow	Photo Optic Incandescent Lamps	31
0023883	BA 400 SE HR	Photo Optic Discharge Lamps	8
0023921	BA 575 DE	Photo Optic Discharge Lamps	9
0023922	BA 1200 DE	Photo Optic Discharge Lamps	9
0023923	BA 2500 DE	Photo Optic Discharge Lamps	9
0023924	BA 4000 DE	Photo Optic Discharge Lamps	9
0023925	BA 6000 DE	Photo Optic Discharge Lamps	9
0023927	BA 12000 DE	Photo Optic Discharge Lamps	9
0023932	BA 575 SE HR	Photo Optic Discharge Lamps	8
0023933	BA 1200 SE HR	Photo Optic Discharge Lamps	8
0023934	BA 2500 SE HR	Photo Optic Discharge Lamps	8
0023935	BA 1200 SE NHR	Photo Optic Discharge Lamps	6
0023941	BA 200 SE HR	Photo Optic Discharge Lamps	8
0023958	BA 400 SE NHR	Photo Optic Discharge Lamps	6
0023960	BA 575 SE NHR	Photo Optic Discharge Lamps	6
0023961	BA 700 SE NHR	Photo Optic Discharge Lamps	6
0023965	BA 600 SE SA	Photo Optic Discharge Lamps	10
0023966	BA 600 DE SA	Photo Optic Discharge Lamps	10
0023976	BA 150 SE D	Photo Optic Discharge Lamps	6
0023981	BA 575 SE D	Photo Optic Discharge Lamps	6
0023987	BA 150 SE NHR	Photo Optic Discharge Lamps	6
0023992	BA 800 SE HR	Photo Optic Discharge Lamps	8
0023996	BA 1200 DE S	Photo Optic Discharge Lamps	9
0023998	BA 250/2 SE D 8.5	Photo Optic Discharge Lamps	7
0024000	BA 575/2 SE NHR 8.5	Photo Optic Discharge Lamps	7
0024002	BA 575/2 SE NHR 7.2	Photo Optic Discharge Lamps	7
0024003	BA 700 SE SA	Photo Optic Discharge Lamps	10
0025052	LYNX-S 11W BLB	Photo Optic Fluorescent Lamps	36
0025053	LYNX-S 9W BLB	Photo Optic Fluorescent Lamps	36
0060884	FEX 230V 2000W	Photo Optic Halogen Lamps	21
0061011	EJL 24V 200W	Photo Optic Halogen Lamps	15
0061303	EVB/BRJ 15V 150W	Photo Optic Halogen Lamps	19
0061321	DXX 240V 800W	Photo Optic Halogen Lamps	21
0061341	EFM 8V 50W	Photo Optic Halogen Lamps	14

Code	Reference	Section	Page
0061342	EFN 12V 75W	Photo Optic Halogen Lamps	14
0061344	EFP 12V 100W	Photo Optic Halogen Lamps	14
0061350	EFR 15V 150W	Photo Optic Halogen Lamps	14
0061367	EHJ 24V 250W	Photo Optic Halogen Lamps	19
0061371	FAD 118V 650W	Photo Optic Halogen Lamps	21
0061373	FCR 12V 100W	Photo Optic Halogen Lamps	19
0061374	FCS 24V 150W	Photo Optic Halogen Lamps	19
0061379	FDG 230V 1000W	Photo Optic Halogen Lamps	21
0061391	FHB 230V 1000W	Photo Optic Halogen Lamps	24
0061395	FHG 230V 1250W	Photo Optic Halogen Lamps	24
0061458	DJC 240V 1000W	Photo Optic Halogen Lamps	24
0061465	FGX 24V 250W	Photo Optic Halogen Lamps	19
0061473	DJE 230V 1000W	Photo Optic Halogen Lamps	24
0061494	EWX 24V 250W	Photo Optic Halogen Lamps	19
0061510	230V 1250W	Photo Optic Halogen Lamps	24
0061520	EYM 240V 1000W	Photo Optic Halogen Lamps	24
0061523	EYN 240V 650W	Photo Optic Halogen Lamps	24
0061735	EWZ 110V 850W	Photo Optic Halogen Lamps	24
0061740	ELC 24V 250W	Photo Optic Halogen Lamps	15
0061741	ELC 24V 250W 500H	Photo Optic Halogen Lamps	15
7220168	BA 200 SE D	Photo Optic Discharge Lamps	6
7220169	BA 250 SE D	Photo Optic Discharge Lamps	6
9000017	EVW 82V 250W	Photo Optic Halogen Lamps	17
9000358	F20 T12 BLB	Photo Optic Fluorescent Lamps	36
9020167	PAR 36 12,8V 30W	Photo Optic Incandescent Lamps	32
9023475	XG 147 100V 1500W	Photo Optic Discharge Lamps	11
9060551	BSS 6V 1A	Photo Optic Incandescent Lamps	30
9060560	BEL 240V 300W	Photo Optic Incandescent Lamps	28
9060571	BRK 4V 0,75A	Photo Optic Incandescent Lamps	30
9060575	BRS 4V 0,75A	Photo Optic Incandescent Lamps	30
9060579	BSK 6V 1A	Photo Optic Incandescent Lamps	30
9060623	CNP 230V 300W	Photo Optic Incandescent Lamps	28
9060629	CJW/CJT 240V 100W	Photo Optic Incandescent Lamps	28
9060633	CTD 240V 150W	Photo Optic Incandescent Lamps	29
9060668	DDS 21V 80W	Photo Optic Halogen Lamps	15
9060743	DNF 21V 150W	Photo Optic Halogen Lamps	18
9060779	DYS/DYV 120V 600W	Photo Optic Halogen Lamps	20
9060813	ELH 120V 300W	Photo Optic Halogen Lamps	17
9060822	EME 230V 800	Photo Optic Halogen Lamps	21
9060826	EVD 36V 400W	Photo Optic Halogen Lamps	19
9060833	EJV 21V 150W	Photo Optic Halogen Lamps	15
9060846	ENX 82V 360W	Photo Optic Halogen Lamps	17
9060850	FHS 82V 300W	Photo Optic Halogen Lamps	15
9060877	FLT 13.8V 25W/S	Photo Optic Halogen Lamps	18
9060889	FSY 240V 400W	Photo Optic Halogen Lamps	20
9060890	EWf 24V 200W	Photo Optic Halogen Lamps	15
9060918	EMM/EKS 24V 250W	Photo Optic Halogen Lamps	18
9060921	EJA 21V 150W	Photo Optic Halogen Lamps	15
9060924	FDS/FDT 24V 150W	Photo Optic Halogen Lamps	19
9060927	EPS 240V 500W	Photo Optic Halogen Lamps	20
9060940	ENH 120V 250W	Photo Optic Halogen Lamps	17
9060943	EKE 21V 150W	Photo Optic Halogen Lamps	15

Code	Reference	Section	Page
9060954	DDM 19V 80W	Photo Optic Halogen Lamps	15
9060957	ELD 21V 150W	Photo Optic Halogen Lamps	15
9060962	ESY 100V 150W	Photo Optic Halogen Lamps	20
9060967	DED 13.8V 85W	Photo Optic Halogen Lamps	15
9060984	DDL 20V 150W	Photo Optic Halogen Lamps	15
9061010	JC 24V 300W	Photo Optic Halogen Lamps	19
9061018	JCP 100V 650W	Photo Optic Halogen Lamps	20
9061039	EXR 82V 300W	Photo Optic Halogen Lamps	15
9061051	CKK 240V 150W	Photo Optic Incandescent Lamps	28
9061052	CSF 240V 300W	Photo Optic Incandescent Lamps	29
9061060	JCD 100V 650W	Photo Optic Halogen Lamps	20
9061063	JCR 100V 300W	Photo Optic Halogen Lamps	17
9061109	PAR 64 1000W NSP	Photo Optic Incandescent Lamps	32
9061116	FKJ CP40 240V 1000W	Photo Optic Halogen Lamps	22
9061118	FKK CP41 240V 2000W	Photo Optic Halogen Lamps	22
9061119	FTL CP43 240V 2000W	Photo Optic Halogen Lamps	22
9061121	FVB CP70 240V 1000W	Photo Optic Halogen Lamps	22
9061122	FSK CP81 240V 300W	Photo Optic Halogen Lamps	22
9061124	FRJ CP82 240V 500W	Photo Optic Halogen Lamps	22
9061126	FRM CP89 240V 650W	Photo Optic Halogen Lamps	22
9061127	PAR 64 1000W SP	Photo Optic Incandescent Lamps	32
9061128	PAR 64 1000W FL	Photo Optic Incandescent Lamps	32
9061142	FLW 24V 300W	Photo Optic Halogen Lamps	19
9061150	FNT 24V 275W	Photo Optic Halogen Lamps	19
9061181	EJM 21V 150W	Photo Optic Halogen Lamps	15
9061182	EXY 82V 250W	Photo Optic Halogen Lamps	15
9061183	ENG 120V 300W	Photo Optic Halogen Lamps	17
9061306	BVA 120V 900W	Photo Optic Halogen Lamps	20
9061358	ESD 120V 150W	Photo Optic Halogen Lamps	17
9061385	FEP CP77 240V 1000W	Photo Optic Halogen Lamps	22
9061531	PAR 36 6V 30W	Photo Optic Incandescent Lamps	32
9061532	PAR 56 12V 300W	Photo Optic Incandescent Lamps	33
9061542	GCJ T25 240V 500W	Photo Optic Halogen Lamps	23
9061545	GCL T27 240V 650W	Photo Optic Halogen Lamps	23
9061548	FWR T19 240V 1000W	Photo Optic Halogen Lamps	23
9061551	FWT T29 240V 1200W	Photo Optic Halogen Lamps	23
9061617	CXR/CXL 8V 50W	Photo Optic Incandescent Lamps	29
9061619	CJW/CJT 230V 100W	Photo Optic Incandescent Lamps	28
9061646	CKK 230V 150W	Photo Optic Incandescent Lamps	28
9061652	CSF 230V 300W	Photo Optic Incandescent Lamps	29
9061656	CTD 230V 150W	Photo Optic Incandescent Lamps	29
9061663	BXT 12V 100W	Photo Optic Incandescent Lamps	28
9061676	CYN 24V 150W	Photo Optic Incandescent Lamps	29
9061768	FXL 82V 410W	Photo Optic Halogen Lamps	17

**SLI International Product
Marketing Lamps**
Noorderlaan 105c
2030 Antwerpen
Phone +32 (0) 3 610 44 80
Telefax +32 (0) 3 610 44 58
www.sylvania-lighting.com

EUROPE

Germany
SLI Lichtsysteme GmbH
Graf-Zeppelin-Str. 9-12
91056 Erlangen
Phone (+49) 9131 793-500
Telefax (+49) 9131 793-345
info.de@sylvania-lighting.com
www.sli-deutschland.de

Eastern Europe
SLI Lichtsysteme GmbH
Graf-Zeppelin-Str. 9-12
91056 Erlangen
Phone (+49) 9131 793-499
Telefax (+49) 9131 793-407
info.de@sylvania-lighting.com

UK
SLI Lighting UK Limited
Otley Road. Shipley
West Yorkshire BD17 7SN
Phone +44(0) 1274 537 703
Telefax +44(0) 1274 580 632

Slovakia
SLI Lichtsysteme GmbH
Vajanského 62
900 01 Modra
Phone (+421) 704 6474506
Telefax (+421) 704 6474506

Ceská Republic
SLI Lichtsysteme GmbH
Pirinská 3244
143 00 Praha 4
Phone (+420) 2 401 51 79
Telefax (+420) 2 401 51 79

Finland
Sylvania Lumiance Oy
Sirrikuja 3 A
00940 Helsinki
Phone (+358) 9 54212100
Telefax (+358) 9 54212130
fi.info@sylvania-lighting.com

Austria
SLI Lichtsysteme GmbH
Otto-Probst-Str. 22-24
1100 Wien
Phone (+43) 1617 4507 22
Telefax (+43) 1617 4507 23
info.de@sylvania-lighting.com
Switzerland
Sylvania Lighting S.A.
4, Chemin des Léchères
1217 Meyrin
PO Box 368
Phone (+41) 227198580
Telefax (+41) 227198581
info.ch@sylvania-lighting.com
www.sylvania-lighting.com

Export
Sylvania Lighting S.A.
4, Chemin des Léchères
1217 Meyrin – Switzerland
PO Box 368
Phone (+41) 227198530
Telefax (+41) 227198531
info.export-ch@sylvania-lighting.com
www.sylvania-lighting.com

Belgium
SLI Benelux
Noorderlaan 105c
2030 Antwerpen
Phone (+32) 3 610 44 44
Telefax (+32) 3 610 44 55
be.info@sylvania-lighting.com
www.sylvania-lighting.com

the Netherlands
SLI Benelux
Postbus 5651
4801 EB Breda
Phone (+31) 76 750 44 44
Telefax (+31) 76 750 44 55
nl.info@sylvania-lighting.com
www.sylvania-lighting.com

France
SLI France SA
29, rue des Trois Fontanot
92722 Nanterre, Cedex
Phone (+33) 1 55 51 11 51
Telefax (+33) 1 55 51 11 52

Denmark
Sylvania A / S
Tempovej 14
2750 Ballerup
Phone (+45) 44 86 00 00
Telefax (+45) 44 86 00 01
kundeservice@sylvania-lighting.com
www.sylvania-lighting.com

Greece
Sylvania A.E.E.E.
89 Kyprou Ave., Argypoli
GR-164 51, Athens
Phone (+30) 210 996 65 61
Telefax (+30) 210 996 90 29

Italy
Sylvania S.p.A.
Via Figino 105
20016 Pero MI
Phone (+39) 02 33 93 11 58
Telefax (+39) 02 33 93 11 91
it.info@sylvania-lighting.com
www.sylvania.it

Norway
Sylvania Lumiance AS
Ole Deviks Vei 44
0668 Oslo
Phone (+47) 23 067470
Telefax (+47) 23 067471
www.sli.no

Spain
SLI Sylvania S.A.
Los Llanos de Jerez, 17
28820 Coslada (Madrid)
Phone (+34) 91 669 90 00
Telefax (+34) 91 673 73 64
www.sylvania-lighting.com

Sweden
Sylvania Lumiance AB
Uppköparvägen 7
120 44 Årsta
Phone (+46) 8 556 322 00
Telefax (+46) 8 556 322 10
sli-sweden@sylvania-lighting.com
www.sli.no

Portugal
SLI Sylvania S.A.
Campo Grande, 35 - 11º C
1700-087 Lisbon
Phone (+351) 21 793 77 36/37
Telefax (+351) 21 793 77 38
www.sylvania-lighting.com

OUTSIDE EUROPE

USA
SLI Lighting Products, Inc.
122 East Laurel Street
Mullins, SC 29574
Phone (+1) 800-922-6693
Telefax (+1) 843-464-1203

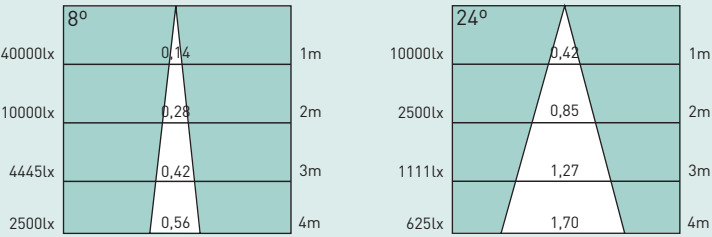
Hong Kong
Sylvania (Hong Kong) Ltd.
1114 Peninsula Centre
67 Mody Road
Kowloon
Phone (+852) 23695531
Telefax (+852) 27218621

Australia
**Sylvania Lighting Australasia
Pty Ltd**
Sylvania Way
Lisarow NSW 2250
Phone (+61) 2 4328 0600
Telefax (+61) 2 4328 2605
sylvania@sla.net.au
www.sla.net.au

New Zealand
**Sylvania Lighting Australasia
Limited**
318 Rosebank Road
PO box 19-116
Avondale Auckland NZ
Phone (+1164) 9 828 3113
Telefax (+1164) 9 828 7426
slanz@sla.net.au
www.sla.net.au

BriteSpot ES111™ 35W

- Crisp, powerful, white light
- Excellent colour rendering
- Spot or flood beam angle
- Extreme high luminous intensity
- Anti - glare
- Twist-and-lock GX10 cap
- Universal burning
- Self protected
- Distinctive visual appearance

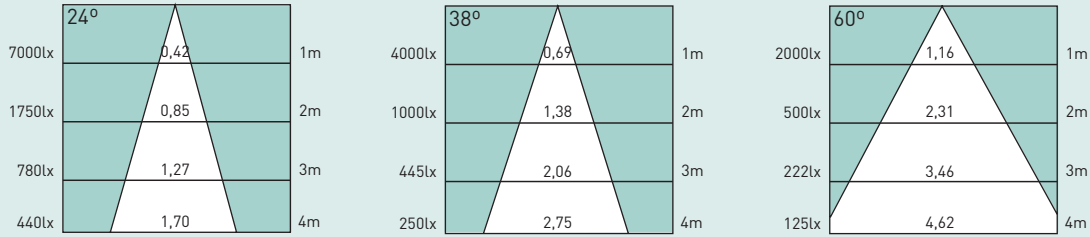
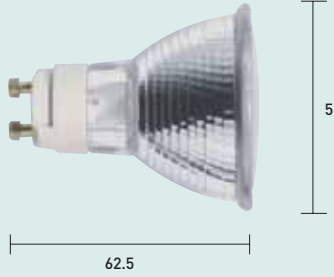


BEAM ANGLE	ORDERING CODE	WATTAGE	VOLTAGE	CURRENT	LUMINOUS INTENSITY	COLOUR TEMP.	CRI	RATED AVERAGE LIFE	PACK QUANTITY
8°	0020200	39W	95V	0.53A	40000 cd	3000 K	1A	6000 hours	15
24°	0020201	39W	95V	0.53A	10000 cd	3000 K	1A	6000 hours	15

Burning Position : universal

BriteSpot ES50™ 35W

- 3 x the output of Low Voltage Tungsten Halogen
- Crisp, powerful, white light
- Excellent colour rendering
- Compact size
- Wide ranges of beam angles
- Twist-and-lock GX10 cap
- Self protected



BEAM ANGLE	ORDERING CODE	WATTAGE	VOLTAGE	CURRENT	LUMINOUS INTENSITY	COLOUR TEMP.	CRI	RATED AVERAGE LIFE	PACK QUANTITY
24°	0020272	39W	95V	0.53A	7000 cd	3000 K	1A	6000 hours	15
38°	0020270	39W	95V	0.53A	4000 cd	3000 K	1A	6000 hours	15
60°	0020271	39W	95V	0.53A	2000 cd	3000 K	1A	6000 hours	15

Burning Position : Vertical base up +/- 90° - Universal burning types available Q3 2005

BriteTronic™

- Resonant Ignition
- Compact
- Reliable ignition
- Stable lamp operation
- High max. Tcase = 90°C



ORDERING CODE	DESCRIPTION	OUTPUT	INPUT VOLTAGE	TYPE	L X W X H
0010930	BriteTronic 35	39W	175 - 265V	For incorporation / Built in	110 x 45 x 32
0010931	BriteTronic 35/R	39W	175 - 265V	Remote / Independant	147 x 45 x 32

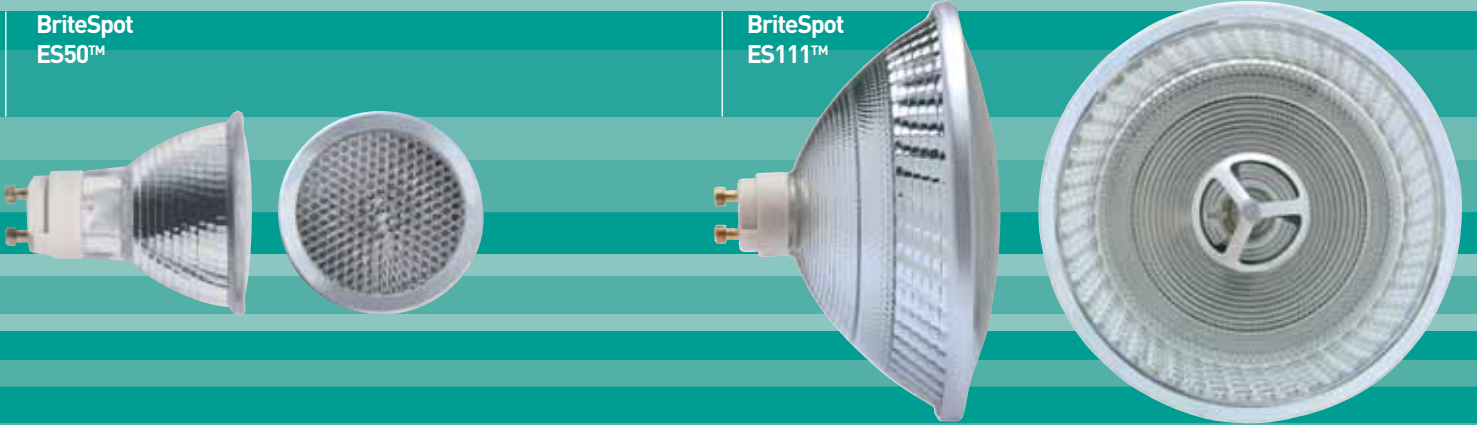
SLI Sylvania Lighting International
International Product Marketing Lamps, Noorderlaan 105c, 2030 Antwerpen, Belgium
Tel: 0032 (0)3 610 44 80, Fax: 0032 (0)3 610 44 58
e-mail: britespot@sylvania-lighting.com Website: www.sylvania-lighting.com

SYLVANIA

COMPACT
POWERFUL
EASY TO INSTALL
CRISP, WHITE LIGHT
SAFE AND ROBUST

BriteSpot

A revolution in lamp technology



BriteSpot™ ES50

SO POWERFUL YET SO SMALL

BriteSpot™ ES50 – the first metal halide reflector lamp to combine high output, excellent light quality and superb energy-efficiency in one compact, highly distinctive package.

Its improved discharge arc offers excellent colour stability and superb colour rendering.

HIGH EFFICIENCY & STABLE, UNIFORM COLOUR



BriteSpot™ ES50 35W

COMPACT SIZE – CRISP LIGHT

Measuring only 51mm in diameter by 62.5mm in depth with a GX10 cap, BriteSpot™ ES50 is the most compact metal halide reflector lamp for general lighting. The combination of metal halide technology and compact reflector design results in a high efficient crisp light source with an excellent beam pattern.

APPLICATIONS

Offices ~ Shops ~ Department Stores

Window Displays ~ Museums ~ Restaurants

Hotel Lobbies ~ Galleries

BriteSpot™ ES50

FEATURES

LOW MAINTENANCE COST

The specially designed twist-and-lock GX10 lamp base ensures quick and easy lamp installation and replacement.

PHYSICAL PROPERTIES

Metal halide technology, combined with its compact size and integrated reflector design, results in a perfect pre-focussed beam, crisp, bright light and offers new and exciting fixture design and installation opportunities.



UV STOP

BriteSpot™ ES50 Front view



BriteSpot™ ES50 GX10 base



BriteSpot™ ES50 GX10 base

OPEN FIXTURE RATED

The UV Stop and self-protective feature enables the use of open fixture designs.

CONTROL GEAR

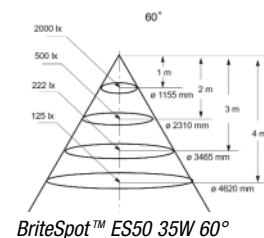
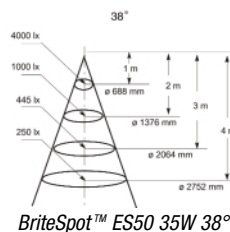
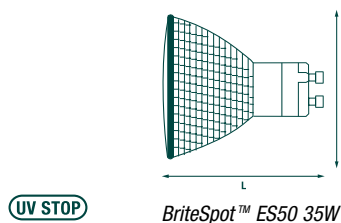
BriteSpot™ lamps can be operated on electronic control gear designed for 35W metal halide products.

LOW INFRA-RED

In comparison to halogen, the metal halide technology ensures less heat radiation.

BriteSpot™ ES50

SO POWERFUL YET SO SMALL



BriteSpot™ ES50 35W

Item description	Watt	Volt	Current	Cap	Dimension (mm)		Luminous intensity (cd)	Beam angle (°)	Colour temp. (K)	Packaging quantity	Ordering code
	W	V	A		L	D					
BriteSpot™ ES50 35W 38°	39	95	0.53	GX10	62,5	51	4000	38	3000	15	0020270
BriteSpot™ ES50 35W 60°	39	95	0.53	GX10	62,5	51	2000	60	3000	15	0020271

Burning position : Vertical base up +/- 90°

MICRO-LYNX F APPLICATIONS

The new light weight, ultra low profile Micro-Lynx F compact fluorescent lamp with integral electronic ballast is an aesthetically pleasing, ultra compact, low temperature and energy efficient alternative to incandescent and halogen lighting.

LIGHT WEIGHT AND ULTRA COMPACT



Micro-Lynx F



HIGH PERFORMANCE COMBINED WITH ENERGY EFFICIENCY

Quick and easy to install Micro-Lynx F delivers more than 30 lumens per watt from a T2 7W light source mounted in six flat and in parallel sections behind a semi opaque prismatic diffuser.

