PHILIPS

Special Lighting

Science & Industry

A **specialist lamp** for every need

Give your **customers exactly** what they need

As a leading lighting company for more than 120 years, we have unrivaled expertise in specialist lamps for science and industry applications. Take our very broad range of halogens, for example. Their distortion-free quartz bulb, precise filament positioning, and Color Rendering Index of 100 make them perfect for mission-critical systems. And then there are our Flexo print TL /R lamps, which have an internal reflector and produce the ideal UVA spectrum for optimal flexographic curing results.

Over the years we have found that professional end users are searching for lamps with a high performance they can rely on, offering them great value for their money. This is exactly what we offer - so you can give your customers exactly what they need. Find out more about our range and their specifications on the next pages.

Halogen reflector

Our halogen reflector lamps offer unbeatable light quality. This in combination with their proven reliability makes them ideal for professional applications where optimum visual conditions are important, such as medical