APPLICATIONS

New concepts in indoor fixture lighting

Furniture lighting

Display lighting

Pathway and Stairway lighting

Low energy lighting applications

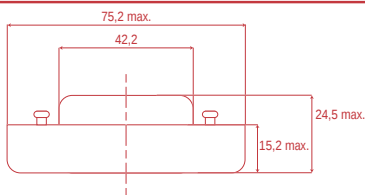


MICRO-LYNX F

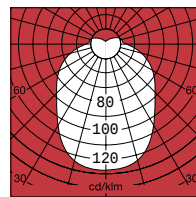
A NEW GENERATION OF COMPACT FLUORESCENT LAMPS



Micro-Lynx F 7W/830



Dimensions Micro-Lynx F



Polar Diagram Micro-Lynx F

Micro-Lynx F

Item description	Wattage W	Input voltage V	Base	Bulb	Dimensions D H mm mm	Light output lm	Colour temperature K	CRI (group)	Average life hrs	Ordering Code
Warmwhite Deluxe										
Micro-Lynx F 7W/830	7	230	GX53	T2	75,2 24,5	220	3000	1B	6000	0025218
Coolwhite Deluxe										
Micro-Lynx F 7W/840	7	230	GX53	T2	75,2 24,5	220	4000	1B	6000	0025219

MICRO-LYNX F

A New Generation of Compact Fluorescent Lamps

Micro Lynx-F is a new and highly innovative, ultra slim, compact fluorescent lamp with integral electronic ballast: based on a T2 light source, cut and joined into six sections and mounted inside a cylindrical housing with a reeded diffuser.



FEATURES

- Ultra compact size - 75 mm wide x 25 mm depth
- Integral electronic ballast
- Light output 220 lm
- Lumen efficacy > 30 lm/W
- Input voltage 230V
- Colour rendering - Ra85/Class1B
- Wattage: 7W
- Available in colours: Warmwhite Deluxe 830 and Coolwhite Deluxe 840
- Universal burning position
- Housing temperature 95°C maximum
- Not suitable for dimming
- Average rated life: 6000 hours

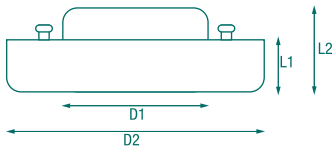
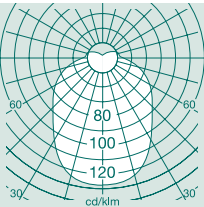
APPLICATIONS

- More opportunities for ultra compact fixture designs due to the small dimensions and low housing temperature
- The perfect alternative to using halogen lighting in furniture

DIRECTIONS FOR USE

- New GX53 “twist and lock” cap
- Integral electronic ballast
- Not suitable for use with dimmer or photocell switches

POLAR DIAGRAM



Item description	Watt	Colour	Base	Dimensions (mm)				Colour Rendering Index	Light output lm	Packing Quantity	Ordering Code
Micro-Lynx F				L1	L2	D1	D2				
Warmwhite Deluxe											
7W/830	7	830	GX53	15.2max	24.5max	42.2	75.2max	1B	30	10	0025218
Coolwhite Deluxe											
7W/840	7	840	GX53	15.2max	24.5max	42.2	75.2max	1B	30	10	0025219

MINI-LYNX AMBIENCE

This compact fluorescent lamp looks similar to a normal incandescent GLS lamp but lasts up to 6 times longer, using 80% less energy.



FEATURES

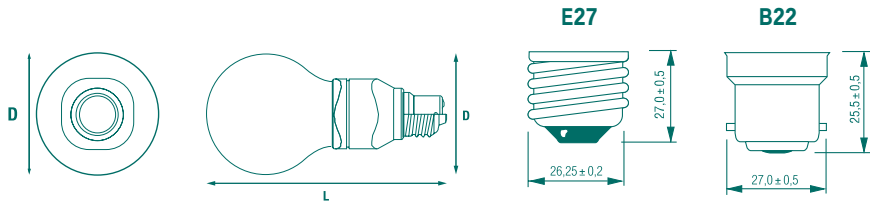
- An energy saving lamp that looks like an incandescent GLS lamp
- Integral electronic ballast
- Soft glow natural light
- Available in colours: Homelight Deluxe 827 and Daylight Deluxe 860 (on request)
- Wattages: 7W, 11W, 15W and 20W
- E27 or B22 cap
- Average rated life: 6000 hours

APPLICATIONS

- Direct replacement for incandescent lamps
- Functional and/or decorative lighting in: table lamps, pendant lamps and wall lights

DIRECTIONS FOR USE

- Integral electronic ballast
- Not suitable for use with dimmer or photocell switches



Item description Mini-Lynx Ambience	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
Homelight Deluxe (827)								
7W/E27	7	827	E27	140	70	350	10	0026200
11W/E27	11	827	E27	140	70	500	10	0026201
15W/E27	15	827	E27	145	70	750	10	0026202
20W/E27	20	827	E27	155	70	980	10	0026203
7W/B22	7	827	B22	138	70	350	10	0026220
11W/B22	11	827	B22	138	70	500	10	0026221
15W/B22	15	827	B22	143	70	750	10	0026222
20W/B22	20	827	B22	153	70	980	10	0026223

LYNX-S

An energy efficient compact fluorescent lamp comprising a U shaped tube and a 2 pin base which incorporates the starter and capacitor. For use with a remote magnetic ballast.



FEATURES

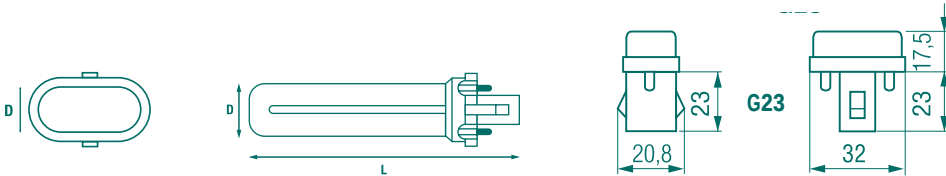
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 5W, 7W, 9W and 11W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830, White Deluxe 835, Coolwhite Deluxe 840 and Daylight Deluxe 860
- 2-pin G23 cap with integral starter
- Average rated life: 10000 hours

APPLICATIONS

- Can replace standard incandescent lamps providing a suitable lampholder/ luminaire is used
- Suitable for commercial and domestic applications

DIRECTIONS FOR USE

- For use with remote magnetic ballast
- Lyncx-S lamps are not suitable for operation on dimmer circuits



Item description Lynx-S	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
				Nominal				
Homelight Deluxe (827)								
5W/827	5	827	G23	105	28	250	50	0025206
7W/827	7	827	G23	135	28	420	50	0025200
9W/827	9	827	G23	165	28	600	50	0025201
11W/827	11	827	G23	233	28	900	50	0025202
Warmwhite Deluxe (830)								
5W/830	5	830	G23	105	28	250	50	25449
7W/830	7	830	G23	135	28	420	50	25450
9W/830	9	830	G23	165	28	600	50	25451
11W/830	11	830	G23	233	28	900	50	25452
Coolwhite Deluxe (840)								
5W/840	5	840	G23	105	28	250	50	25600
7W/840	7	840	G23	135	28	420	50	25601
9W/840	9	840	G23	165	28	600	50	25602
11W/840	11	840	G23	233	28	900	50	25603
Daylight Deluxe (860)								
7W/860	7	860	G23	135	28	420	50	25604
9W/860	9	860	G23	165	28	600	50	25605
11W/860	11	860	G23	233	28	900	50	25606

LYNX-SE

An energy efficient compact fluorescent lamp comprising two U shaped tubes and a 4 pin base without starter or capacitor.
For use with an electronic ballast or external starting device.



FEATURES

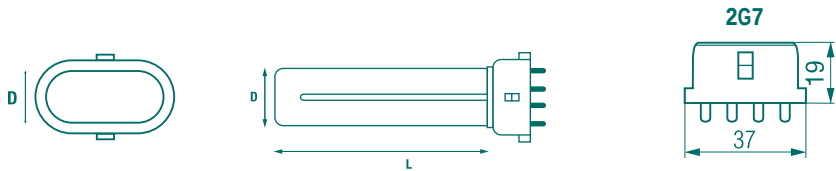
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 5W, 7W, 9W and 11W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827 and Coolwhite Deluxe 840
- 4-pin 2G7 cap for use with electronic ballast
- Average rated life: 10000 hours

APPLICATIONS

- Can replace standard incandescent lamps, providing a suitable lampholder/luminaire is used
- Suitable for commercial and domestic applications
- Emergency lighting

DIRECTIONS FOR USE

- To be operated on electronic ballasts only
- Lynx- SE lamps can be dimmed using a suitable dimmer



Item description Lynx-SE	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
				Nominal				
Homelight Deluxe (827)								
5W/827	5	827	2G7	86	28	250	50	0025623
7W/827	7	827	2G7	113	28	420	50	0025624
SE 9W/827	9	827	2G7	144,5	28	600	50	0025625
SE 11W/827	11	827	2G7	213	28	900	50	0025626
Coolwhite Deluxe (840)								
5W/840	5	840	2G7	86	28	250	50	25614
7W/840	7	840	2G7	113	28	420	50	25627
9W/840	9	840	2G7	144,5	28	600	50	25628
11W/840	11	840	2G7	213	28	900	50	25629

LYNX-D

An energy efficient compact fluorescent lamp comprising two U shaped tubes and a 2 pin base which incorporates the starter and capacitor. For use with remote magnetic ballast.



FEATURES

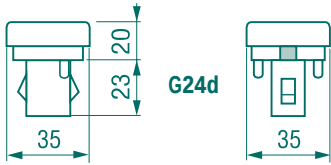
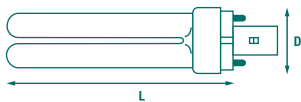
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 10W, 13W, 18W and 26W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830, White Deluxe 835, Coolwhite Deluxe 840 and Daylight Deluxe 860
- 2-pin G24d-1 base (10W and 13W) G24d-2 (18W) and G24d-3 (26W) with integral starter
- Average rated life: 10000 hours

APPLICATIONS

- Can replace standard incandescent lamps, providing a suitable lampholder/ luminaire is used
- Suitable for commercial and domestic applications

DIRECTIONS FOR USE

- For use with remote magnetic ballast
- Lynx-D lamps are not suitable for operation on dimmer circuits



Item description Lynx-D	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
Nominal								
Homelight Deluxe (827)								
10W/827	10	827	G24d-1	87	35	600	50	0025210
13W/827	13	827	G24d-1	115	35	900	50	0025211
18W/827	18	827	G24d-2	129	35	1200	50	0025150
26W/827	26	827	G24d-3	147	35	1800	50	0025154
Warmwhite Deluxe (830)								
10W/830	10	830	G24d-1	87	35	600	50	0025395
13W/830	13	830	G24d-1	115	35	900	50	0025396
18W/830	18	830	G24d-2	129	35	1200	50	0025151
26W/830	26	830	G24d-3	147	35	1800	50	0025155
Coolwhite Deluxe (840)								
10W/840	10	840	G24d-1	87	35	600	50	0025382
13W/840	13	840	G24d-1	115	35	900	50	0025383
18W/840	18	840	G24d-2	129	35	1200	50	0025152
26W/840	26	840	G24d-3	147	35	1800	50	0025156
Daylight Deluxe (860)								
10W/860	10	860	G24d-1	87	35	600	50	0025455
13W/860	13	860	G24d-1	115	35	900	50	0025456
18W/860	18	860	G24d-2	129	35	1200	50	0025153
26W/860	26	860	G24d-3	147	35	1800	50	0025157

LYNX-DE

An energy efficient compact fluorescent lamp comprising two U shaped tubes and a 4 pin base without starter or capacitor. For use with an electronic ballast or external starting device.



FEATURES

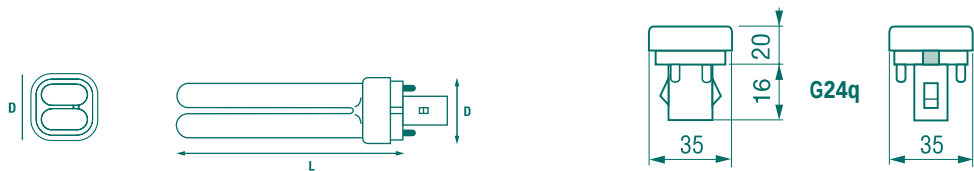
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 10W, 13W, 18W and 26W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827 and Coolwhite Deluxe 840
- 4-pin G24q-1 (10W and 13W) G24q-2 (18W) and G24q-3 (26W)
- Average rated life: 10000 hours

APPLICATIONS

- Can replace standard incandescent lamps, providing a suitable lampholder/ luminaire is used
- Suitable for commercial and domestic applications
- Emergency lighting

DIRECTIONS FOR USE

- To be operated on electronic ballasts only
- Lync-DE lamps can be dimmed using a suitable dimmer



Item description Lynx-DE	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
				Nominal				
Homelight Deluxe (827)								
10W/827	10	827	G24q-1	87	35	600	50	0025159
13W/827	13	827	G24q-1	115	35	900	50	0025160
18W/827	18	827	G24q-2	129	35	1200	50	0025140
26W/827	26	827	G24q-3	147	35	1800	50	0025143
Coolwhite Deluxe (840)								
10W/840	10	840	G24q-1	87	35	600	50	0025161
13W/840	13	840	G24q-1	115	35	900	50	0025162
18W/840	18	840	G24q-2	129	35	1200	50	0025141
26W/840	26	840	G24q-3	147	35	1800	50	0025144

LYNX-T

An energy efficient compact fluorescent lamp comprising three U shaped tubes and a 2 pin base which incorporates the starter and capacitor. The triangular arrangement of the tubes ensures near perfect 360° light distribution. For use with remote magnetic ballast.



FEATURES

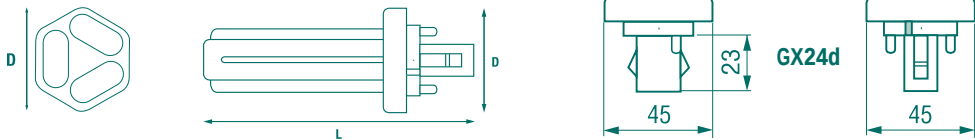
- Multi-limbed compact fluorescent lamps
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 18W and 26W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830 and Coolwhite Deluxe 840
- 2-pin GX24d-2 base (18W) GX24d-3 (26W) with integral starter
- Average rated life: 10000 hours

APPLICATIONS

- Can replace standard incandescent lamps, providing a suitable lampholder luminaire is used
- Suitable for commercial and domestic applications

DIRECTIONS FOR USE

- For use with remote magnetic ballast
- Lynx-T lamps are not suitable for operation on dimmer circuits



Item description Lynx-T	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
				Nominal				
Homelight Deluxe (827)								
18W/827	18	827	GX24d-2	120	49	1200	10	0027800
26W/827	26	827	GX24d-3	135	49	1800	10	0027810
Warmwhite Deluxe (830)								
18W/830	18	830	GX24d-2	120	49	1200	10	0027801
26W/830	26	830	GX24d-3	135	49	1800	10	0027811
Coolwhite Deluxe (840)								
18W/840	18	840	GX24d-2	120	49	1200	10	0027802
26W/840	26	840	GX24d-3	135	49	1800	10	0027812

LYNX-TE AMALGAM

Energy efficient compact fluorescent lamps comprising three U shaped tubes and a 4 pin base without starter or capacitor. The triangular arrangement of the tubes provides near perfect 360° light distribution. The use of the latest amalgam technology ensures consistent colour and high output throughout life. For use with an electronic ballast or external starting device.



FEATURES

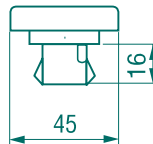
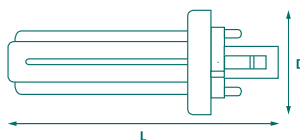
- Amalgam technology ensures consistent colour and high output throughout life
- Multi-limbed compact fluorescent lamps
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 18W, 26W, 32W and 42W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830 and Coolwhite Deluxe 840
- 4-pin GX24q-2 (18W and 26W) GX24q-3 (32W) and GX24q-4 (42W)
- Average rated life: 10000 hours

APPLICATIONS

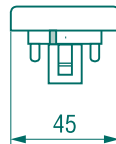
- Particularly suitable for use in the new generation of ultra compact fluorescent downlights and luminaires
- Suitable for commercial and domestic applications
- Emergency lighting

DIRECTIONS FOR USE

- To be operated on electronic ballasts only
- Orientation of the lamp does not affect performance
- Lynx-TE lamps can be dimmed using a suitable dimmer



GX24q



Item description Lynx-TE	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L Nominal	D			
Homelight Deluxe (827)								
18W/827	18	827	GX24q-2	114	49	1200	10	0027815
26W/827	26	827	GX24q-3	131	49	1800	10	0027820
32W/827	32	827	GX24q-3	153	49	2400	10	0027841
42W/827	42	827	GX24q-4	167	49	3200	10	0027843
Warmwhite Deluxe (830)								
18W/830	18	830	GX24q-2	114	49	1200	10	0027817
26W/830	26	830	GX24q-3	131	49	1800	10	0027822
32W/830	32	830	GX24q-3	153	49	2400	10	0027842
42W/830	42	830	GX24q-4	167	49	3200	10	0027844
Coolwhite Deluxe (840)								
18W/840	18	840	GX24q-2	114	49	1200	10	0027816
26W/840	26	840	GX24q-3	131	49	1800	10	0027821
32W/840	32	840	GX24q-3	153	49	2400	10	0027840
42W/840	42	840	GX24q-4	167	49	3200	10	0027845

LYNX-L

An energy efficient high performance compact fluorescent lamp particularly suitable for use in recess and surface mounted luminaires. Lynx-L lamps deliver the same light output as traditional fluorescent lamps twice the length. Comprising two parallel tubes, “kissed” at the tip with a 4 pin base without starter or capacitor. The lamp operates on conventional magnetic ballasts, with remote starter and capacitor or on electronic circuits.



FEATURES

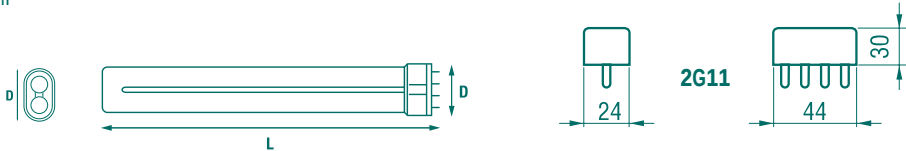
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 18W, 24W and 36W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830, White Deluxe 835, Coolwhite Deluxe 840 and Daylight Deluxe 860
- 4-pin 2G11 cap without starter or capacitor
- Suitable for use in modular ceiling luminaire 300 x 300 or 600 x 600 mm
- Average rated life: 10000 hours

APPLICATIONS

- General lighting offices, hotels, shops and public access areas

DIRECTIONS FOR USE

- To be used with magnetic ballast with remote starter and capacitor or on electronic ballasts
- Do not expose the lamp to draughty air flow
- Dimmable with suitable ballast



Item description Lynx-L	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
Homelight Deluxe (827)								
18W/827	18	827	2G11	225	38	1200	10	0025226
24W/827	24	827	2G11	320	38	1800	10	0025227
36W/827	36	827	2G11	415	38	2900	10	0025228
Warmwhite Deluxe (830)								
18W/830	18	830	2G11	225	38	1200	10	0025233
24W/830	24	830	2G11	320	38	1800	10	0025235
36W/830	36	830	2G11	415	38	2900	10	0025237
White Deluxe (835)								
18W/835	18	835	2G11	225	38	1200	10	0027908
24W/835	24	835	2G11	320	38	1800	10	0027910
36W/835	36	835	2G11	415	38	2900	10	0027912
Coolwhite Deluxe (840)								
18W/840	18	840	2G11	225	38	1200	10	0025234
24W/840	24	840	2G11	320	38	1800	10	0025236
36W/840	36	840	2G11	415	38	2900	10	0025238
Daylight Deluxe (860)								
18W/860	18	860	2G11	225	38	1200	10	0025685
24W/860	24	860	2G11	320	38	1800	10	0025686
36W/860	36	860	2G11	415	38	2900	10	0025687

LYNX-LE

An energy efficient high performance compact fluorescent lamp particularly suitable for use in recess and surface mounted luminaires. Lynx-LE lamps deliver the same light output as traditional fluorescent lamps twice the length. Comprising two parallel tubes, “kissed” at the tip with a 4 pin base without starter or capacitor. Lynx LE lamps operate on electronic circuits only.



FEATURES

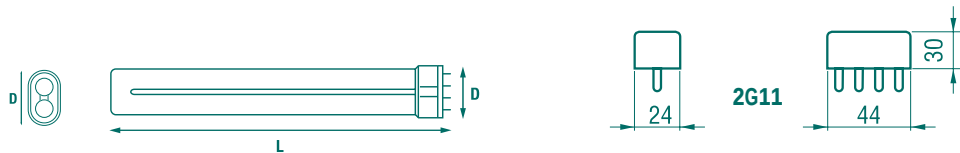
- Use considerably less power and last up to 10 times longer than incandescent lamps
- Wattages: 40W and 55W
- Excellent colour rendering (Ra85/Class1B)
- Available in colours: Homelight Deluxe 827, Warmwhite Deluxe 830, White Deluxe 835, Coolwhite Deluxe 840 and Daylight Deluxe 860
- 4-pin 2G11 cap without starter or capacitor
- Suitable for use in modular ceiling luminaires - 300 x 300 or 600 x 600 mm
- Average rated life: 10000 hours

APPLICATIONS

- General lighting offices, hotels, shops and public access areas.

DIRECTIONS FOR USE

- To be used with electronic ballast only
- Do not expose the lamp to draughty air flow
- Dimmable with suitable ballast



Item description Lynx-LE	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
Homelight Deluxe (827)								
40W/827	40	827	2G11	533	38	3500	10	0025460
55W/827	55	827	2G11	533	38	4800	10	0025463
Warmwhite Deluxe (830)								
40W/830	40	830	2G11	533	38	3500	10	0025461
55W/830	55	830	2G11	533	38	4800	10	0025464
White Deluxe (835)								
40W/835	40	835	2G11	533	38	3500	10	0027914
55W/835	55	835	2G11	533	38	4800	10	0027916
Coolwhite Deluxe (840)								
40W/840	40	840	2G11	533	38	3500	10	0025462
55W/840	55	840	2G11	533	38	4800	10	0025465
Daylight Deluxe (860)								
40W/860	40	860	2G11	533	38	3500	10	0025688
55W/860	55	860	2G11	533	38	4800	10	0025689

LYNX-F

An energy efficient compact fluorescent lamp comprising two U shaped tubes mounted flat and in parallel with a 4 pin base without starter or capacitor. The lamp operates on conventional magnetic ballasts, with remote starter and capacitor or on electronic circuits.



FEATURES

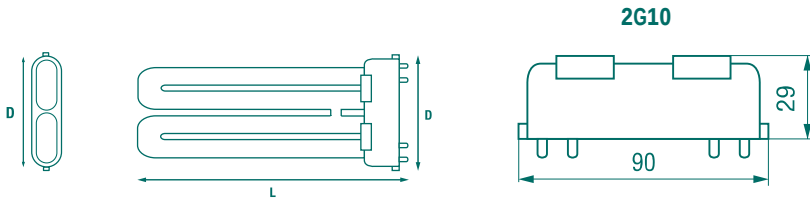
- Multi-limbed compact fluorescent lamp
- Half the length of corresponding L types, yet higher light output
- Very good colour rendering (Ra85/Class1B)
- Available in Homelight Deluxe 827, Warmwhite Deluxe 830 and Coolwhite Deluxe 840
- Average rated life: 10000 hours

APPLICATIONS

- Ideal for small, flat luminaires for wall and ceiling mounting

DIRECTIONS FOR USE

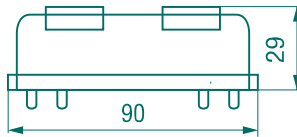
- To be used with conventional, magnetic, or electronic ballasts
- Lynx-F lamps can be dimmed using a suitable dimmer



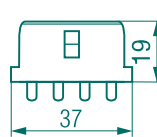
Item description Lynx-F	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
Homelight Deluxe (827)								
18W/827	18	827	2G10	122	79	1100	10	0027824
24W/827	24	827	2G10	165	79	1700	10	0027829
36W/827	36	827	2G10	217	79	2800	10	0027834
Warmwhite Deluxe (830)								
18W/830	18	830	2G10	122	79	1100	10	0027825
24W/830	24	830	2G10	165	79	1700	10	0027830
36W/830	36	830	2G10	217	79	2800	10	0027835
Coolwhite Deluxe (840)								
18W/840	18	840	2G10	122	79	1100	10	0027826
24W/840	24	840	2G10	165	79	1700	10	0027831
36W/840	36	840	2G10	217	79	2800	10	0027836

LAMP CAPS

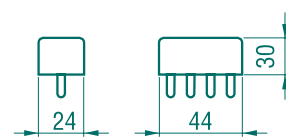
2G10



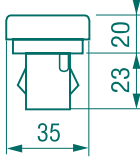
2G7



2G11



G24



d-1



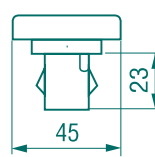
d-2



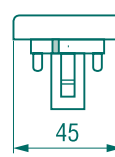
d-3



GX24



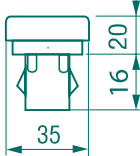
d-2



d-3



G24



q-1



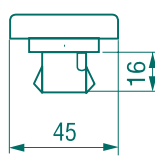
q-2



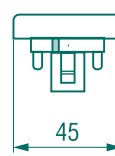
q-3



GX24



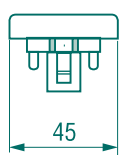
q-2



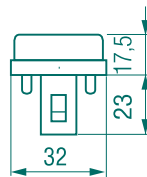
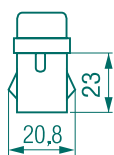
q-3



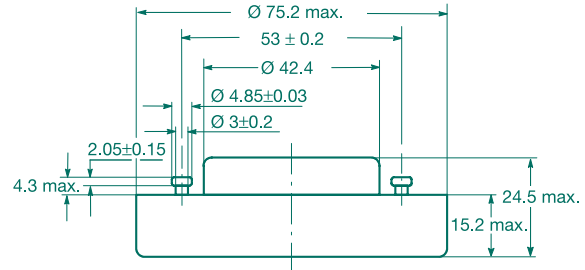
q-4



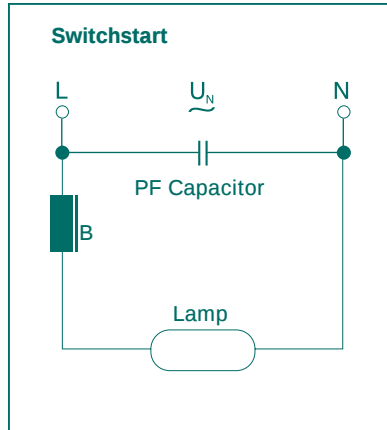
G23



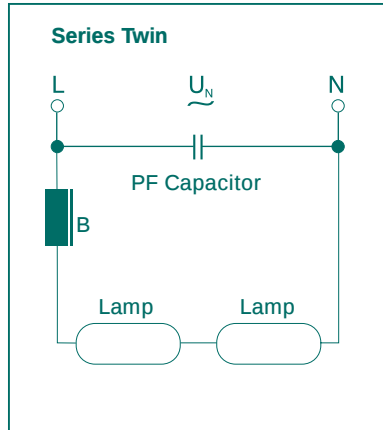
GX53



CIRCUIT DIAGRAMS

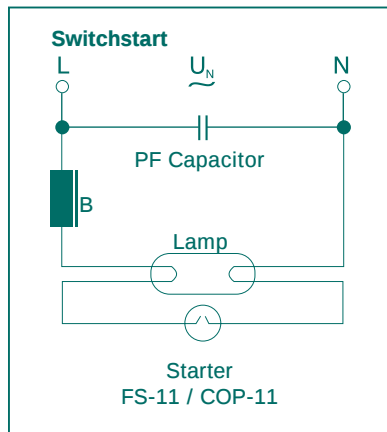


Switchstart
with conventional ballast
Lynx-S 5W, 7W, 9W, 11W
Lynx-D 10W, 13W, 18W, 26W
Lynx-T 18W, 26W

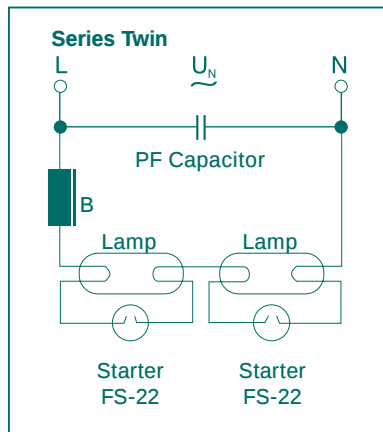


Series Twin
with conventional ballast
Lynx-S 5W, 7W, 9W

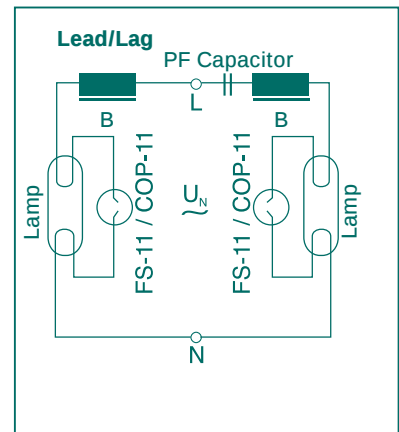
L = External conductor L_1, L_2, L_3
N = Median conductor MP
 U_n = Power supply 230V
B = Ballast



Switchstart
with conventional ballast and
FS-11 starter or COP-11 safety starter
Lynx-L 18W, 24W, 36W



Series Twin
with conventional ballast only with
2 x FS-22 starter
Lynx-L 18W



Lead/Lag
with conventional ballast with
FS-11 starter or with COP-11 safety starter
Lynx-L 18W, 24W, 36W

COMPACT FLUORESCENT LAMPS COMPARISON TABLE

Sylvania	Philips	Osram
Micro-Lynx F	-	-
Mini-Lynx Ambience	Ecotone Ambience	Dulux-EL Classic
Mini-Lynx Candle	Ambiance Ecotone	Dulux-EL Classic E14
Mini-Lynx Longlife	Ecotone Professional	Dulux-EL Longlife
Mini-Lynx Economy	Ecotone Economy	Dulux-EL Economy
Mini-Lynx Automatic	-	Dulux-EI Sensor
Lynx-S	PLS	Dulux-S
Lynx-SE	PLS/4p	Dulux-SE
Lynx-D	PLC	Dulux-D
Lynx-DE	PLC/4p	Dulux-DE
Lynx-L	PLL	Dulux-L
Lynx-LE	PLL	Dulux-L
Lynx-T	PLT	Dulux-T
Lynx-TE	PLT/4p	Dulux-T/E
Lynx-F	-	Dulux-F

T5 FHE

A new generation of triphosphor High Efficiency slim linear fluorescent tubes offering superior colorimetric, photometric and lumen maintenance performance. Particularly suitable for use in the new low profile recessed and suspended luminaires and modular systems.

1. FHE - Fluorescent High Efficiency is the optimised solution for efficient direct lighting.



FEATURES

- High lamp efficacy: up to 104 lm/W
- Energy savings: up to 25% compared to T8 tubes in appropriate luminaires
- Almost constant lumen maintenance throughout the entire life of the lamp due to Luxline Plus triphosphor technology
- High colour rendering (Ra85/Class1B)
- For electronic ballast operation only giving greater efficiency and advantages in improved starting and life performance
- Optimised ambient operating temperature at 35° C (max lumen output) allows compact luminaire designs
- Reduced storage volume and transportation costs
- Average rated life: up to 20000 hours

APPLICATIONS

- Commercial and industrial areas
- Offices
- Hotels
- Shops
- Schools



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FHE 14W/830	14	Warmwhite Deluxe	G5	549	16	1B	1350	25	0002760
FHE 14W/840	14	Coolwhite Deluxe	G5	549	16	1B	1350	25	0002761
FHE 14W/860	14	Daylight Deluxe	G5	549	16	1B	1250	25	0002762
FHE 21W/830	21	Warmwhite Deluxe	G5	849	16	1B	2100	25	0002763
FHE 21W/840	21	Coolwhite Deluxe	G5	849	16	1B	2100	25	0002764
FHE 21W/860	21	Daylight Deluxe	G5	849	16	1B	1950	25	0002765
FHE 28W/830	28	Warmwhite Deluxe	G5	1149	16	1B	2900	25	0002766
FHE 28W/840	28	Coolwhite Deluxe	G5	1149	16	1B	2900	25	0002767
FHE 28W/860	28	Daylight Deluxe	G5	1149	16	1B	2700	25	0002768
FHE 35W/830	35	Warmwhite Deluxe	G5	1449	16	1B	3650	25	0002769
FHE 35W/840	35	Coolwhite Deluxe	G5	1449	16	1B	3650	25	0002770
FHE 35W/860	35	Daylight Deluxe	G5	1449	16	1B	3400	25	0002771

T5 FHO

A new generation of triphosphor High Output slim linear fluorescent tubes offering superior colorimetric, photometric and lumen maintenance performance. Particularly suitable for use in the new low profile recessed and suspended luminaires and modular systems.

2. FHO - Fluorescent High Output is the optimised solution for indirect lighting.

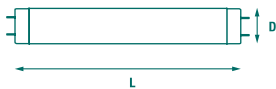


FEATURES

- Higher lumen output: from 1850 lm to 4900 lm
- Almost constant lumen maintenance throughout the entire life of the lamp due to Luxline Plus triphosphor technology
- High colour rendering (Ra85/Class1B)
- For electronic ballast operation only giving greater efficiency and advantages in improved starting and life performance
- Optimised ambient operating temperature at 35° C (max lumen output) allows compact luminaire designs
- Reduced storage volume and transportation costs
- Average rated life: up to 20000 hours

APPLICATIONS

- Industrial and commercial lighting
- Shops
- Department stores
- Restaurants and reception areas



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FHO 24W/830	24	Warmwhite Deluxe	G5	549	16	1B	2000	25	0002772
FHO 24W/840	24	Coolwhite Deluxe	G5	549	16	1B	2000	25	0002773
FHO 24W/860	24	Daylight Deluxe	G5	549	16	1B	1850	25	0002774
FHO 39W/830	39	Warmwhite Deluxe	G5	849	16	1B	3500	25	0002775
FHO 39W/840	39	Coolwhite Deluxe	G5	849	16	1B	3500	25	0002776
FHO 39W/860	39	Daylight Deluxe	G5	849	16	1B	3250	25	0002779
FHO 49W/830	49	Warmwhite Deluxe	G5	1449	16	1B	4900	25	0002778
FHO 49W/840	49	Coolwhite Deluxe	G5	1449	16	1B	4900	25	0002777
FHO 49W/860	49	Daylight Deluxe	G5	1449	16	1B	4650	25	0002780
FHO 54W/830	54	Warmwhite Deluxe	G5	1149	16	1B	5000	25	0002781
FHO 54W/840	54	Coolwhite Deluxe	G5	1149	16	1B	5000	25	0002782
FHO 54W/860	54	Daylight Deluxe	G5	1149	16	1B	4550	25	0002783

T5 STANDARD

A comprehensive range of 16mm diameter halophosphor fluorescent tubes available in various lengths and colours. Particularly suitable for use where space is limited, in signs and in emergency lighting luminaires.

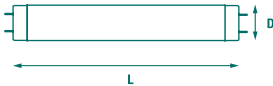


FEATURES

- Quality fluorescent tubes according to IEC81
- Choice of colours for different applications
- High lumen performance

APPLICATIONS

- In furniture, showcases, bathroom cabinets, transportation and leisure applications
- Emergency lighting luminaires



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F4W/154	4	Daylight	G5	136	16	3	115	25	0000001
F4W/135	4	White	G5	136	16	3	140	25	0000002
F4W/133	4	Coolwhite	G5	136	16	3	140	25	0000003
F4W/129	4	Warmwhite	G5	136	16	3	140	25	0000004
F6W/154	6	Daylight	G5	212	16	3	240	25	0000011
F6W/135	6	White	G5	212	16	3	280	25	0000012
F6W/133	6	Coolwhite	G5	212	16	3	280	25	0000013
F6W/129	6	Warmwhite	G5	212	16	3	280	25	0000014
F8W/154	8	Daylight	G5	288	16	3	340	25	0000019
F8W/135	8	White	G5	288	16	3	400	25	0000020
F8W/133	8	Coolwhite	G5	288	16	3	400	25	0000021
F8W/129	8	Warmwhite	G5	288	16	3	400	25	0000382
F13W/154	13	Daylight	G5	517	16	3	750	25	0000029
F13W/135	13	White	G5	517	16	3	880	25	0000030
F13W/133	13	Coolwhite	G5	517	16	3	880	25	0000031
F13W/129	13	Warmwhite	G5	517	16	3	880	25	0000032

T8 STANDARD

A comprehensive range of halophosphor 26 mm diameter fluorescent tubes available in various lengths and colours.

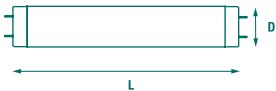


FEATURES

- For the replacement of T12 38 mm tubes offering the same photometrics but with a 10% saving in energy

APPLICATIONS

- Industrial and commercial lighting
- Supermarkets, warehouses and street lighting
- For new installations use "Luxline Plus" Triphosphor tubes - see page 103



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
Standard:									
F18W/133	18	Cool White	G13	590	26	2B	1150	25	0001406
F18W/125	18	Universal White	G13	590	26	2A	1100	25	0001407
F18W/135	18	White	G13	590	26	3	1150	25	0001408
F18W/129	18	Warmwhite	G13	590	26	3	1150	25	0001409
F18W/154	18	Daylight	G13	590	26	2A	1050	25	0001410
F36W/125/1M	36	Universal White	G13	977	26	2A	2500	25	0001508
F38W/125	38	Universal White	G13	1047	26	2A	2600	25	0001784
F36W/133	36	Cool White	G13	1200	26	2B	2850	25	0001416
F36W/125	36	Universal White	G13	1200	26	2A	2600	25	0001417
F36W/135	36	White	G13	1200	26	3	2850	25	0001418
F36W/129	36	Warmwhite	G13	1200	26	3	2850	25	0001419
F36W/154	36	Daylight	G13	1200	26	2A	2500	25	0001420
F58W/133	58	Cool White	G13	1500	26	2B	4600	25	0001436
F58W/125	58	Universal White	G13	1500	26	2A	4100	25	0001437
F58W/135	58	White	G13	1500	26	3	4600	25	0001438
F58W/129	58	Warmwhite	G13	1500	26	3	4600	25	0001439
F58W/154	58	Daylight	G13	1500	26	2A	4000	25	0001440
F70W/133	70	Cool White	G13	1764	26	2B	5700	25	0001090
F70W/135	70	White	G13	1764	26	3	5800	25	0001091
F70W/129	70	Warmwhite	G13	1764	26	3	5800	25	0001092

T8 SPECIAL LENGTH

A range of 26 mm diameter fluorescent tubes available in various special lengths and standard colours.



FEATURES

- For special length luminaires

APPLICATIONS

- In luminaires of non-standard dimensions
- For new installation use "Luxline Plus" Triphosphor tubes - see page 103



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
Special Lengths :									
F14W/154	14	Daylight	G13	361	26	2A	650	25	0000037
F14W/133	14	Cool White	G13	361	26	2B	700	25	0000039
F14W/129	14	Warmwhite	G13	361	26	3	700	25	0000040
F15W/154	15	Daylight	G13	438	26	2A	750	25	0000062
F15W/135	15	White	G13	438	26	3	900	25	0000063
F15W/133	15	Cool White	G13	438	26	2B	900	25	0000064
F15W/129	15	Warmwhite	G13	438	26	3	900	25	0000065
F16W/133	16	Cool White	G13	720	26	2B	1100	25	0000860
F16W/129	16	Warmwhite	G13	720	26	3	1100	25	0000861
F16W/135	16	White	G13	720	26	3	1100	25	0000868
F25W/28"/154	25	Daylight	G13	691	26	2A	1500	25	0001767
F25W/28"/133	25	Cool White	G13	691	26	2B	1700	25	0001768
F25W/30"/133	25	Cool White	G13	742	26	2B	1800	25	0001085
F25W/30"/129	25	Warmwhite	G13	742	26	3	1800	25	0001086
F25W/33"/154	25	Daylight	G13	818	26	2A	1700	25	0001769
F25W/33"/133	25	Cool White	G13	818	26	2B	1900	25	0001770
F30W/154	30	Daylight	G13	895	26	2A	1900	25	0000142
F30W/135	30	White	G13	895	26	3	2200	25	0000143
F30W/133	30	Cool White	G13	895	26	2B	2200	25	0000144
F30W/129	30	Warmwhite	G13	895	26	3	2200	25	0000145

T8 LUXLINE PLUS

A new generation of triphosphor coated fluorescent tubes. Using T8 triphosphor tubes in place of T12 and T8 halophosphor tubes increases light levels and extends lamp life, up to 20000 hours when used with electronic control gear, improves colour rendering performance and reduces maintenance and energy costs.



FEATURES

- High light output; almost constant lumen maintenance throughout life
- High colour rendering (Ra85/Class 1B)
- Consumes 10% less energy than comparable 38mm fluorescent tubes
- Excellent performance (lm/W) and increased luminaire efficiency (5 to 10%)
- Operates on conventional and electronic ballast

APPLICATIONS

- Industrial and commercial lighting (stores, offices, industrial areas, supermarkets)
- Special lengths in luminaires with non-standard dimensions, displays, furniture lighting, shops, bathroom luminaires



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F18W/840	18	Coolwhite Deluxe	G13	590	26	1B	1350	25	0001500
F18W/830	18	Warmwhite Deluxe	G13	590	26	1B	1350	25	0001501
F18W/860	18	Daylight Deluxe	G13	590	26	1B	1300	25	0001502
F18W/850	18	Daylight Deluxe	G13	590	26	1B	1300	25	0002960
F18W/835	18	White Deluxe	G13	590	26	1B	1350	25	0000580
F18W/827	18	Homelight Deluxe	G13	590	26	1B	1350	25	0001505
F36W/840	36	Coolwhite Deluxe	G13	1200	26	1B	3350	25	0001510
F36W/830	36	Warmwhite Deluxe	G13	1200	26	1B	3350	25	0001511
F36W/860	36	Daylight Deluxe	G13	1200	26	1B	3250	25	0001512
F36W/850	36	Daylight Deluxe	G13	1200	26	1B	3250	25	0002961
F36W/827	36	Homelight Deluxe	G13	1200	26	1B	3350	25	0001514
F36W/835	36	White Deluxe	G13	1200	26	1B	3350	25	0000578
F58W/840	58	Coolwhite Deluxe	G13	1500	26	1B	5200	25	0001530
F58W/830	58	Warmwhite Deluxe	G13	1500	26	1B	5200	25	0001531
F58W/860	58	Daylight Deluxe	G13	1500	26	1B	5000	25	0001532
F58W/850	58	Daylight Deluxe	G13	1500	26	1B	5000	25	0002962
F58W/827	58	Homelight Deluxe	G13	1500	26	1B	5200	25	0001535
F58W/835	58	White Deluxe	G13	1500	26	1B	5200	25	0001394
F70W/830	70	Warmwhite Deluxe	G13	1764	26	1B	6050	25	0001093
F70W/840	70	Coolwhite Deluxe	G13	1764	26	1B	6050	25	0001094
F70W/860	70	Daylight Deluxe	G13	1764	26	1B	5700	25	0001095
F70W/835	70	White Deluxe	G13	1764	26	1B	6050	25	0000581

T8 LUXLINE PLUS SPECIAL LENGTH

A new generation of special length triphosphor coated fluorescent tubes. Using triphosphor tubes in place of T12 and T8 halophosphor tubes increases light levels, and extends lamp life, up to 20000 hours when used with electronic control gear, improves colour rendering performance and reduces maintenance and energy costs.



FEATURES

- High light output; almost constant lumen maintenance throughout life
- High colour rendering (Ra85/Class1B)
- Consumes 10% less energy than comparable 38mm fluorescent tubes
- Excellent performance (lm/W) and increased luminaire efficiency (5 to 10%)
- Operates on conventional and electronic ballast
- The best choice for new installations and tube replacement

APPLICATIONS

- In luminaires of non-standard lengths
- In display areas, furniture lighting, shops, bathroom luminaires etc.
- Wherever excellent colour rendering and performance (lm/W) are demanded



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
Special Lengths :									
F15W/840	15	Coolwhite Deluxe	G13	438	26	1B	950	25	0000567
F15W/860	15	Daylight Deluxe	G13	438	26	1B	900	25	0000947
F15W/830	15	Warmwhite Deluxe	G13	438	26	1B	950	25	0001853
F15W/827	15	Homelight Deluxe	G13	438	26	1B	950	25	0001850
F30W/860	30	Daylight Deluxe	G13	895	26	1B	2350	25	0001078
F30W/840	30	Coolwhite Deluxe	G13	895	26	1B	2400	25	0001080
F30W/830	30	Warmwhite Deluxe	G13	895	26	1B	2400	25	0001079
F30W/827	30	Homelight Deluxe	G13	895	26	1B	2400	25	0001680
F38W/830	38	Warmwhite Deluxe	G13	1047	26	1B	3200	25	0001521
F38W/840	38	Coolwhite Deluxe	G13	1047	26	1B	3200	25	0001520

T8 - LUXLINE PLUS ES8 NEW GENERATION TRIPHOSPHOR LAMPS

T8 Triphosphor lamps in reduced length for the use in ES8 lighting systems to fit exactly into modular ceiling systems.



FEATURES

- Energy savings up to 17% over standard length T8 lamps
- Average rated lamp life of 16000 hrs with magnetic ballast
- Excellent lumen maintenance of 95% after 10000 hrs
- Operates on magnetic, low loss and electronic ballasts
- Fits exactly into modular ceiling systems (600x600mm and 1200x300 mm)

APPLICATIONS

- All lighting projects with recessed fixtures in modular ceiling grids
- Concrete ceilings
- All refurbishments of commercial lighting projects
- T8 projects where additional energy savings are required but where budget cannot justify electronic ballasts



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
SF15W/13W(ECG)/830	15/13*	Warmwhite Deluxe	G13	549	26	1B	1150	25	0001402
SF15W/13W(ECG)/840	15/13*	Coolwhite Deluxe	G13	549	26	1B	1150	25	0001423
SF33W/30W(ECG)/830	33/30*	Warmwhite Deluxe	G13	1149	26	1B	3050	25	0001442
SF33W/30W(ECG)/840	33/30*	Coolwhite Deluxe	G13	1149	26	1B	3050	25	0001443

* Wattage reduction when operated on dedicated ES8 electronic ballast

T8 ACTIVA

A range of full-spectrum high colour rendering lamps with daylight characteristics. Excellent lamps for use where colour judgement is critical.



FEATURES

- Excellent colour rendering (Ra98/Class 1A)
- Colour temperature: 6500 K

APPLICATIONS

- Where colour judgement is critical such as in the fabric, printing and graphics and painting industries
- Windowless offices and rooms, hotel and bank lobbies
- Also understood to be of therapeutic value in the treatment of Seasonal Affective Disorder or so called "Winter Depression"



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F15W/172 Activa	15	Activa	G13	438	26	1A	700	25	0002672
F18W/172 Activa	18	Activa	G13	590	26	1A	1000	25	0002218
F36W/172 Activa	36	Activa	G13	1200	26	1A	2300	25	0002219
F58W/172 Activa	58	Activa	G13	1500	26	1A	3700	25	0002220
F70W/172 Activa	70	Activa	G13	1764	26	1A	4600	25	0002188

T8 GOURMET

A range of lamps developed to display meat products at their best by highlighting their natural red colour making them more appealing.



FEATURES

- Replacement for standard fluorescent tubes
- Excellent colour rendering (Class 1B) with a colour temperature of 3700 K
- The perfect lighting for meat presentation

APPLICATIONS

- For lighting red meat in supermarkets, butcher shops and restaurants



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F18W/175	18	Gourmet	G13	590	26	1B	650	25	0001810
F30W/175	30	Gourmet	G13	895	26	1B	1100	25	0001971
F36W/175	36	Gourmet	G13	1200	26	1B	1500	25	0001811
F58W/175	58	Gourmet	G13	1500	26	1B	2400	25	0001812

FLUORESCENT TUBES

T8 OCTRON

A range of T8 fluorescent tubes for use with Octron HF electronic ballasts, offering maximum energy efficiency, full light output and good colour rendition.



FEATURES

- High performance fluorescent tubes
- Maximum energy efficiency
- Good colour rendition
- High light output
- Almost constant lumen maintenance throughout life
- Available in triphosphor colours: 830, 840 and 860

APPLICATIONS

- Offices
- Conference rooms
- Stores
- Hallways

DIRECTIONS FOR USE

- Use only a dedicated Octron HF Electronic ballast



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FO17W/41K 840	17	Coolwhite Deluxe	G13	590	26	1B	1400	25	0001591
FO17W/65K 860	17	Daylight Deluxe	G13	590	26	1B	1250	25	0001592
FO32W/31K 830	32	Warmwhite Deluxe	G13	1200	26	1B	2900	25	0001700
FO32W/41K 840	32	Coolwhite Deluxe	G13	1200	26	1B	2900	25	0001701
FO32W/65K 154	32	Daylight	G13	1200	26	2A	2100	25	0002336

T12 STANDARD

An extensive range of standard fluorescent tubes available in various lengths and colours.



FEATURES

- High quality standard fluorescent tubes for existing installations
- Choice of colours for different applications

APPLICATIONS

- In luminaires and installations where T8 Energy Saver tubes are not suitable
- For street lighting and in open luminaires
- RS = Rapid Start in accordance with EN 60081



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F20W/133 - RS	20	Cool White	G13	590	38	2B	1200	25	0001550
F20W/129 - RS	20	Warmwhite	G13	590	38	3	1200	25	0001551
F20W/125 - RS	20	Universal White	G13	590	38	2A	1050	25	0001552
F20W/154 - RS	20	Daylight	G13	590	38	2A	1050	25	0001559
F20W/135 - RS	20	White	G13	590	38	3	1200	25	0001562
F25W/1M/154 - RS	25	Daylight	G13	970	38	2A	1600	25	0000391
F25W/1M/133 - RS	25	Cool White	G13	970	38	2B	1800	25	0000393
F40W/1M/154 - RS	40	Daylight	G13	970	38	2A	2500	25	0000397
F40W/1M/133 - RS	40	Cool White	G13	970	38	2B	2800	25	0000399
F40W/1M/125 - RS	40	Universal White	G13	970	38	2A	2400	25	0000403
F40W/133 - RS	40	Cool White	G13	1200	38	2B	3000	25	0001553
F40W/129 - RS	40	Warmwhite	G13	1200	38	3	3000	25	0001554
F40W/125 - RS	40	Universal White	G13	1200	38	2A	2500	25	0001555
F40W/154 - RS	40	Daylight	G13	1200	38	2A	2500	25	0001560
F40W/135 - RS	40	White	G13	1200	38	3	3000	25	0001563
F65W/133 - RS	65	Cool White	G13	1500	38	2B	4800	25	0001556
F65W/129 - RS	65	Warmwhite	G13	1500	38	3	4800	25	0001557
F65W/154 - RS	65	Daylight	G13	1500	38	2A	4200	25	0001561
F65W/125 - RS	65	Universal White	G13	1500	38	2A	4000	25	0001558
F65/80W/154 - RS	65	Daylight	G13	1500	38	2A	4800	25	0000443
F65/80W/135 - RS	65	White	G13	1500	38	3	5500	25	0000444
F65/80W/133 - RS	65	Cool White	G13	1500	38	2B	5500	25	0000445
F65/80W/129 - RS	65	Warmwhite	G13	1500	38	3	5500	25	0000446
F75/85W/135	85	White	G13	1764	38	3	6400	25	0001008
F75/85W/129	85	Warmwhite	G13	1764	38	3	6400	25	0001009
F75/85W/133	85	Cool White	G13	1764	38	2B	6400	25	0001017
F75/85W/154	85	Daylight	G13	1764	38	2A	5300	25	0001138
F100W/133	100	Cool White	G13	2400	38	2B	8450	20	0001027
F100W/135	100	White	G13	2400	38	3	8600	20	0001028
F125W/135	125	White	G13	2400	38	3	9500	20	0001038
F125W/D133 UK	125	Cool White	G13	2400	38	2B	9300	20	0001041

FLUORESCENT TUBES

T12 REFLECTOR

A range of specialist 38 mm fluorescent tube with a reflector coating covering almost 66% of the tube's circumference and directing up to 75% of the light output through the non-coated 135° aperture.



FEATURES

- Greater directional control of light
- Approximately 75% of the available light is directed through a beam angle of 135°
- Available in halophosphor colour:
Cool White 133 (4300 K)

APPLICATIONS

- Mainly for specialist industrial applications or in sign lighting



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FR40W/133 - RS	40	Cool White	G13	1200	38	2B	3000	25	0001538
FR65W/133 - RS	65	Cool White	G13	1500	38	2B	4800	25	0001542

T12 IRS

A range of 38 mm Rapid Start fluorescent tubes with a resistor cap and 3.6V electrodes guaranteeing immediate flicker-free starting.



FEATURES

- Flicker free starting
- No starter required-lamp operates on a rapid start or semi-resonant ballast
- Lamp electrode is pre-heated by a separate transformer in the operating circuit (3,6V)

APPLICATIONS

- Lighting systems where soft start and flicker free starting is required



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F20W/133 - IRS	20	Cool White	G13	590	38	2B	1200	25	0000423
F20W/154 - IRS	20	Daylight	G13	590	38	2A	1050	25	0000421
F20W/129 - IRS	20	Warmwhite	G13	590	38	3	1200	25	0000424
F40W/133 - IRS	40	Cool White	G13	1200	38	2B	3000	25	0000430
F40W/154 - IRS	40	Daylight	G13	1200	38	2A	2500	25	0000428
F40W/129 - IRS	40	Warmwhite	G13	1200	38	3	3000	25	0000431
F65W/133 - IRS	65	Cool White	G13	1500	38	2B	4800	25	0000438

FLUORESCENT TUBES

T12 VERY HIGH OUTPUT (VHO) AND HIGH OUTPUT (HO)

A range of 38 mm tubes with higher power loading and higher light output per unit length compared to standard tubes.



FEATURES

- High lumen output
- No starter required, flicker free starting
- Special vapour pressure control centres at each end of the lamp maintain efficient operating conditions
- Maximum light output at low ambient temperature

APPLICATIONS

- Extremely efficient in applications with low average ambient temperatures



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F48T12/CW/VHO	115	Cool White	R17d	1166	38	2B	6600	30	0000224
F72T12/CW/VHO	160	Cool White	R17d	1776	38	2B	10600	15	0000269
F96T12/CW/VHO	215	Cool White	R17d	2385	38	2B	14000	15	0000307
F48T12/CW/HO	60	Cool White	R17d	1166	38	2B	4050	30	0000218
F72T12/CW/HO	85	Cool White	R17d	1776	38	2B	6250	15	0000263
F96T12/CW/HO	110	Cool White	R17d	2385	38	2B	9000	15	0000300

T12 SLIMLINE

A range of single pin, longer and quick starting fluorescent tubes requiring special magnetic ballasts.



FEATURES

- Operate without the use of a starter
- Can be operated on different currents and wattages
- Single-pin Fa8 caps

APPLICATIONS

- General lighting in special applications (refrigerated food displays etc.)



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
F72T12/CW	55	Cool White	Fa8	1760	38	2B	4500	15	0000255
F96T12/CW	75	Cool White	Fa8	2370	38	2B	6300	15	0000291

CIRCULAR

A range of circular halophosphor fluorescent tubes for use in round or square shaped fixtures.

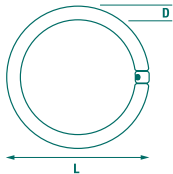


FEATURES

- Available in four wattages: 22W, 32W, 40W and 60W
- Available in colours: Coolwhite (133) Warmwhite (129)
- 4 Pin G10q cap
- Average rated life: 10000 hours

APPLICATIONS

- For round or square shaped fixtures
- For commercial and domestic lighting



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FC22W/154	22	Daylight	G10q	216	29	2A	1000	12	0000472
FC22W/133	22	Cool White	G10q	216	29	2B	1100	12	0000474
FC22W/129	22	Warmwhite	G10q	216	29	3	1100	12	0000475
FC22W/125	22	Universal White	G10q	216	29	2A	1000	12	0000478
FC32W/154	32	Daylight	G10q	305	32	2A	1700	12	0000482
FC32W/133	32	Cool White	G10q	305	32	2B	2000	12	0000484
FC32W/129	32	Warmwhite	G10q	305	32	3	2000	12	0000485
FC32W/125	32	Universal White	G10q	305	32	2A	1700	12	0000488
FC40W/154	40	Daylight	G10q	406	32	2A	2400	12	0000491
FC40W/133	40	Cool White	G10q	406	32	2B	2800	12	0000493
FC40W/129	40	Warmwhite	G10q	406	32	3	2800	12	0000494
FC40W/125	40	Universal White	G10q	406	32	2A	2300	12	0000497
FC60W/129	60	Warmwhite	G10q	406	32	3	3650	12	0001065

T8 U SHAPED

Standard U-shaped halophosphor fluorescent tubes for rectangular - shaped luminaires.



FEATURES

- Compact U-shape

APPLICATIONS

- For rectangular-shaped luminaires, generally used in domestic lighting
- Signs and displays



Item description	Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light output lm	Packing Quantity	Ordering Code
				L	D				
FU18W/125	18	Universal White	G13	310	26	2A	1000	24	0000510
FU36W/125	36	Universal White	G13	607	26	2A	2400	12	0000511
FU58W/125	58	Universal White	G13	765	26	2A	3650	12	0000512

GRO-LUX

A range of fluorescent tubes that assist plant growth in locations with insufficient daylight.

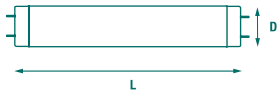


FEATURES

- High level of blue and red radiation helps promote healthy plant growth
- Strengthens the natural colours of aquatic plants and fish in aquariums

APPLICATIONS

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



Packaging Note: The sleeve pictured is for retail sales.

Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F8W/GRO	8	Gro-Lux	G5	288	16	25	0000026
F13W/GRO	13	Gro-Lux	G5	517	16	25	0000370
F14W/GRO	14	Gro-Lux	G13	361	26	25	0000043
F15W/GRO	15	Gro-Lux	G13	438	26	25	0000069
F18W/GRO	18	Gro-Lux	G13	590	26	25	0001523
F25W/30"/GRO	25	Gro-Lux	G13	742	26	25	0001679
F30W/GRO	30	Gro-Lux	G13	895	26	25	0000150
F36W/GRO	36	Gro-Lux	G13	1200	26	25	0001524
F38W/GRO	38	Gro-Lux	G13	1047	26	25	0002213
F58W/GRO	58	Gro-Lux	G13	1500	26	25	0001525
F20W/GRO	20	Gro-Lux	G13	590	38	25	0000462

T8 AQUASTAR

A range of 10.000 K tubes developed to promote the growth of coral and aquatic plants by simulating lighting conditions found in their natural environment.



FEATURES

- Light colour: 10,000 Kelvin (simulating the tropical light spectrum)
- Promotes the growth of coral and aquatic plants through natural red and blue sections of the light spectrum
- Excellent lighting performance

APPLICATIONS

- For all biological organisms in fresh and marine water aquariums

Packaging Note: The sleeve pictured is for retail sales.



Item description	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
F15W/174 Aquastar	15	Aquastar	G13	438	26	650	25	0002224
F18W/174 Aquastar	18	Aquastar	G13	590	26	900	25	0002221
F25W/30"/174 Aquastar	25	Aquastar	G13	742	26	1500	25	0002226
F30W/174 Aquastar	30	Aquastar	G13	895	26	1700	25	0002225
F36W/174 Aquastar	36	Aquastar	G13	1200	26	2200	25	0002222
F38W/174 Aquastar	38	Aquastar	G13	1047	26	2100	25	0002185
F58W/174 Aquastar	58	Aquastar	G13	1500	26	3550	25	0002223

T8 DAYLIGHTSTAR

See fish and plants in fresh water aquariums in their natural colours with this 5000 K triphosphor full spectrum daylight tube.



FEATURES

- Reduces algae growth through a special UV-STOP protective sleeve
- Allows fish and plants to be seen in their true colours

APPLICATIONS

- For use in fresh water aquariums



Packaging Note: The sleeve pictured is for retail sales.

Item description	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
F15W/5000K	15	Daylightstar	G13	438	26	900	10	0000715
F18W/5000K	18	Daylightstar	G13	590	26	1300	10	0000716
F30W/5000K	30	Daylightstar	G13	895	26	2350	10	0000717
F36W/5000K	36	Daylightstar	G13	1200	26	3250	10	0000718

T8 - CORALSTAR

These lamps simulate coral reef natural lighting at 6-10m tank depth and support coral growth in marine water aquariums.



FEATURES

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

APPLICATIONS

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



Packaging Note: The sleeve pictured is for retail sales.

Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F18W/ACTINIC	18	Coralstar	G13	590	26	10	0000719
F25W/30"/ACTINIC	25	Coralstar	G13	742	26	10	0000720
F30W/ACTINIC	30	Coralstar	G13	895	26	10	0000725
F36W/ACTINIC	36	Coralstar	G13	1200	26	10	0000726
F38W/ACTINIC	38	Coralstar	G13	1047	26	10	0000721

FLUORESCENT TUBES

T8 REPTISTAR TERRARIUMS

Lamps which improve the natural appearance of reptiles in terrariums and aid vitamin D3 production by providing ideal proportions of UVA & UVB light.



FEATURES

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

APPLICATIONS

- For the artificial lighting of reptiles in terrariums



Packaging Note: The sleeve pictured is for retail sales.

Item description	Watt	Colour	Cap	Dimensions (mm)		Light output lm	Packing Quantity	Ordering Code
				L	D			
F15W/REPTISTAR	15	Reptistar	G13	438	26	300	10	0000731
F18W/REPTISTAR	18	Reptistar	G13	590	26	450	10	0000732
F30W/REPTISTAR	30	Reptistar	G13	895	26	700	10	0000733

T8 COLOURED

Standard halophosphor tubes with a coloured coating for special colour effects.

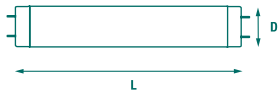


FEATURES

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

APPLICATIONS

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



Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F18W/T8/R	18	Red	G13	590	26	25	0002560
F18W/T8/Y	18	Yellow	G13	590	26	25	0002561
F18W/T8/G	18	Green	G13	590	26	25	0002562
F18W/T8/B	18	Blue	G13	590	26	25	0002563
F36W/T8/R	36	Red	G13	1200	26	25	0002564
F36W/T8/Y	36	Yellow	G13	1200	26	25	0002565
F36W/T8/G	36	Green	G13	1200	26	25	0002566
F36W/T8/B	36	Blue	G13	1200	26	25	0002567

FLUORESCENT TUBES

BLACKLIGHT (BL350)

A range of UVA fluorescent tubes developed to attract flies and other airborne insects towards insect traps.



FEATURES

- These tubes emit highly concentrated radiation between 315 nm and 400 nm (at peak 352 nm)
- Same shape, structural and electrical characteristics and control circuits as standard T12 and T8 fluorescent tubes

APPLICATIONS

- For attracting flies and other airborne insects
- Photosensitization and photochemical reactions



Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F4W/T5/BL	4	Blacklight 350	G5	136	16	20	0000007
F6W/T5/BL	6	Blacklight 350	G5	212	16	25	0000017
F8W/T5/BL	8	Blacklight 350	G5	288	16	25	0000023
F15W/T8/BL	15	Blacklight 350	G13	438	26	25	0000076
F20W/T12/BL	20	Blacklight 350	G13	590	38	25	0000359
F40W/T12/BL	40	Blacklight 350	G13	1200	38	25	0000185
F40W/T12/BL/2ft	40	Blacklight 350	G13	590	38	25	0001635

BLACKLIGHT BLUE (BLB)

A range of UVA fluorescent tubes used for specialist security and medical applications.



FEATURES

- The tubes efficiently emit UVA at 315 nm - 400 nm (peak at 352 nm and 368 nm) which has a strong photochemical and fluorescent effect
- The special deep blue filter glass absorbs visible radiation and transmits near ultra-violet rays only
- Shape, size, electrical characteristics and control circuits are similar to general fluorescent tubes

APPLICATIONS

- In equipment for the detection of forged bank notes, stamps and paintings etc.
- Special light effects in theatres, discotheques and bars
- Medical forensics



Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
F4W/T5/BLB	4	Blacklight Blue	G5	136	16	50	0000008
F6W/T5/BLB	6	Blacklight Blue	G5	212	16	50	0000018
F8W/T5/BLB	8	Blacklight Blue	G5	288	16	50	0000024
F15W/T8/BLB	15	Blacklight Blue	G13	438	26	24	0000077
F18W/T8/BLB/ES	18	Blacklight Blue	G13	590	26	12	0000698
F36W/T8/BLB/ES	36	Blacklight Blue	G13	1200	26	12	0000699

FLUORESCENT TUBES

GERMICIDAL

A range of UVC fluorescent tubes designed to kill bacteria and other micro-organisms.



FEATURES

- Lamps radiate more than 85% of their energy in the UVC-spectrum at 253,7 nm

APPLICATIONS

- Sterilization and deodorization of air, gases, liquids and solids
- Hospitals, food processing industry, etc.

DIRECTIONS FOR USE

- The emitted radiation from Germicidal tubes can be harmful and can cause serious injury. Direct exposure to skin or eyes must be avoided. If skin or eyes are exposed to direct radiation obtain medical advice as quickly as possible



Item description	Watt	Colour	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
G8T5	8	Germicidal Lamps	G5	288	16	24	0000501
G15T8	15	Germicidal Lamps	G13	438	26	24	0000502
G30T8	30	Germicidal Lamps	G13	895	26	24	0000503

SAFETY STARTERS COP-11, COP-22 & STANDARD STARTERS

COP starters guarantee fast starting and an automatic lamp switch-off at end of life to protect the ballast and starter. May be used at an ambient temperature of -20°C/+80°C.



FEATURES

- Quick start without increasing the starting current
- Immediately switches off flickering or defective tubes, eliminating loss of energy
- Prevents overheating of the ballast
- Test house approved and ENEC/CE marked
- Last 4 times longer than standard starters

APPLICATIONS

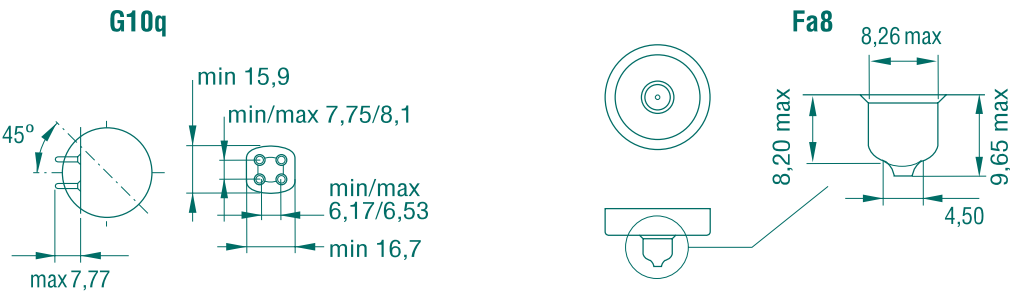
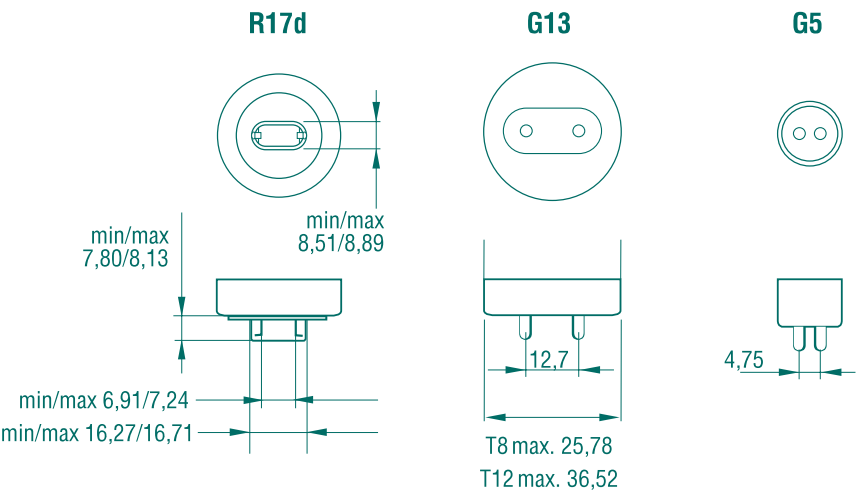
- For extra safety and less energy loss in the case of flickering tubes
- Reduced maintenance costs, ideal for group replacement
- Suitable for inductive and capacitive operation
- For areas where flickering tubes might be dangerous or annoying

DIRECTIONS FOR USE

- After lamp replacement, simply push the button for reactivation of the COP-starter

Item Description	Watt	Volt	Lamptype	Circuit	Packing quantity	Ordering Code
Cop starters:						
COP-11	18, 25, 30, 36, 38, 58W	220 - 240V	diam. 26 mm	Single	10/100	0024470
	20, 40, 42, 65W		diam. 38 mm	Single		
	22, 32, 40, 60W		Circline	Single		
	18, 24, 36W		Compact L (CF)	Single		
COP-22	14, 15, 18W	110 - 130V	diam. 26 mm	Single	10/100	0024482
	20W		diam. 38 mm	Single		
	22W		Circline	Single		
	18W		Compact L (CF)	Single		
COP-22	14, 15, 18W	220 - 240W	diam. 26 mm	Twin	10/100	0024482
	20W		diam. 38 mm	Twin		
	22W		Circline	Twin		
	18W		Compact L (CF)	Twin		
Standard starters:						
FS-11	4, 6, 8, 13W	220 - 240V	diam. 16 mm	Single	500/1000	0024454
	14, 15, 16, 18, 36, 58W		diam. 26 mm	Single		
	20, 40, 65, 85W		diam. 38 mm	Single		
	22, 32, 40, 60W		Circline	Single		
	18, 24, 36W		Compact L (CF)	Single		
FS-22	4, 6, 8, 13W	110 - 130V	diam. 16 mm	Single	500/1000	0024455
	14, 15, 18W		diam. 26 mm	Single		
	18, 20W	220 - 240V	diam. 38 mm	Single/Twin		
	22W		Circline	Single/Twin		
	18W		Compact L (CF)	Single/Twin		

LAMP CAPS

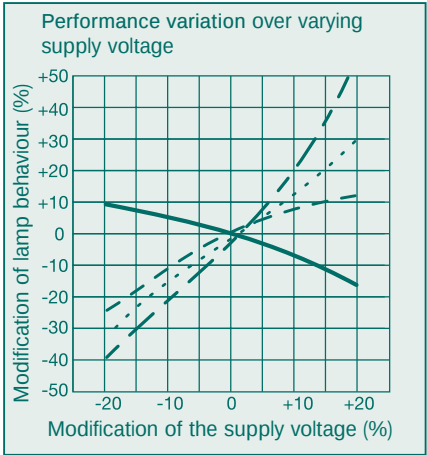


LAMP DATA

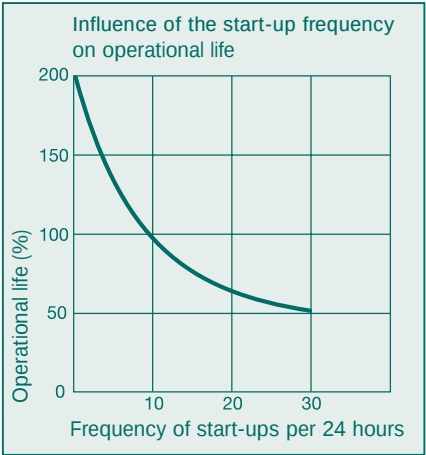
[illegible]

OPERATING CHARACTERISTICS

Operating characteristics

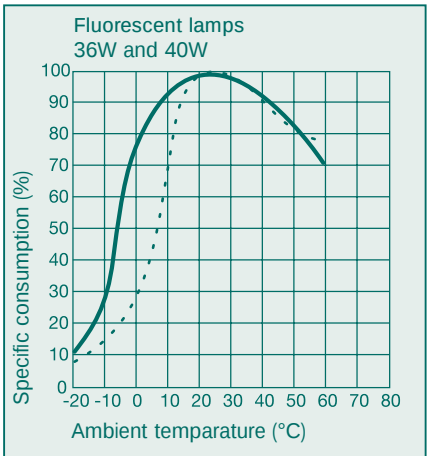


I_L — = lamp current
 P_L - - - = lamp conductor

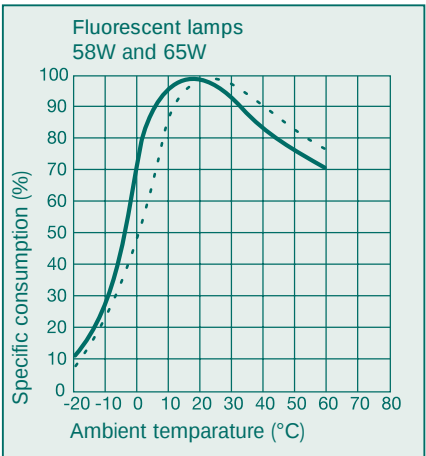


Φ - - - = light output
 U_L — = lamp voltage

Relationship between ambient temperature and light output



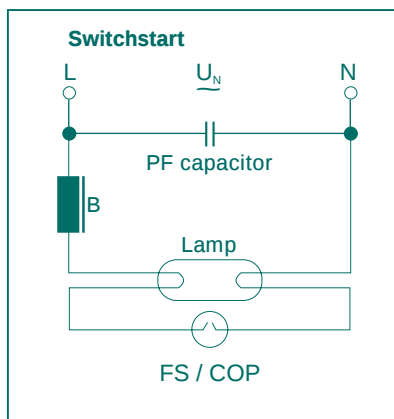
- - - F36W
— F40W



- - - F58W
— F65W

CIRCUIT DIAGRAMS

No 1

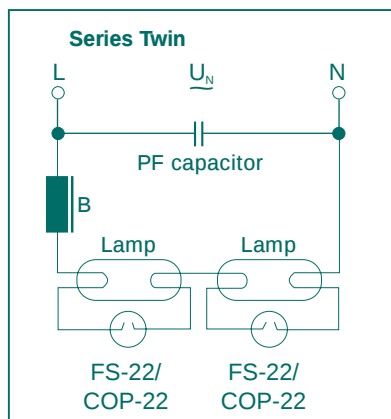


Switchstart

The most common circuit using a ballast and glow starter which effects electrode pre-heating. When the starter contacts open the ballast supplies the starting voltage.

Reliable starting is from -5°C to $+50^{\circ}\text{C}$.
Use FS-11 or COP-11 starters.

No 2

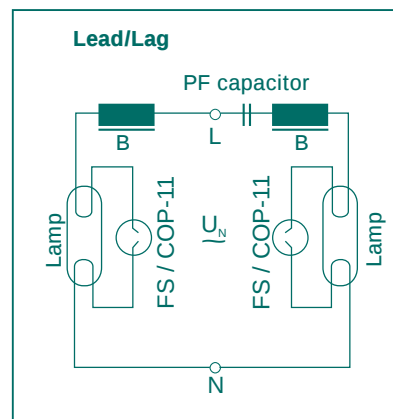


Series Twin

A circuit used for most lamp types up to 20W. Two fluorescent lamps are run in series using one ballast but with individual starters operating as above.

Use FS-11 or COP-11 starters.

No 3

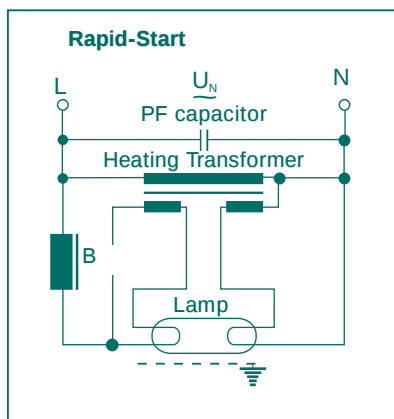


Lead/Lag

A common circuit combination for Twin lamp luminaires, with high power factor and less likelihood of flicker.

Use FS-11 or COP-11 starters.

No 4

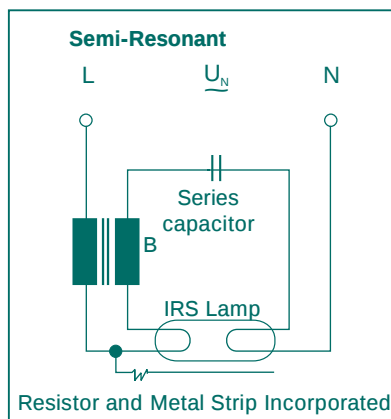


Rapid-Start

A circuit giving flicker-free instant starting and increased lamp life. The lamp is operated in series with a standard ballast. The electrode pre-heating voltage is provided by a separate transformer.

Reliable starting is from -10°C to $+40^{\circ}\text{C}$.

No 5



Semi-Resonant

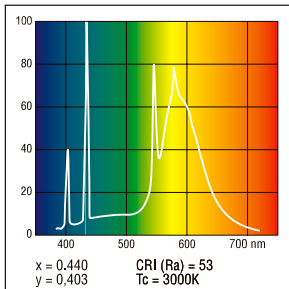
A circuit with flicker-free instant start and electrode pre-heating. An electrical resonance occurs between the secondary winding of the ballast and the capacitor, amplifying the mains voltage for starting the IRS metal stripped lamp.

The resonance stops after starting and the capacitor assumes a power factor correction function.

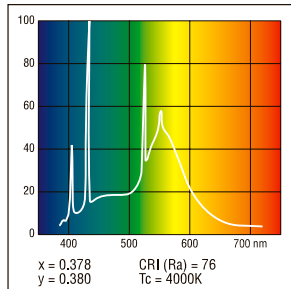
Reliable starting from 0°C to $+50^{\circ}\text{C}$.

L = external conductor L_1, L_2, L_3
N = median conductor MP
 U_N = power supply 230V
B = ballast
PF = power factor capacitor
 K_z = start-up capacitor

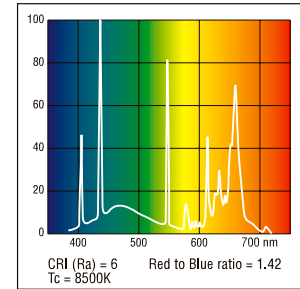
SPECTRAL POWER DISTRIBUTION



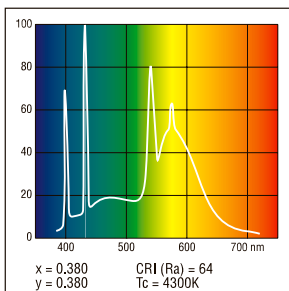
Warm White WW 129



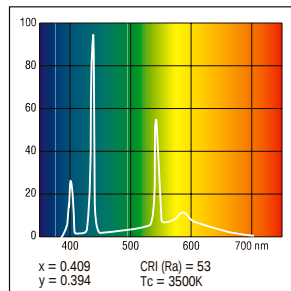
Universal White UW 125



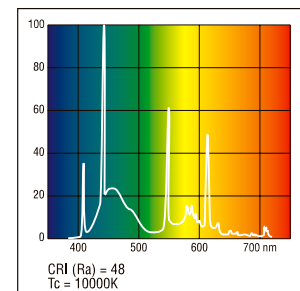
Gro-Lux



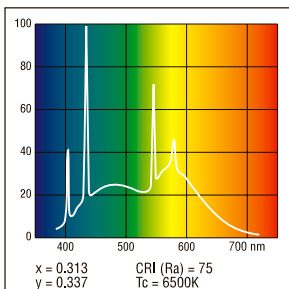
Cool White CW 133



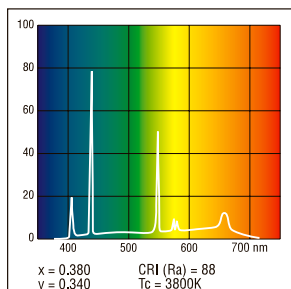
White 135



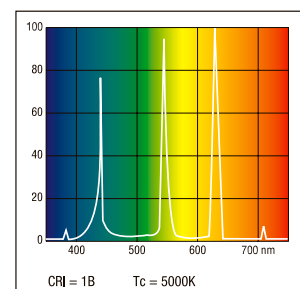
Aquastar



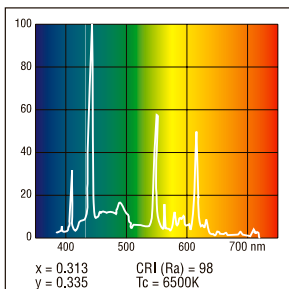
Daylight D 154



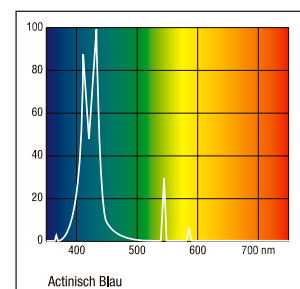
Gourmet 175



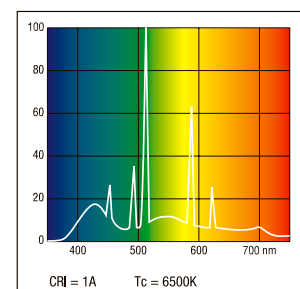
Daylightstar



Activa 172



Coralstar



Reptistar

APPLICATIONS AND LAMP COLOURS

	Activa 172	Daylight 860	CW 133	Coolwhite 840	W 135	WW 129	Warmwhite 830	Homelight 827	Gro-Lux AquaStar	Gourmet 175
Department stores/Shops										
Grocery shops				○		○	▼			
Meat Counter				○			○			▼
Bakers/Patisseries				○		○	▼			
Boutiques				▼			▼			
Shoe Shops				▼			▼			
Furniture Stores						○	▼			
Books Shops/Record Stores				○			▼			
Chemists and cosmetic shops	○						▼	▼		
Florists	▼	○		○			▼		▼	
Pet shops/Aquaria										
	▼	○		○					▼	
Hotels/Conference Centres										
Lobbies and Corridors				○		○	▼			
Dining Rooms							▼	▼		
Bedrooms							○	▼		
Conference Areas				○			▼			
Schools										
Sports Areas			○	▼			○			
Classrooms				○			▼			
Corridors			▼	○		○	▼			
Restaurants										
							▼	▼		
Hospitals										
Wards				▼			▼			
General	▼			○			○			
Offices										
	○			▼			▼			
Industrial										
Workshops			○	▼		○	○			
Warehouses			▼	○		○	○			
Textiles and Printing	▼	○		▼			○			
Plastics and Chemicals			○	▼			▼			
Automobile industry	▼	○		▼			○			
Laboratories	▼			▼			▼			
Quality inspection Departments	▼			○			○			
Domestic										
Living Room							○	▼		
Kitchens, Bathrooms							○	▼		
Plants, Fish Tanks	○			○			○		▼	
COOL			INTERMEDIATE			WARM			SPECIAL	

▼ = Recommended

○ = Alternative

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

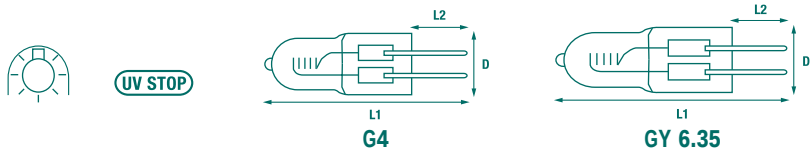
- Compact size for optimum luminaire design
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 2000 hours

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

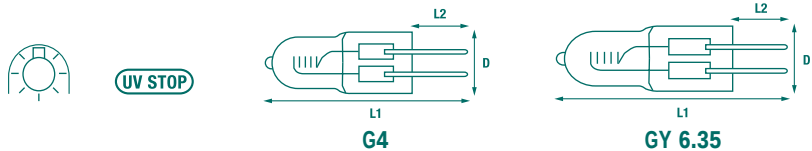
- Compact size for optimum luminaire design
- Platinum coated pins (75W & 100W)
- Dimmable using a suitable dimmer for operation with a transformer
- Constant light output throughout lamp life
- The use of UV-Stop materials dramatically reduces UV emissions
- Average rated life: 3000 hours

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

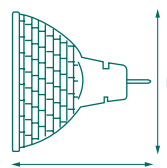
- Accent and decorative lighting in retail, commercial and domestic applications
- Professional lighting of objects and displays, sensitive to heat

DIRECTIONS FOR USE

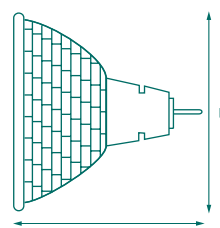
- Must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



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						
Diameter 35 mm											
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
Diameter 50 mm											
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

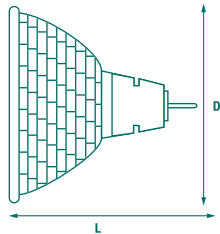
- Heat and light are dissipated forward away from the back of the lamp
- Sealed flat front lens protects capsule and reflector from dust, and offers extra safety
- Wear resistant aluminium reflector for constant light output and colour temperature throughout lamp life
- Dimmable using a suitable dimmer 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°/WFL	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

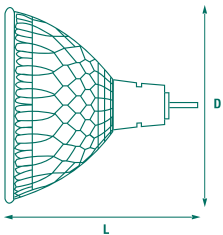
- Sealed, flat front, lens protects capsule and reflector from dust, and offers extra safety
- Cool Beam - 66% of the heat produced is radiated through the back of the lamp
- Dimmable using a suitable dimmer for operation with a transformer
- Constant colour and light output throughout lamp life
- Excellent 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°/WFL	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

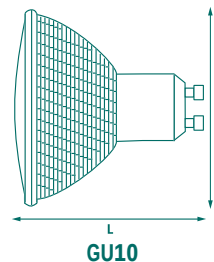
- ESD50 dichroic lamps must only be used in fixtures that are designed for use with Cool Beam lamps and which will dissipate the heat radiated from the back of the lamp
- Do not exceed the maximum power rating stated on the fixture
- Do not use the lamp in fittings marked with this label:



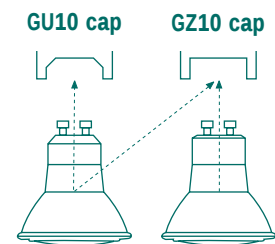
For greater flexibility and added safety, Sylvania also offers the dichroic Hi-Spot® ESD50 with GZ10 cap. The ESD50 lamp has the same physical dimensions as the ES50 lamp but has a higher light output and being dichroic means that more heat is dissipated towards the rear of the lamp. However the GZ10 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

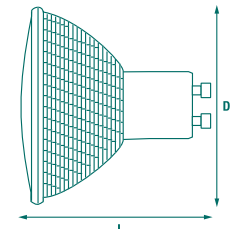


GU10



GU10 cap

GZ10 cap



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						
HI-SPOT ES 50											
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
HI-SPOT ESD 50											
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

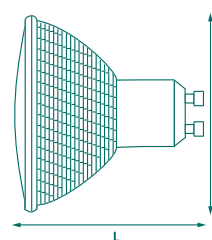
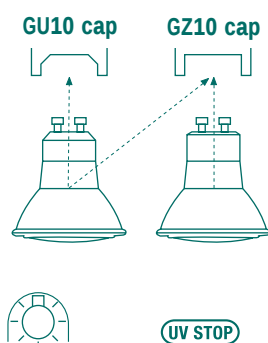
- Halogen light without the need for a transformer
- Installing and changing lamps has never been easier thanks to the “turn and lock” GU10 and GZ10 caps
- Unique, patented, computer designed spiral faceted aluminised reflector
- Wattages 50W and 75W
- Beam angles 25° and 50°
- Can be dimmed using standard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

APPLICATIONS

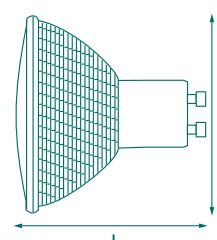
- For use in mains voltage GU10/GZ10 downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Suitable for outdoor use when protected from direct contact with water

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						
HI-SPOT ES 63											
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
HI-SPOT ESD 63											
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.

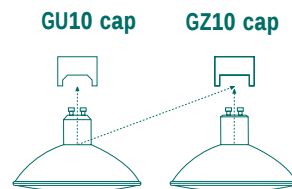


FEATURES

- 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

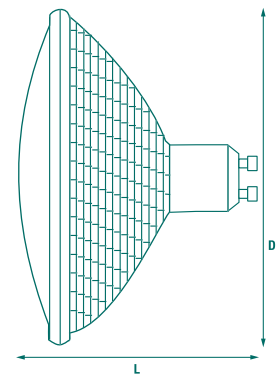


DIRECTIONS FOR USE

- 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						
HI-SPOT ES 111											
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
HI-SPOT ESD 111											
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

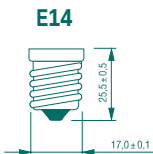
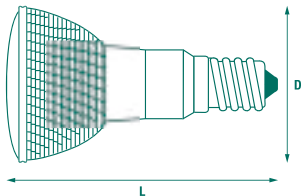
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral facettted aluminised reflector
- Wattages 25W and 40W
- Beam angle 25°
- Twice the life compared to incandescent lamp
- Can be dimmed using standard dimmer switches
- The use of UV-Stop materials dramatically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

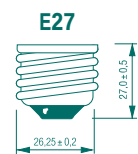
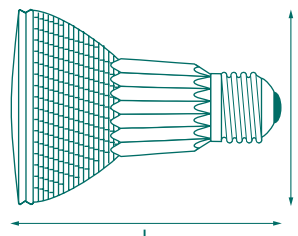
- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral faceted aluminised reflector
- Wattage 50W
- Beam angles 10° and 25°
- Excellent colour rendering
- Up to 2.5 times the life of incandescent lamp
- Can be dimmed using standard dimmer switches
- The use of 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.

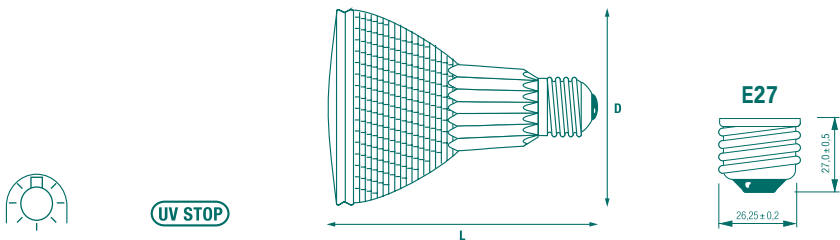


FEATURES

- 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



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

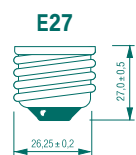
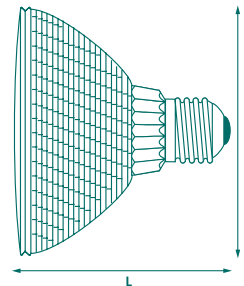
- For use in mains voltage ES/E27 cap downlights, spotlights and luminaires
- For precision or decorative lighting in retail, commercial and domestic applications
- Use dichroic lamps for lighting food, textiles and other objects sensitive to heat
- Suitable for outdoor use when protected from direct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



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						
Aluminised reflector											
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
Dichroic reflector											
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.

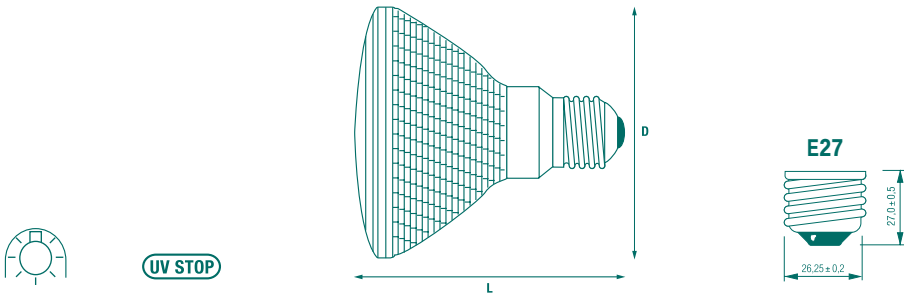


FEATURES

- Halogen light without the need for a transformer
- Unique, patented, computer designed spiral 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
- Suitable for outdoor use when protected from direct contact with water



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

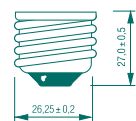
APPLICATIONS

- All domestic and commercial indoor applications using incandescent lamps

UV STOP



E27



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.



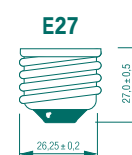
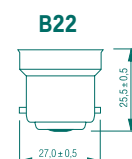
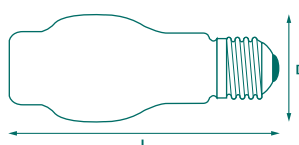
FEATURES

- 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

UV STOP

APPLICATIONS

- All domestic and commercial indoor applications using incandescent lamps



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 .

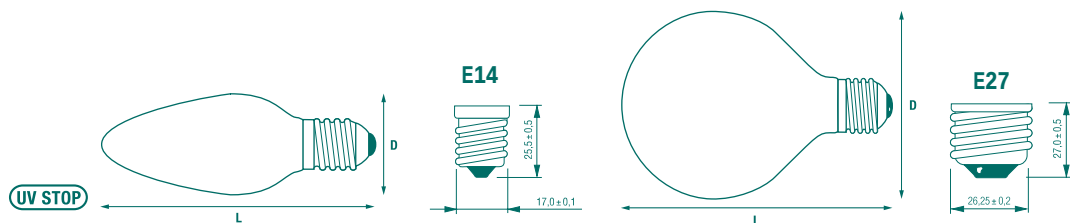


FEATURES

- 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

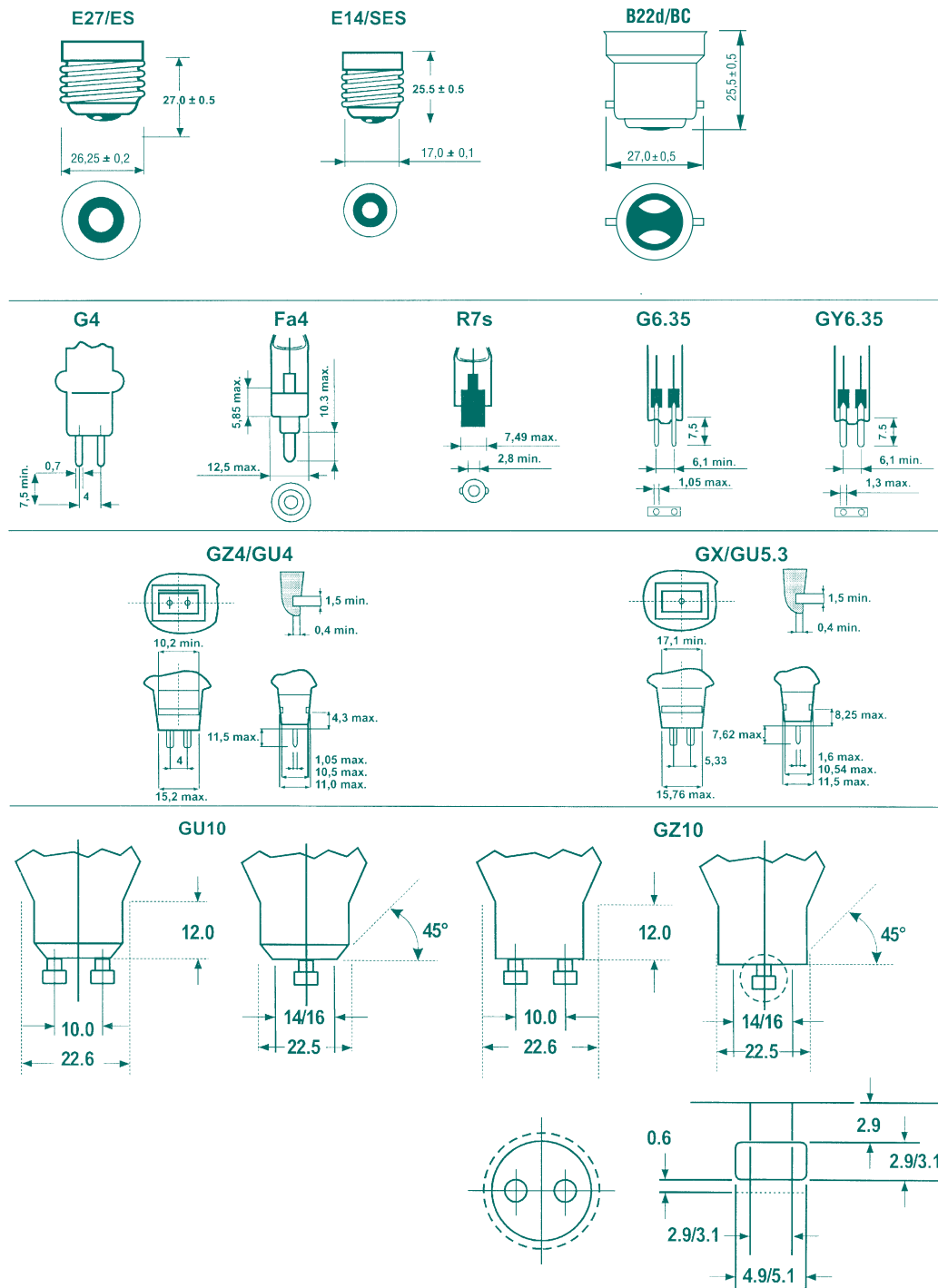
DIRECTIONS FOR USE

- 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.

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

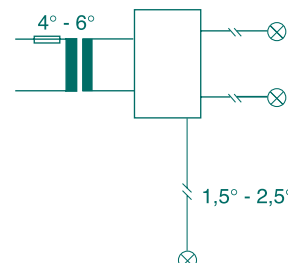
A in mm²

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 (mm²) 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

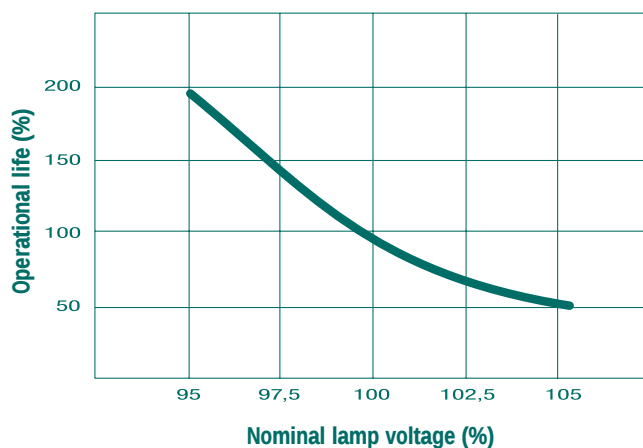
Cable Cross Sections (mm²) for 12V lamps (max. 3.5% Voltage Drop)

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.

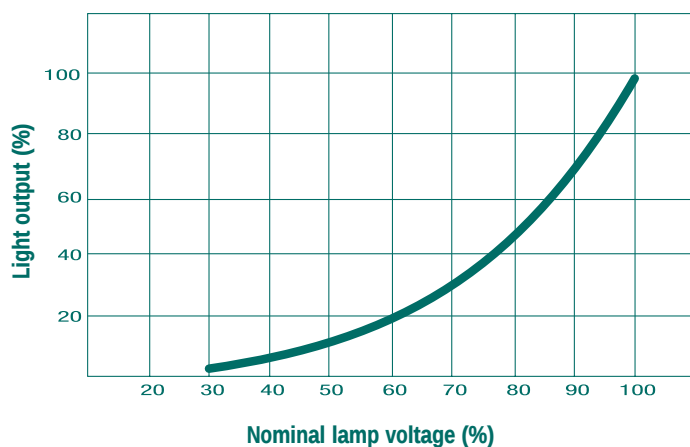


$$LD_2 = LD_1 \left(\frac{U_1}{U_2} \right)^{13}$$

- 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).

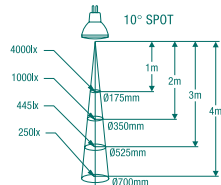


$$\phi_2 = \phi_1 \left(\frac{U_2}{U_1} \right)^{3.4}$$

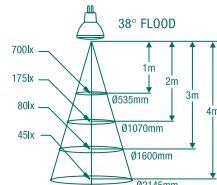
- ϕ_1 = Light output at nominal lamp voltage
- ϕ_2 = Light output at varying supply voltage
- U_1 = Nominal lamp voltage
- U_2 = Deviation from nominal lamp voltage

CONE DIAGRAMS

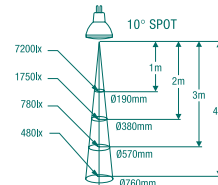
Superia 35 / 20W / 10°



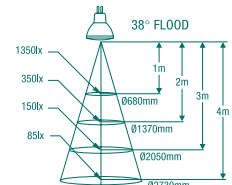
Superia 35 / 20W / 38°



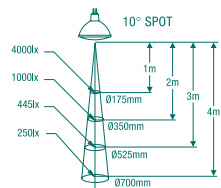
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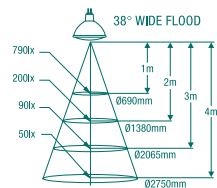
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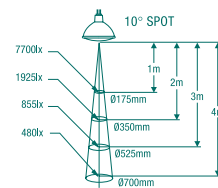
Superia 50 / 20W / 10°



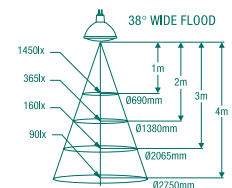
Superia 50 / 20W / 38°



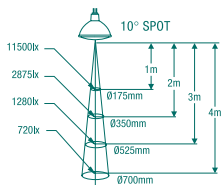
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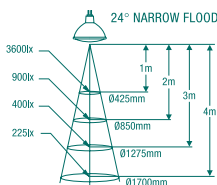
Superia 50 / 35W / 38°



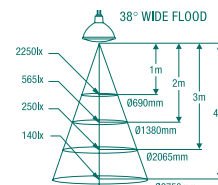
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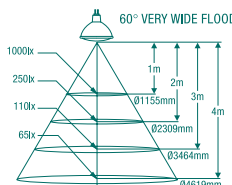
Superia 50 / 50W / 24°



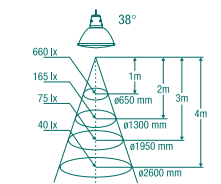
Superia 50 / 50W / 38°



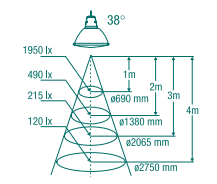
Superia 50 / 50W / 60°



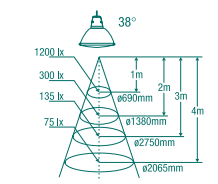
Coolfit 20W / 38°



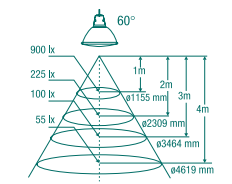
Coolfit 35W / 38°



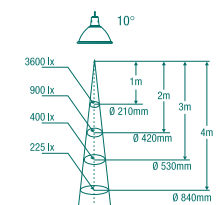
Coolfit 50W / 38°



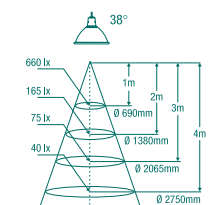
Coolfit 50W / 60°



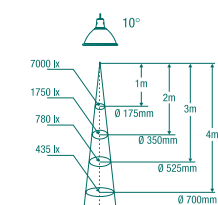
Dichroic 20W / 10°



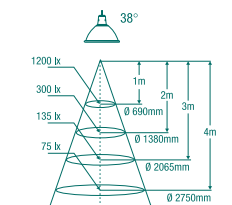
Dichroic 20W / 38°



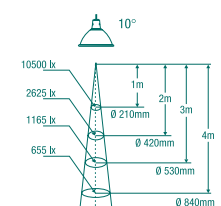
Dichroic 35W / 10°



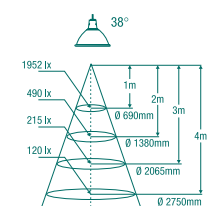
Dichroic 35W / 38°



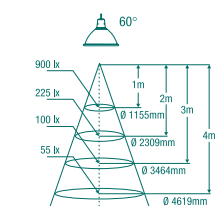
Dichroic 50W / 10°



Dichroic 50W / 38°

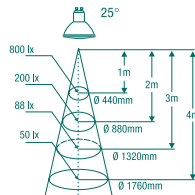


Dichroic 50W / 60°

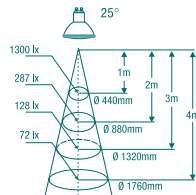


CONE DIAGRAMS

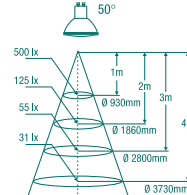
Hi-Spot ES50 35W / 25°



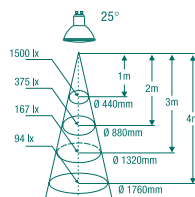
Hi-Spot ES(D)50 50W / 25°



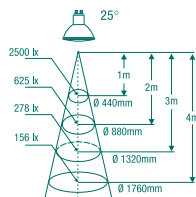
Hi-Spot ES(D)50 50W / 50°



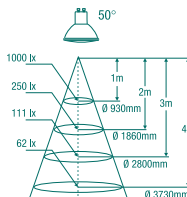
Hi-Spot ES63 50W / 25°



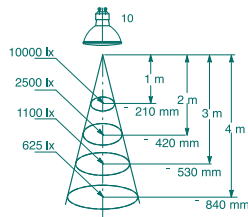
Hi-Spot ES(D)63 75W / 25°



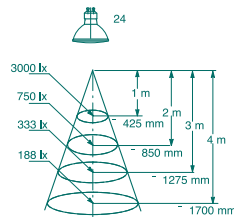
Hi-Spot ES(D)63 75W / 50°



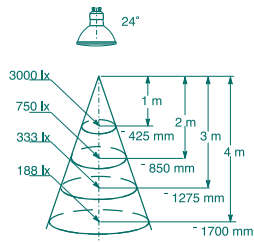
Hi-Spot ES111 75W / 10°



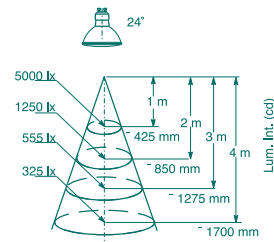
Hi-Spot ES111 75W / 24°



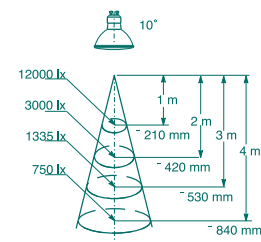
Hi-Spot ES111 75W / 24°



Hi-Spot ESD111 100W / 24°

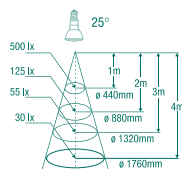


Hi-Spot ESD111 100W / 10°

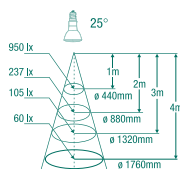


CONE DIAGRAMS

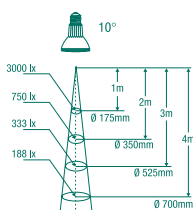
Hi-Spot 50 25W/25°



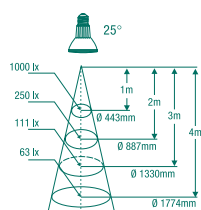
Hi-Spot 50 40W/25°



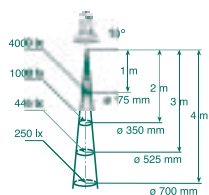
Hi-Spot 63 50W/10°



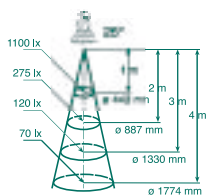
Hi-Spot 63 50W/25°



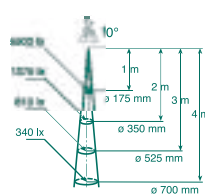
Hi-Spot 80 50W/10°



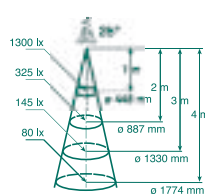
Hi-Spot 80 50W/25°



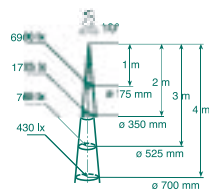
Hi-Spot 80 75W/10°



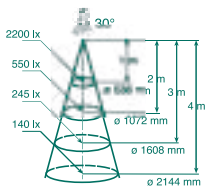
Hi-Spot 80 75W/25°



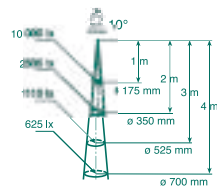
Hi-Spot 95 75W/10°



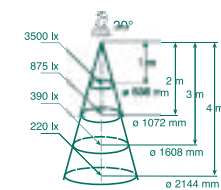
Hi-Spot 95 75W/30°



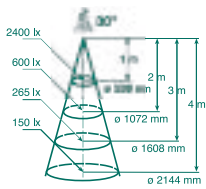
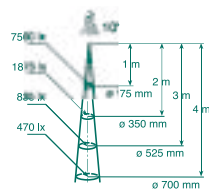
Hi-Spot 95 100W/10°



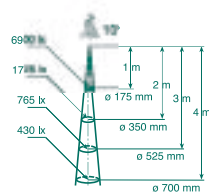
Hi-Spot 95 100W/30°



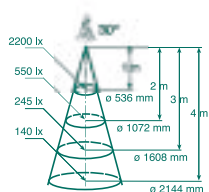
Hi-Spot 95 75W/10° dichroic Hi-Spot 95 75W/30° dichroic



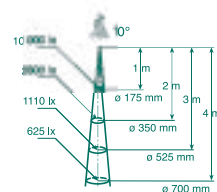
Hi-Spot 120 75W/10°



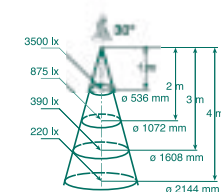
Hi-Spot 120 75W/30°



Hi-Spot 120 100W/10°



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

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

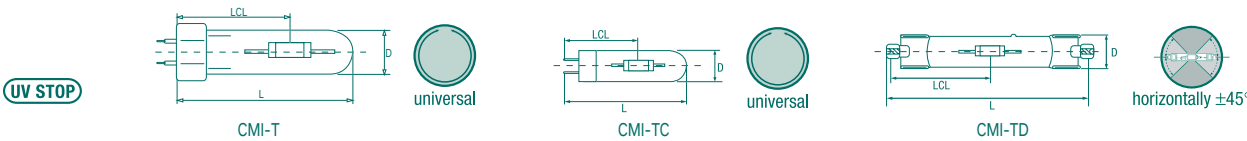
- Superior colour rendering
- Colour stability and uniformity
- High luminous efficacy
- UV stop
- Retrofit for quartz equivalent types

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

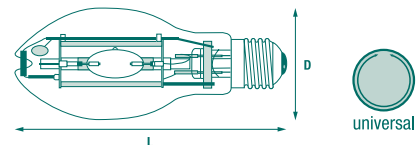
- Display lighting in retail stores
- Public areas, i.e. lobbies, banking halls and airport terminals
- Offices, especially in VDU areas using up-lighters
- Floodlighting

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

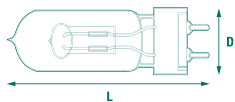
APPLICATIONS

- 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					
Elliptical											
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
Tubular Clear											
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

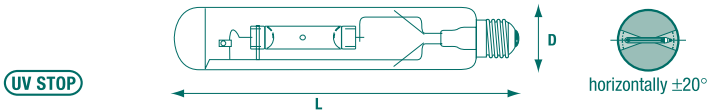
- High light output and good colour characteristics
- E40 cap
- Envelope finish: clear
- Average rated life: up to 7000 hours

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

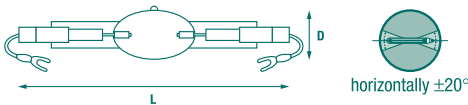
- High efficiency and very good colour rendering
- Very high light output
- Envelope finish: clear
- Average rated life: up to 3000 hrs

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**

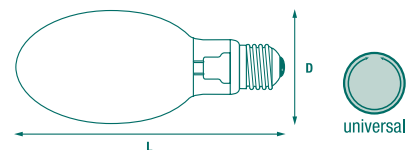
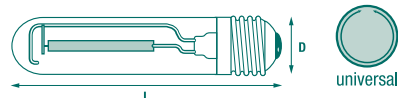
- Contains no mercury; a significant environmental benefit and allowing considerable savings on recycling costs
- High light output
- Faster run up time: 5 minutes
- Envelope shape/finish: tubular clear/elliptical coated
- Average rated life: up to 24000 hours

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				
Elliptical coated										
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
Tubular clear										
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
					L	D				
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

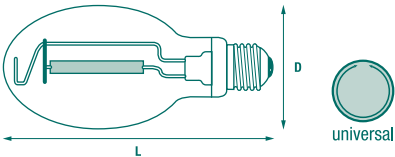
- Integral ignitor
- Offers cost-reduction opportunities: no ignitor or extra wiring needed
- Envelope shape: elliptical
- Envelope finish: clear or coated
- Average rated life: up to 12500 hours

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

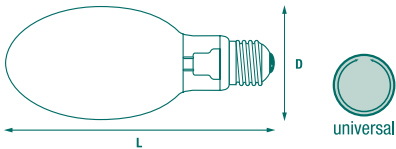
- Offers a warm golden-white light colour
- Direct replacement for mercury (HSL) lamps
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 20000 hours

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

MERCURY LAMPS

SUPER COMFORT MERCURY LAMPS

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



FEATURES

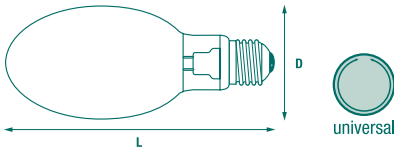
- High colour rendering (Ra 60), offering a warm white light colour (3400 K)
- Operates on standard mercury ballasts
- Excellent starting characteristics
- Efficacies: up to 60 lm/W
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 29000 hours

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

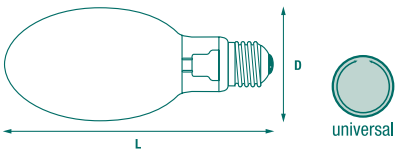
- Colour rendering (Ra 42)
- Operates on simple choke circuits
- Excellent starting characteristics
- Rugged construction to withstand shocks and vibration
- Efficacies: up to 60 lm/W
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 29000 hours

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

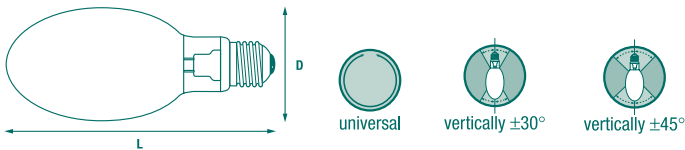
- Direct plug-in replacement for incandescent lamps, lasting sixteen times longer
- Low initial cost: no control gear needed
- Pleasant white light
- Reliable starting down to minus 18°C
- Envelope shape/finish: elliptical/coated
- Average rated life: up to 16000 hours

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 $\pm 30^\circ$
250W: vertical $\pm 45^\circ$
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

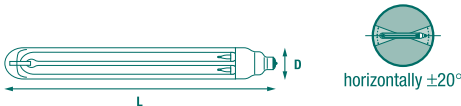
- Highest efficacy available: up to 183 lm/W
- Monochromatic warm yellow light
- Radiates light energy in the most effective part of the visible spectrum to reveal objects, vehicles and obstructions to full advantage
- Envelope shape/finish: tubular/clear

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

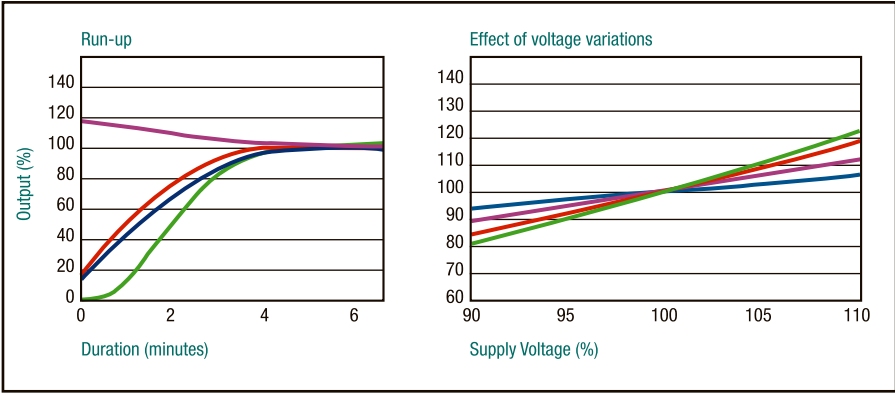
- Burning position: horizontal 20°
- Technical data: p. 159
- Circuit diagrams: p. 165 N° 4



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

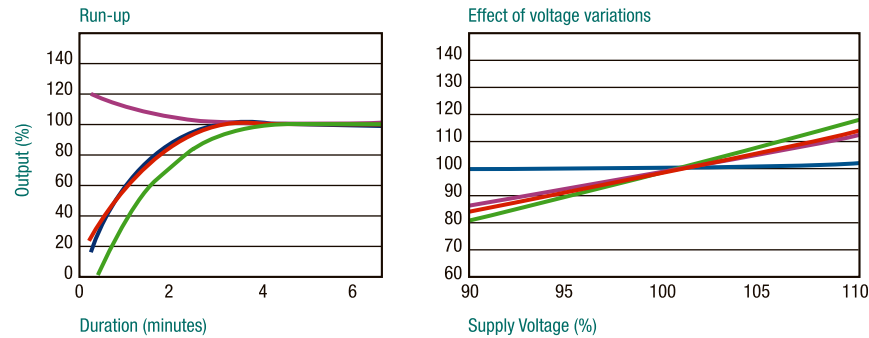
Ceramic Metal Halide



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

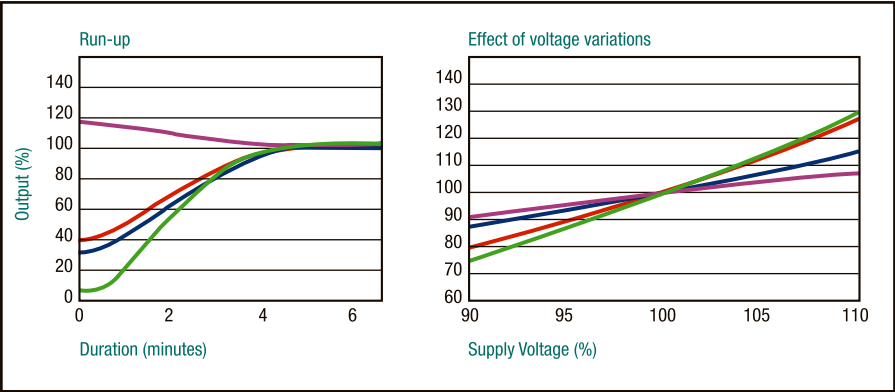
- Lamp Voltage
- Lamp Current
- Lamp Power
- Luminous Flux

Quartz Metal Halide



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

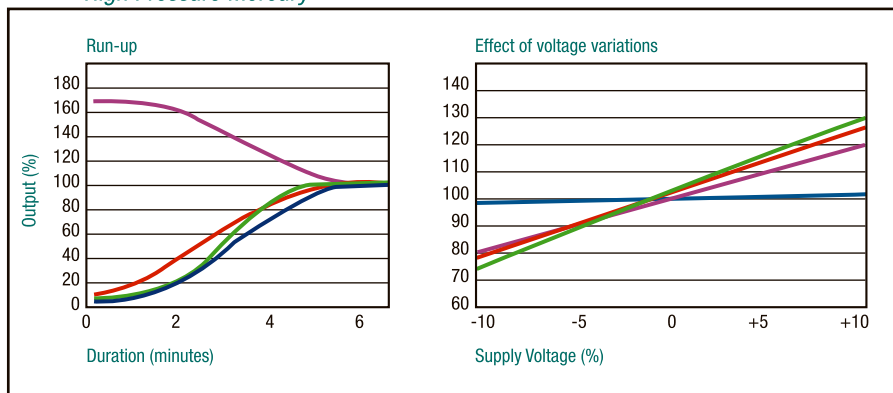
High Pressure Sodium



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

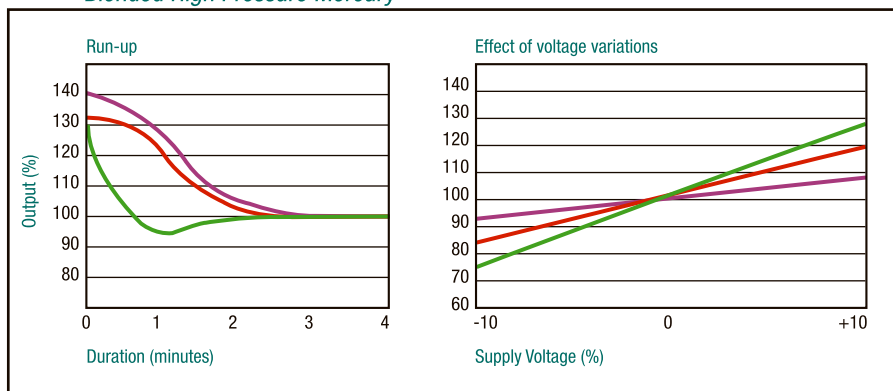
High Pressure Mercury



Re-start time when hot
5 to 10 minutes

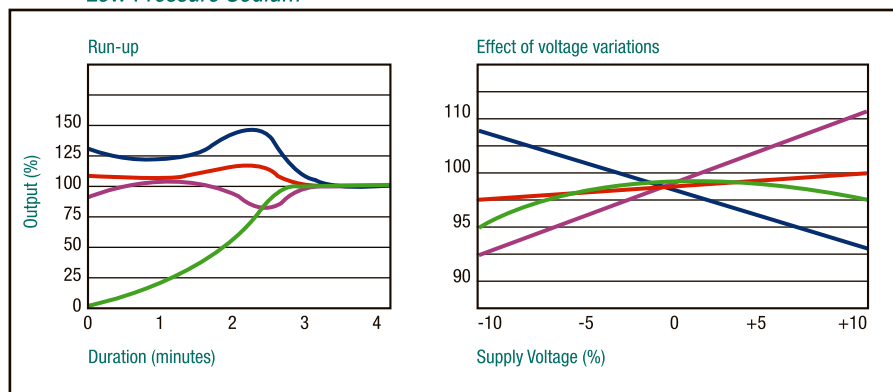
- Lamp Voltage
- Lamp Current
- Lamp Power
- Luminous Flux

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
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

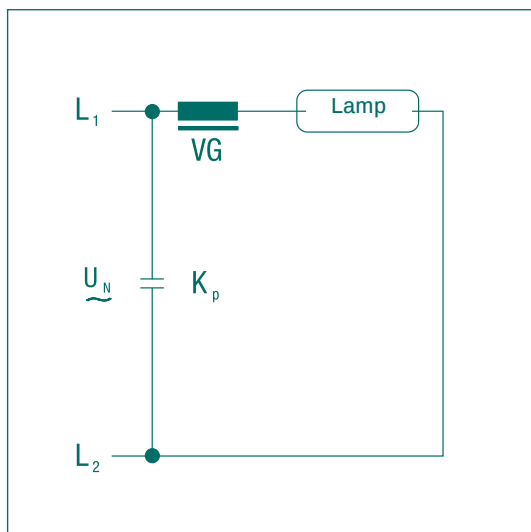
Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (µF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
SHP-S 70W Mercury Free	70	0.98	82	10	2 / 5	5000	2200	4	any
SHP-S 100W Mercury Free	100	1.20	115	12	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

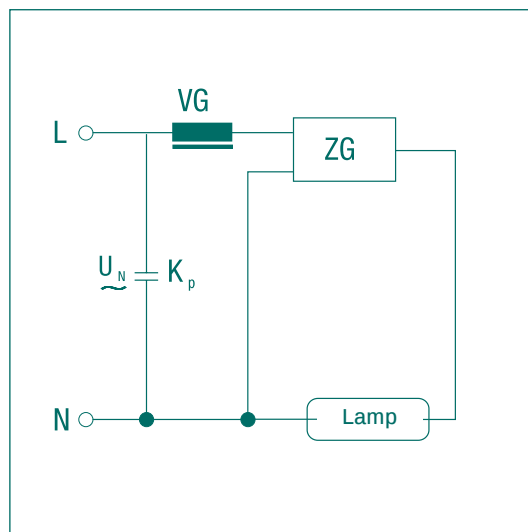
Item description	Watt (W)	Current (A)	Power consumption including ballast (W)	Parallel capacitor for 220-240V at 50 Hz (μF)	Circuit No	Light output (lm)	Colour temperature (K)	CRI Class	Burning position
HSL-BW 50W E27	50	0.61	59	7	1	1800	4000	3	any
HSL-BW 80W E27	80	0.80	90	8	1	3800	4000	3	any
HSL-BW 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

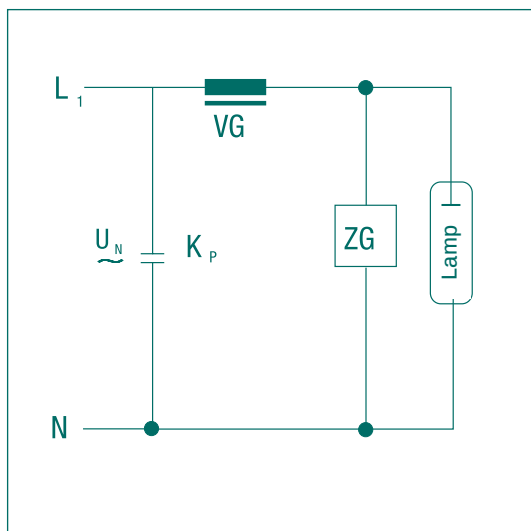
No 1 CROSS-PHASE OPERATION



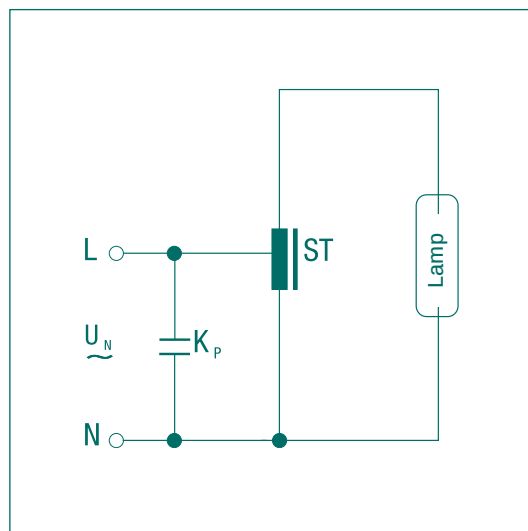
No 2 SINGLE PHASE



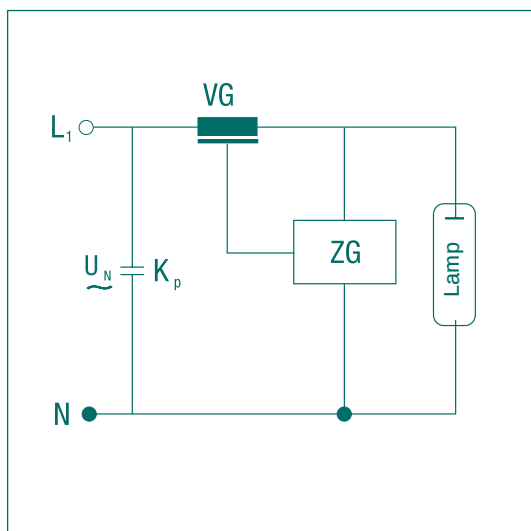
No 3 MONOPULSE IGNITOR STARTING



No 4 SLP CIRCUIT

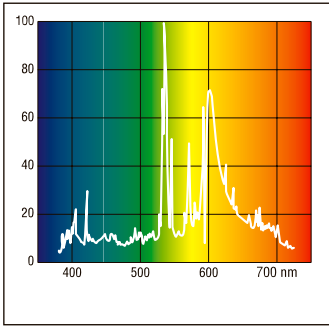


No 5 SLP IGNITOR STARTING

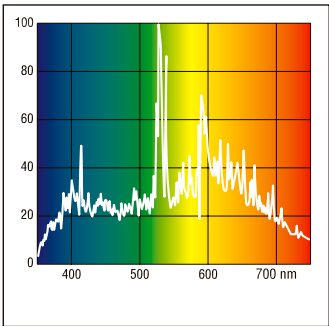


- L Live conductor L₁, L₂, L₃
- N Neutral conductor
- U_N power supply voltage 230V ~ (400V ~ for HSI-T 2000V)
- VG ballast
- K_p lead capacitor
- ZG start-up system
- K_z start-up capacitor
- ST stray field transformer
- CWA constant wattage autotransformer

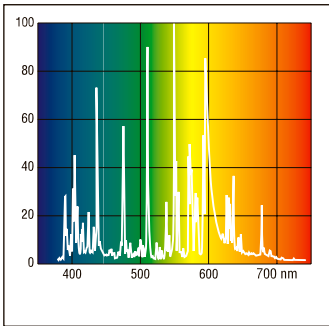
SPECTRAL DISTRIBUTION CURVES



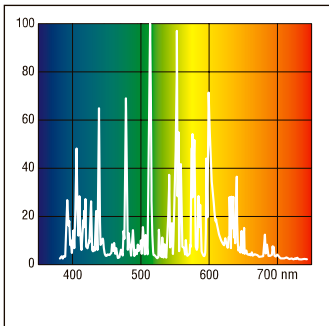
Ceramic Metal Halide: WDL



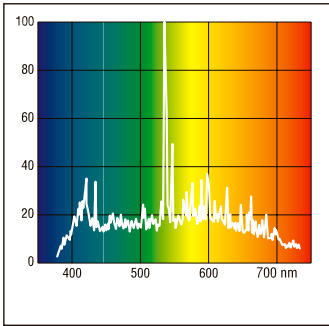
Ceramic Metal Halide: NDL



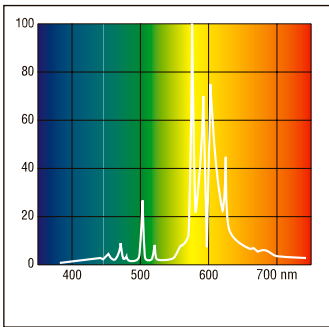
Quartz Metal Halide: WDL



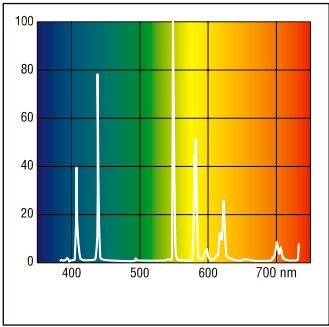
Quartz Metal Halide: NDL



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.

GLS PEARL

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

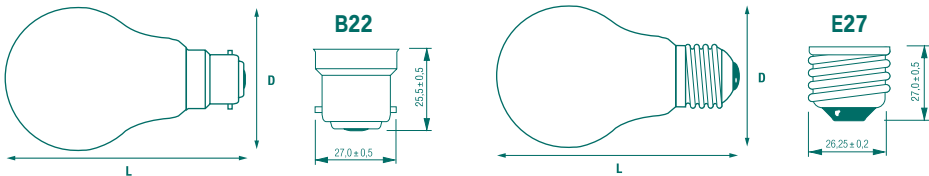


FEATURES

- 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.

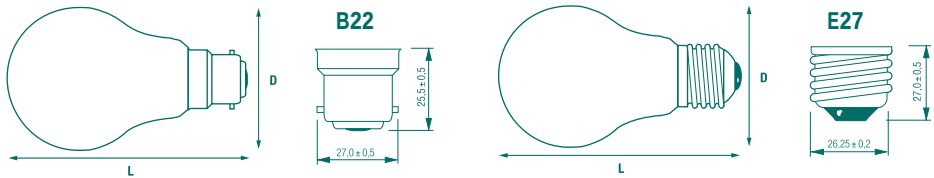


FEATURES

- 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.

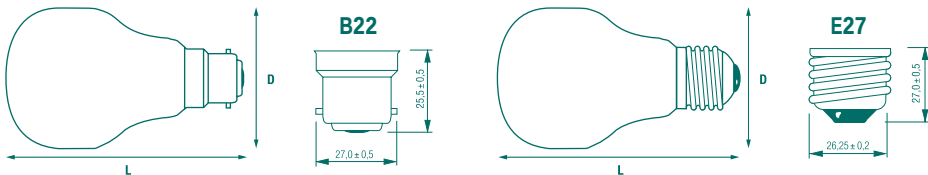


FEATURES

- 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.

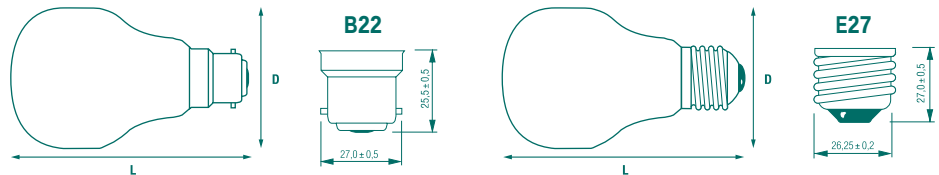


FEATURES

- 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.

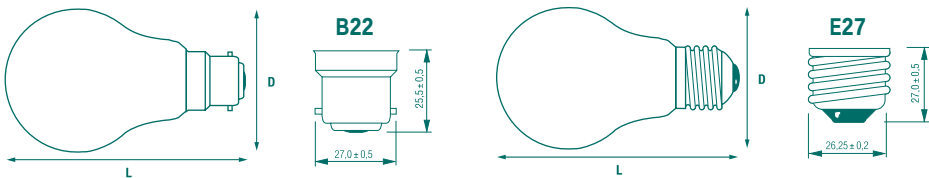


FEATURES

- 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.

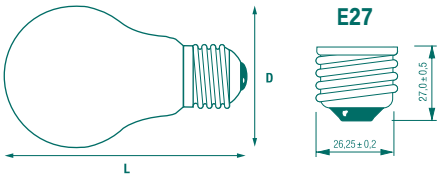


FEATURES

- 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.

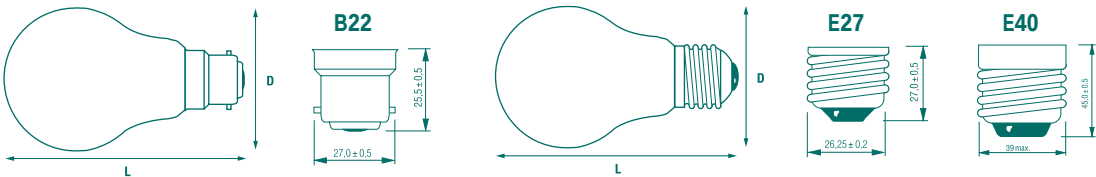


FEATURES

- 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.

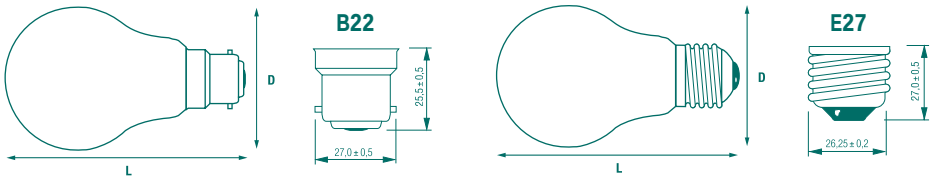


FEATURES

- 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.

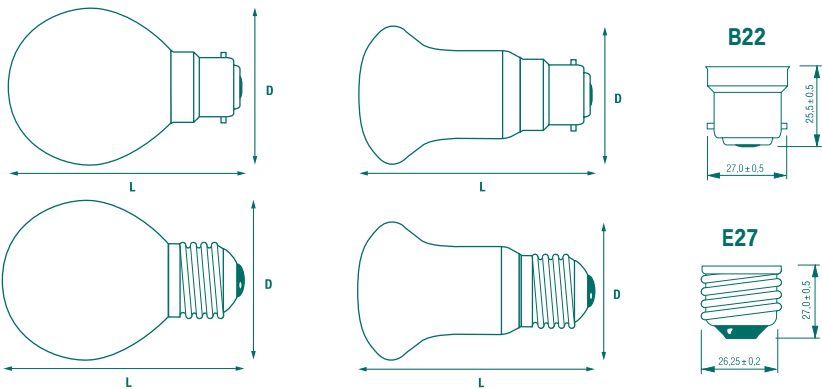


FEATURES

- 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.

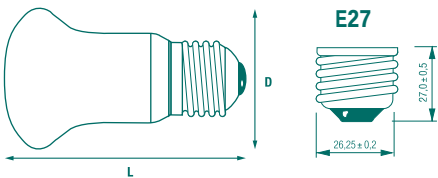


FEATURES

- 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.

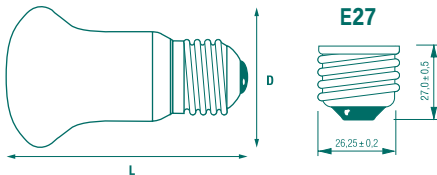


FEATURES

- 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.

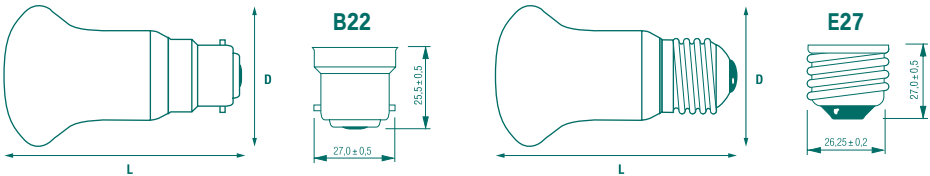


FEATURES

- 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.

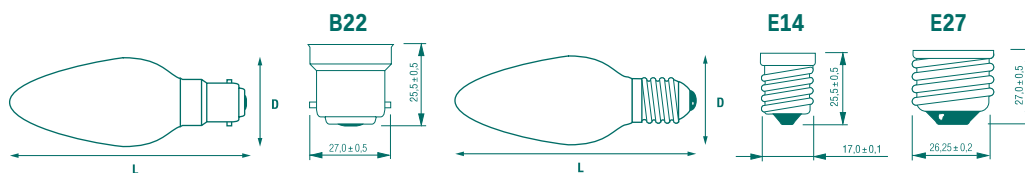


FEATURES

- 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.

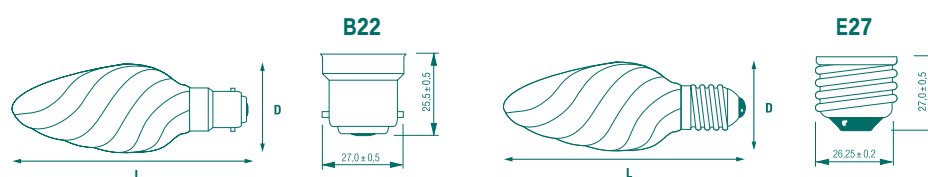


FEATURES

- 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.

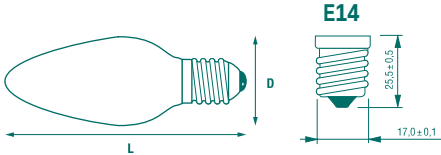


FEATURES

- 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.

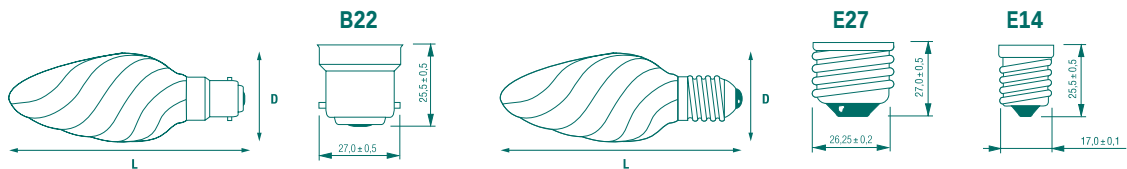


FEATURES

- 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.

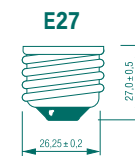
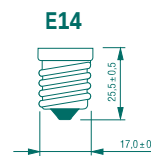
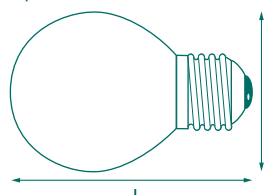
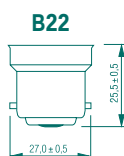
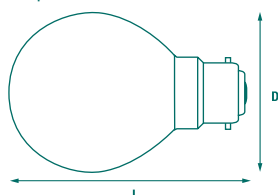


FEATURES

- 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.

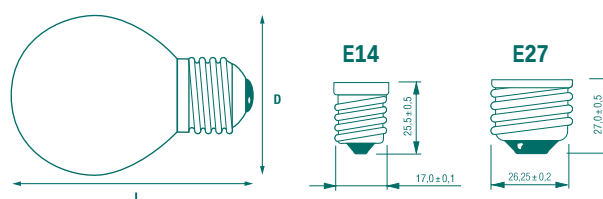


FEATURES

- 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

ROUND KRYPTON

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

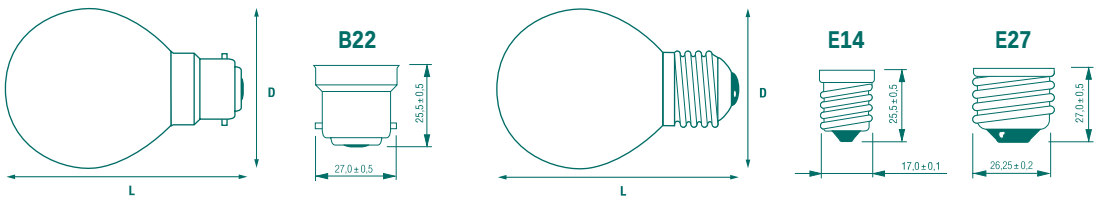


FEATURES

- 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.

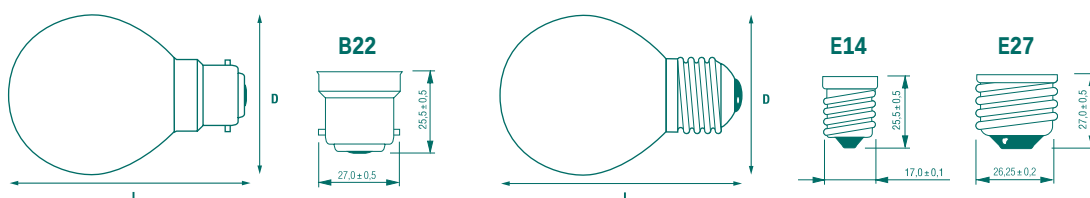


FEATURES

- 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.

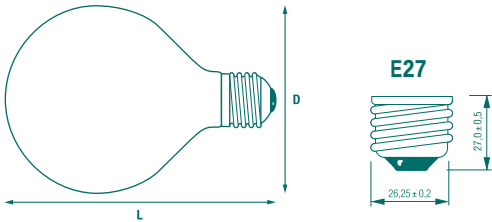


FEATURES

- 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.

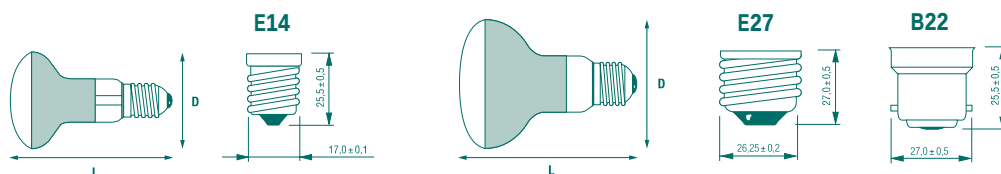


FEATURES

- 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.

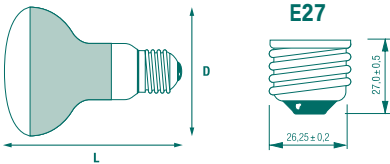


FEATURES

- 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.

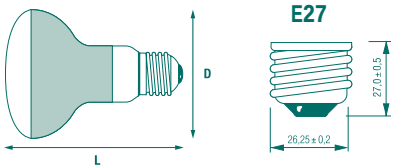


FEATURES

- 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.

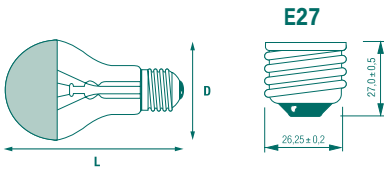
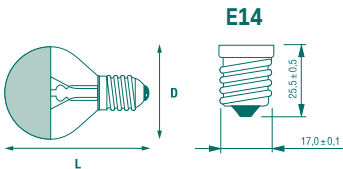


FEATURES

- 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.

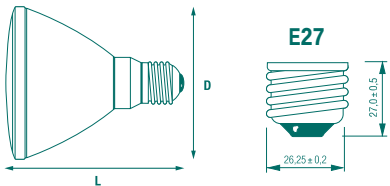


FEATURES

- 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

PAR38 COLOURED

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

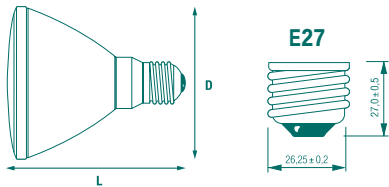


FEATURES

- 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.

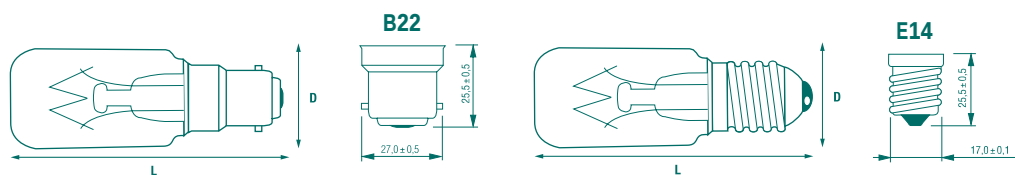


FEATURES

- 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

PYGMY / PYGMY OVEN

Small, compact, incandescent lamps for special applications.

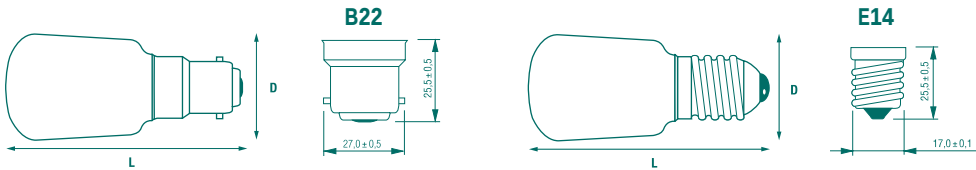


FEATURES

- 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			
Pygmy									
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
Pygmy Oven									
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.

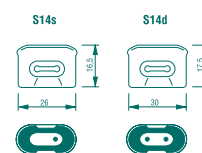
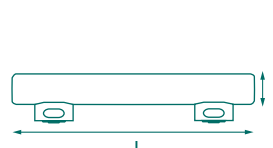
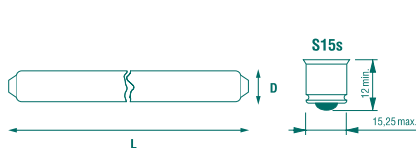


FEATURES

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

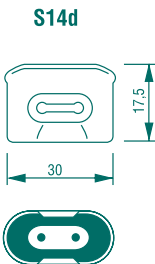
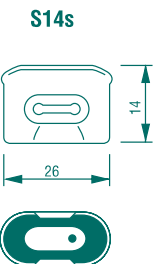
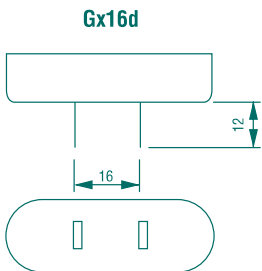
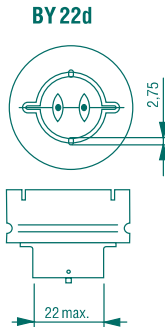
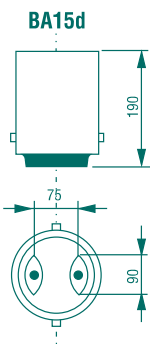
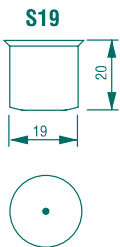
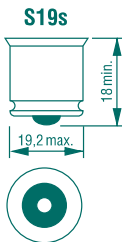
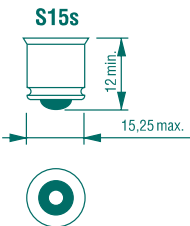
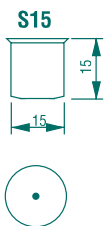
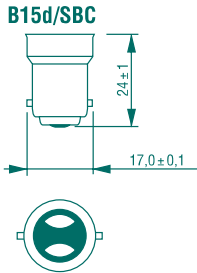
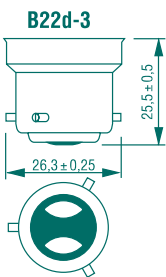
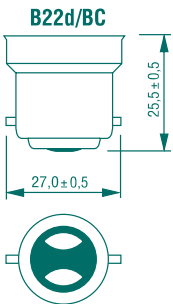
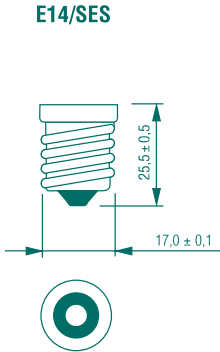
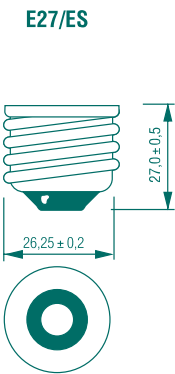
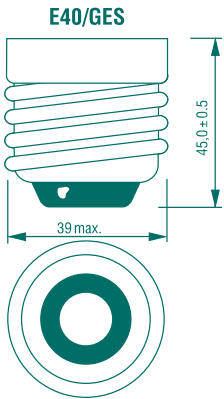
APPLICATIONS

- 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





GRO-LUX® T5/T8/T12

A range of fluorescent and compact fluorescent tubes that assist plant growth in locations with insufficient daylight

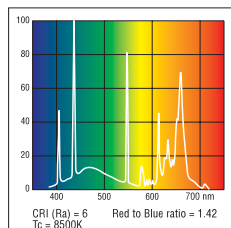
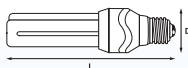


FEATURES

- High level of blue and red radiation helps promote healthy plant growth
- Strengthens the natural colours of aquatic plants and fish in aquariums
- Promotes the process of photo-synthesis in plants

APPLICATIONS

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



Gro-Lux®

Ordering Code

Item description		Watt	Colour	Cap	Dimensions (mm)		Industrial Pack	Retail Pack	Retail Pack
					L	D	Quantity per 25	Quantity per 10	Quantity per 20
F8W/GRO	T5	8	Gro-Lux	G5	288	16	0000026	-	-
F13W/GRO	T5	13	Gro-Lux	G5	517	16	0000370	-	-
FHO24W/GRO	T5	24	Gro-Lux	G5	549	16	0002740	-	-
FHO39W/GRO	T5	39	Gro-Lux	G5	849	16	0002743	-	-
FHO54W/GRO	T5	54	Gro-Lux	G5	1149	16	0002746	-	-
F14W/GRO	T8	14	Gro-Lux	G13	361	26	0000043	0000707	-
F15W/GRO	T8	15	Gro-Lux	G13	438	26	0000069	0000708	-
F18W/GRO	T8	18	Gro-Lux	G13	590	26	0001523	0000709	-
F25W/30"/GRO	T8	25	Gro-Lux	G13	742	26	0001679	0000710	-
F30W/GRO	T8	30	Gro-Lux	G13	895	26	0000150	0000711	-
F36W/GRO	T8	36	Gro-Lux	G13	1200	26	0001524	0000712	-
F38W/GRO	T8	38	Gro-Lux	G13	1047	26	0002213	0000713	-
F58W/GRO	T8	58	Gro-Lux	G13	1500	26	0001525	0000714	-
F20W/GRO	T12	20	Gro-Lux	G13	590	38	0000462	-	-
Mini-Lynx 18W/GRO		18	Gro-Lux	E27	178	38	-	-	0026484

Packaging Note: The sleeve pictured is for retail sales.

AQUASTAR T5/T8

A range of 10000 K tubes developed to promote the growth of coral and aquatic plants by simulating lighting conditions found in their natural environment

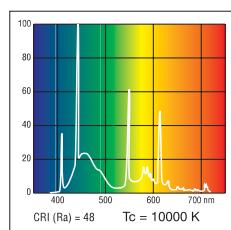


FEATURES

- Light colour: 10000 Kelvin (simulating the tropical light spectrum)
- Promotes the growth of coral and aquatic plants through natural red and blue sections of the light spectrum
- Excellent lighting performance
- Combination with other lamp types is not required

APPLICATIONS

- For all biological organisms in fresh and marine water aquariums



Aquastar®



Item description	Watt	Colour Temp. K	Cap	Dimensions (mm)		Light-output lm	Ordering Code	
				L	D		Industrial Pack Quantity per 25	Retail Pack Quantity per 10
FHO24W/Aquastar T5	24	10000	G5	549	16	1120	0002741	-
FHO39W/Aquastar T5	39	10000	G5	849	16	1960	0002744	-
FHO54W/Aquastar T5	54	10000	G5	1149	16	2800	0002747	-
F14W/Aquastar T8	14	10000	G13	361	26	525	0002212	-
F15W/Aquastar T8	15	10000	G13	438	26	650	0002224	0000643
F18W/Aquastar T8	18	10000	G13	590	26	900	0002221	0000644
F25W/30"/Aquastar T8	25	10000	G13	742	26	1500	0002226	0000645
F30W/Aquastar T8	30	10000	G13	895	26	1700	0002225	0000646
F36W/Aquastar T8	36	10000	G13	1200	26	2200	0002222	0000647
F38W/Aquastar T8	38	10000	G13	1047	26	2100	0002185	0000648
F58W/Aquastar T8	58	10000	G13	1500	26	3550	0002223	0000649

Packaging Note: The sleeve pictured is for retail sales.



DAYLIGHTSTAR T8

See fish and plants in fresh water aquariums in their natural colours with this 5000 K triphosphor full spectrum daylight tube

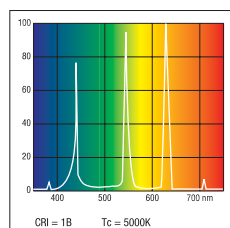


FEATURES

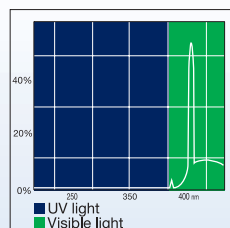
- Reduces algae growth through a special UV-STOP protective sleeve
- Allows fish and plants to be seen in their true colours (high colour rendition)

APPLICATIONS

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



Daylightstar®



Item description	Watt	Colour temp. K	Cap	Dimensions (mm)		Light-output lm	Retail Pack Quantity	Ordering Code
				L	D			
F15W/Daylightstar T8	15	5000	G13	438	26	900	10	0000715
F18W/Daylightstar T8	18	5000	G13	590	26	1300	10	0000716
F30W/Daylightstar T8	30	5000	G13	895	26	2350	10	0000717
F36W/Daylightstar T8	36	5000	G13	1200	26	3250	10	0000718

Packaging Note: The sleeve pictured is for retail sales.

CORALSTAR T5/T8

These lamps simulate coral reef natural lighting at 6-10m depth and support coral growth in marine water aquariums

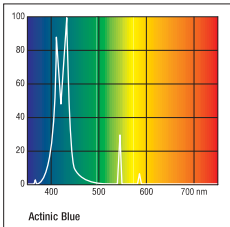


FEATURES

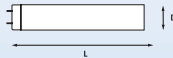
- Reproduces light conditions found at coral reefs through actinic blue light
- Promotes the growth of coral and invertebrates by supporting the growth of zooxanthellae
- See coral in its true colour(s)

APPLICATIONS

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



Coralstar®



Ordering Code

Item description		Watt	Colour	Cap	Dimensions (mm)		Industrial Pack	Retail Pack
					L	D	Quantity per 25	Quantity per 10
FHO24W/Coralstar	T5	24	Coralstar	G5	549	16	0002742	-
FHO39W/Coralstar	T5	39	Coralstar	G5	849	16	0002745	-
FHO54W/Coralstar	T5	54	Coralstar	G5	1149	16	0002748	-
F18W/Coralstar	T8	18	Actinic	G13	590	26	-	0000719
F25W/30"/Coralstar	T8	25	Actinic	G13	742	26	-	0000720
F30W/Coralstar	T8	30	Actinic	G13	895	26	-	0000725
F36W/Coralstar	T8	36	Actinic	G13	1200	26	-	0000726
F38W/Coralstar	T8	38	Actinic	G13	1047	26	-	0000721

Packaging Note: The sleeve pictured is for retail sales.



REPTISTAR T8

Lamps which improve the natural appearance of reptiles in terrariums and aid vitamin D3 production by providing ideal proportions of UVA & UVB light

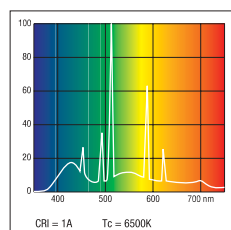


FEATURES

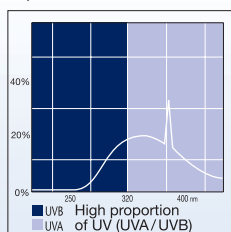
- Promotes vitamin D3 production which aids good health, growth and the general well-being of reptiles in terrariums through a high content of UVB (up to 5%) and UVA (up to 30%)
- This full spectrum (6500 K) lamp improves the natural appearance of reptiles
- Shows reptiles in their true colours

APPLICATIONS

- For the artificial lighting of reptiles in terrariums



Reptistar®



Item description	Watt	Colour	Cap	Dimensions (mm)		Light-output lm	Retail Pack Quantity	Ordering Code
				L	D			
F15W/Reptistar T8	15	Reptistar	G13	438	26	300	10	0000731
F18W/Reptistar T8	18	Reptistar	G13	590	26	450	10	0000732
F30W/Reptistar T8	30	Reptistar	G13	895	26	700	10	0000733
F36W/Reptistar T8	36	Reptistar	G13	1200	26	1000	10	0000734

Packaging Note: The sleeve pictured is for retail sales.

ACTIVA T8

A range of full-spectrum high colour rendering lamps with daylight characteristics

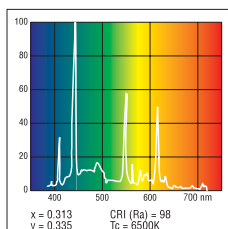


FEATURES

- Full spectrum lamp including UVA
- Radiation reproduces sunlight most closely
- Excellent colour rendering (Ra98/Class 1A)
- Colour temperature: 6500 K

APPLICATIONS

- Well-being of animals in captivity is improved
- The spectrum contains non-visible radiation (UVA) which is a source of vitality for the animals
- The exceptional high colour rendering (Ra 98) will make animals look bright and attractive



Activa® 172



Item description		Watt	Colour	Cap	Dimensions (mm)		CRI (Group)	Light-output lm	Packing Quantity	Ordering Code
					L	D				
F15W/Activa	T8	15	Activa	G13	438	26	1A	700	25	0002672
F18W/Activa	T8	18	Activa	G13	590	26	1A	1000	25	0002218
F36W/Activa	T8	36	Activa	G13	1200	26	1A	2300	25	0002219
F58W/Activa	T8	58	Activa	G13	1500	26	1A	3700	25	0002220
F70W/Activa	T8	70	Activa	G13	1764	26	1A	4600	25	0002188



HSI-TD 5K Daylight

Double ended quartz metal halide lamps with a clear tubular outer envelope and small, compact dimensions for use over fresh water aquaria

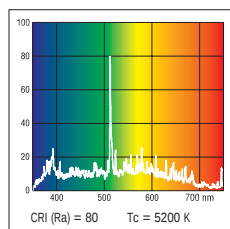


FEATURES

- Compact dimensions
- High efficiency and long service life (9000 hours)
- UV-STOP glass absorbs nearly all harmful UVB and UVC radiation. Lamps can therefore be used without the need for expensive UV-filters

APPLICATIONS

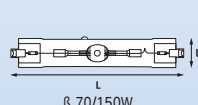
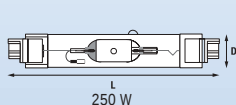
- Strong directional light which penetrates deep into large tanks
- Ideal for fresh water aquaria
- The excellent colour rendering makes the fish look bright
- The UV-stop feature the development of algae



Quartz Metal Halide: Daylight

DIRECTIONS FOR USE

- Burning position: horizontal $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with protective cover glass
- Ensure the lamp envelope is cleaned of finger prints before use
- Lamps should be operated with the arc tube tip-off up - see instructions supplied with lamp



Item description	Watt	Volt	Current	Cap	Dimensions(mm)		Bulb finish	Colour temp. K	Chromaticity Coordinate		Light output lm	Packing Quantity	Ordering Code
					L	D			x	y			
HSI-TD 70W/D 5K UVS	75	108	0.98	Rx7s	117.6	22	clear	5600	0.327	0.372	5400	10	0021045
HSI-TD 150W/D 5K UVS	150	102	1.80	Rx7s	135.4	25	clear	5200	0.336	0.366	11000	10	0021046
HSI-TD 250W/D 5K UVS	250	112	3.00	Fc2	161.6	27.5	clear	5200	0.335	0.361	18000	10	0021047

HSI-TD AquaArc

Double ended quartz metal halide lamps for use over fresh water and sea water aquaria

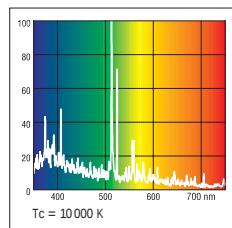


FEATURES

- High light output and good efficiency
- High colour rendering
- Very high colour stability over the whole lamp life
- High colour temperature (10000 K)

APPLICATIONS

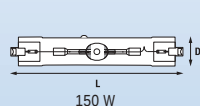
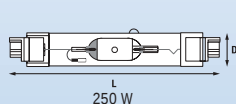
- For use in fresh and sea water aquaria
- Strong directional light which penetrates deep into large tanks
- Lifelike appearance of fish corals and plants



AquaArc®

DIRECTIONS FOR USE

- Burning position: horizontal $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with protective cover glass
- Ensure the lamp envelope is cleaned of finger prints before use
- Lamps should be operated with the arc tube tip-off up - see instructions supplied with lamp



Item description	Watt	Volt	Current	Cap	Dimensions(mm)		Bulb finish	Colour temp. K	Chromaticity Coordinate		Light output lm	Packing Quantity	Ordering Code
					L	D			x	y			
HSI-TD 150W AquaArc	150	100	1.80	Rx7s	135.4	25	clear	10000	0.277	0.311	9000	10	0021049
HSI-TD 250W AquaArc	250	100	3.00	Fc2	161.6	27.5	clear	10000	0.275	0.323	14000	10	0021050



HSI-TD CoralArc

Double ended quartz metal halide lamps for use over sea water aquaria

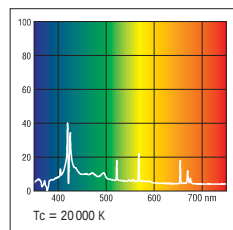


FEATURES

- Very high colour temperature (bluish light)
- Very high colour stability over the entire lamp life
- Enhanced colour rendition

APPLICATIONS

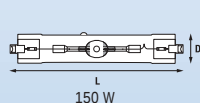
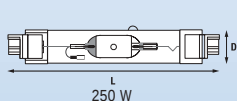
- For use in sea water aquaria
- Provides the specific spectrum (400-480 nm) necessary to achieve the blue chlorophyll absorption for zooxanthellae symbioses to develop



CoralArc®

DIRECTIONS FOR USE

- Burning position: horizontal $\pm 45^\circ$
- External ignitor only
- Only use in luminaires fitted with protective cover glass
- Ensure the lamp envelope is cleaned of finger prints before use
- Lamps should be operated with the arc tube tip-off up - see instructions supplied with lamp



Item description	Watt	Volt	Current	Cap	Dimensions(mm)		Bulb finish	Colour temp. K	Chromaticity Coordinate		Light output lm	Packing Quantity	Ordering Code
					L	D			x	y			
HSI-TD 150W CoralArc	150	100	1.80	Rx7s	135.4	25.0	clear	blue	0.261	0.257	5400	10	0021028
HSI-TD 250W CoralArc	250	100	3.00	Fc2	161.6	27.5	clear	blue	0.257	0.243	8000	10	0021029

HSL-SC Super Comfort



Mercury Vapour lamp for fresh water applications

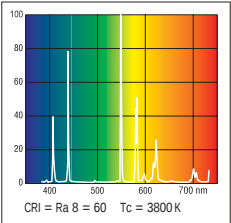


FEATURES

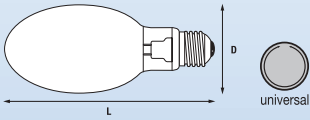
- Good natural appearance of animals and plants through good colour rendering properties
- Extremely long life (29000 hours)
- Also available as HSL-BW lamp with colder colour temperature of 4000K

APPLICATIONS

- For fresh water applications
- Low cost economical light source
- Direction for use
- Operates on standard ballast, no ignitor required



Mercury Vapour Super Comfort



Item description	Watt	Volt	Current	Cap	Dimensions (mm)		Colour temp. K	Light output lm	Packing Quantity	Ordering Code
					L	D				
HSL-SC 50W	50	95	1.61	E27	130	56	3400	2000	24	0020895
HSL-SC 80W	80	115	0.80	E27	166	71	3400	4000	40	0020890
HSL-SC 125W	125	125	1.15	E27	178	76	3400	6500	40	0020891



Infrared Reflector Lamps

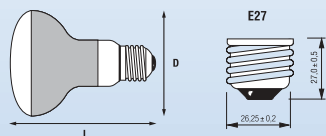


FEATURES

- Converts electric current into infrared radiation

APPLICATIONS

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



Item description	Watt	Volt	Cap	Dimensions (mm)		Packing Quantity	Ordering Code
				L	D		
Refl. 150W R125 Infrared	150	230	E27	181	125	10	0033002
Refl. 250W R125 Infrared	250	230	E27	181	125	10	0033003
Refl. 100W R95 Infrared	100	230	E27	130	95	15	0033004

Recommendations

Tips you need for the pets well-being

- How much light does your aquarium need? A general rule of thumb is that at least 0.5 watts of lighting per litre of water in the tank (more is better) must be available.
Keeping lower watt levels may cause a more frequent changing of lamps.

Length of Aquarium	Volume	Length of Lamps	Lamp Power	Lamps
40 cm	25 l	30 cm	8 W	1
50 cm	45 l	45 cm	15 W	1
60 cm	55 l	45 cm	15 W	1
80 cm	128 l	60 cm	18 W	2
100 cm	250 l	90 cm	30 W	4
120 cm	300 l	100 cm	38 W	4
130 cm	325 l	120 cm	36 W	4
150 cm	375 l	120 cm	36 W	4
160 cm	400 l	150 cm	58 W	4

- Avoid positioning your aquarium near to the window. The UVA and UVB in the sunlight will develop algae.
- Use a timer to light your aquarium at a certain hour each day. You should foresee between 10 and 14 hours of lighting per day.
- Change your fluorescent lamps at least once a year. Once 12 months have passed the light output of the lamps will be insufficient due to normal ageing.
- Don't change all the lamps of your aquarium at the same time. Throughout life the efficiency of the lamp gradually decreases. If you change all lamps at once, the increase in light output risks to upset the daily cycle of the fish and plants. Change therefore each of the lamps at intervals of one month.
- Don't forget to change the starter when you re-lamp. It is a requirement for a good lamp operation. Using COP-starters will avoid repetitive starting of the lamp at end of life.



Item description	Watt	Volt	Lamptype	Circuit	Packing Quantity	Ordering Code
COP starters:						
COP-11	18-58W	220 – 240V	26 mm	Single	1000	0024470
COP-22	14-18W	220 – 240V	26 mm	Tandem	1000	0024482

AIRFIELD *Ground Lighting*

RUN AND TAXIWAY LIGHTING

Airfields require lighting to provide aircraft with accurate information on positioning and direction. These lights are located alongside runways and in taxiways.

In close co-operation with world leading manufacturers of airfield ground lighting, Sylvania has developed a range of halogen lamps, specific to this application. Quality control management of the highest level is required in this field and calls on the extensive resources and experience the company possesses.

One of the most important features of these lamps is that they maintain their full light output throughout life. Hardly any blackening of the lamp bulb occurs, whilst the colour temperature and lumen output remain relatively constant.



L2513



L2502



L2352



L2368



L2372



INTEGRAL REFLECTOR TYPE

These are lamps integrated in dichroic reflectors which belong to the low voltage halogen range of Sylvania for airfield lighting.

Their advantages over tungsten halogen lamps without reflectors are: optimum adjustment, high luminaire efficiency thanks to the integrated reflector, focusing of the light source in the mirror, temperature resistant hard coated reflector and a long life.

CAPSULE TYPE

A range of conventional lamps for use as replacements. These combine long reliable through life performance with complete interchangeability for existing capsule types.

APPLICATIONS

The lamps are used in following feature types:

- approach lights
- runway edge lights
- threshold lights
- touchdown zone
- runway lights
- taxiway lights
- visual approach slope indicator systems
- calvert bars



ING - TWINARC

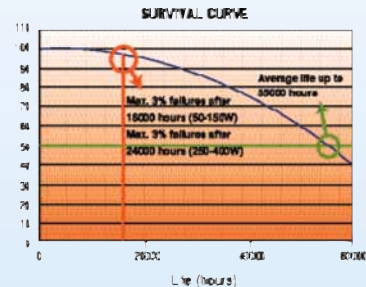
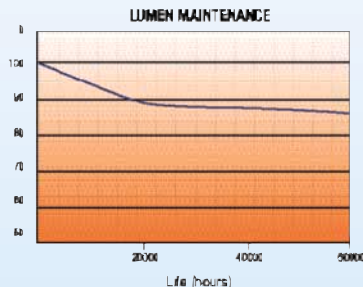
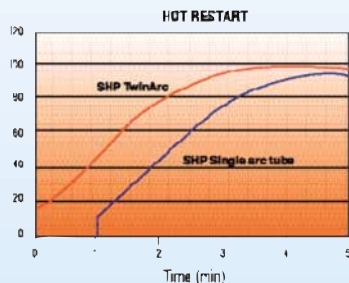


ING - TWINARC

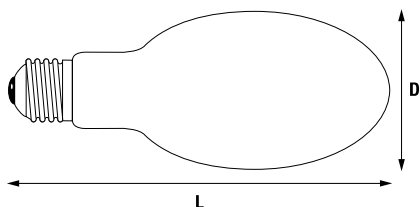


ING - HALOGEN

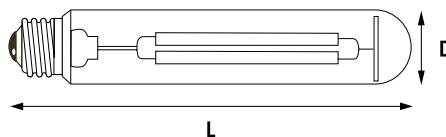
AIRFIELD *Ground Lighting*



SHP-S TWINARC



SHP-TS TWINARC



Item description	Watt W	Volt V	Current A	cap	Dimensions L D	Colour temp (K)	Light Output (lm)	Average life (hours)	Packing quantity	Ordering code
Elipctical coated										
SHP-S 35W TwinArc	35	90	0.49	E27	165	72	2050	1800	25000	40 0020720
SHP-S 50W TwinArc	50	85	0.76	E27	165	72	2050	3600	40000	40 0020717
SHP-S 70W TwinArc	70	90	0.98	E27	165	72	2050	6000	40000	40 0020719
SHP-S 100W TwinArc	100	100	1.20	E40	186	78	2050	9500	40000	40 0020725
SHP-S 150W TwinArc	150	100	1.80	E40	227	91	2050	15500	40000	12 0020740
SHP-S 250W TwinArc	255	100	2.90	E40	227	91	2050	30000	55000	12 0020742
SHP-S 400W TwinArc	410	105	4.40	E40	292	122	2050	52500	55000	12 0020744
Tubular clear										
SHP-TS 50W TwinArc	50	85	0.76	E27	156	39	2050	4000	40000	40 0020712
SHP-TS 70W TwinArc	70	90	0.98	E27	156	39	2050	6500	40000	40 0020718
SHP-TS 100W TwinArc	100	100	1.20	E40	211	48	2050	10000	40000	12 0020724
SHP-TS 150W TwinArc	150	100	1.80	E40	211	48	2050	17000	40000	12 0020739
SHP-TS 250W TwinArc	255	100	2.90	E40	260	48	2050	32000	55000	12 0020741
SHP-TS 400W TwinArc	400	100	4.50	E40	292	48	2050	55000	55000	12 0020743
SHP-T 1000W SBY	960	100	10.6	E40	400	68	2050	130000	20000	12 0020748

AIRFIELD

Ground Lighting

Integral reflector lamps MR 16 (50mm)

Item description	Watt W	Current A	Con- nector	Con- nector type	Cable Length (mm)	Dimensions (mm) M.O.L D	Average Life (h)	Max Light intensity (cd)	Beam Angle 50% (°)	Fig. #	Packing quantity	Ordering code
L2372 36W 6A MR16	36	6.0	2	Male	100	45.6 50.6	1500	24000	5	3	10	0021484
L2373 30W 6.6A MR16	30	6.6	2	Male	100	45.6 50.6	1500	19000	6	3	10	0021483
L2378 36W 6.6A MR16	36	6.6	1	Female	110	45.6 50.6	1500	19000	6	4	10	0021494
L2352 45W 6.6A MR 16	45	6.6	3	Bullet	122	45.6 50.6	1500	19000	7	4	10	7024522
L2354 48W 6.6A MR16	48	6.6	1+2	Fem/Male	135	45.6 50.6	1000	29500	6	3	10	7221518
L2358 48W 6.6A MR16	48	6.6	1	Female	110	45.6 50.6	1500	19000	7	3	10	0021496
L2359 48W 6.6A MR16	48	6.6	2	Male	100	45.6 50.6	1500	19000	7	3	10	0021497
L2371 48W 6.6A MR16	48	6.6	1	Female	100	45.6 50.6	1500	8500	13	3	10	0021489
L2374 60W 6.6A MR16	60	6.6	1	Female	110	45.6 50.6	1500	26000	7.5	3	10	0021487
L2375 60W 6.6A MR16	60	6.6	1	Female	100	45.6 50.6	1500	11000	15	3	10	0021488
L2362 105W 6.6A MR16	105	6.6	3	Bullet	122	50.0 50.6	1000	30000	10	5	10	7024526
L2368 105W 6.6A MR16	105	6.6	1	Female	110	50.0 50.6	1000	30000	10	5	10	0021498
L2369 105W 6.6A MR16ma	105	6.6	2	Male	100	50.0 50.6	1000	30000	10	5	10	0021499

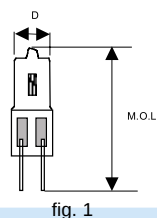


fig. 1

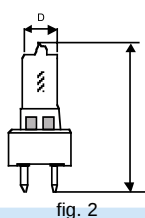


fig. 2

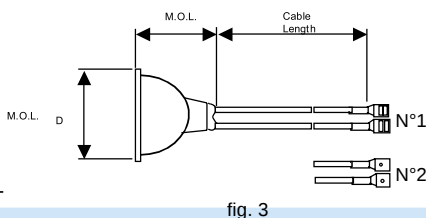


fig. 3

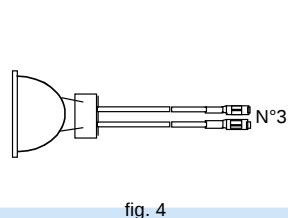


fig. 4

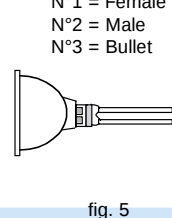


fig. 5

N°1 = Female
N°2 = Male
N°3 = Bullet

Capsule lamps

Item description	Watt	Current A	Cap	Dimensions (mm) M.O.L D	Light Output (lm)	Rated Average life (h)	Burning position	Fig. #	Packing quantity	Ordering code
L2516 30W 6.6A J1/74	30	6.6	G6.35	45.0 11.0	400	1500	BD+/-90°	1	50	0021479
L2510 36W 6.0A J1/59	36	6.0	G6.35	45.0 11.0	610	1200	BD+/-90°	1	50	0022213
L2517 36W 6.6A J1/75	36	6.6	G6.35	45.0 11.0	610	1500	BD+/-90°	1	50	0021480
L2511 45W 6.6A J1/57	45	6.6	G6.35	45.0 11.0	960	1200	BD+/-90°	1	50	0022214
L2512 65W 6.6A	65	6.6	G6.35	45.0 11.0	1450	1200	BD+/-90°	1	50	0022215
L2513 100W 6.6A J1/58	100	6.6	G6.35	47.0 13.5	2300	1200	BD+/-90°	1	50	0022212
L2518 100W 8.33A J1/66	100	8.33	G6.35	47.0 13.5	2300	1200	BD+/-90°	1	50	0021491
L2514 200W 6.6A J1/39	200	6.6	G6.35	47.0 13.5	4700	1200	BD+/-90°	1	50	0022211
L2519 200W 8.33A J1/65	200	8.33	G6.35	47.0 13.5	4700	1200	BD+/-90°	1	50	0021492
L2500 30W 6.6A EXL	30	6.6	G29.5	44.0 11.4	400	1000	BD+/-90°	2	50	0021757
L2501 45W 6.6A EXM	45	6.6	G29.5	44.0 11.4	960	1000	BD+/-90°	2	50	0021686
L2502 150W 6.6A EWR/1	150	6.6	G29.5	57.0 13.5	3600	1000	BD+/-90°	2	50	0024529
L2503 175W 6.6A	175	6.6	G29.5	57.0 13.5	4700	1000	BD+/-90°	2	50	0021683
L2504 200W 6.6A EZL	200	6.6	G29.5	57.0 13.5	5000	1000	BD+/-90°	2	50	0021696
L2505 115W 6.6A EVV	115	6.6	G29.5	57.0 13.5	2700	1000	BD+/-90°	2	50	0024531
L2502 150W 6.6A EWR/2	150	6.6	G29.5	57.0 13.5	4400	1000	BD+/-90°	2	50	0024530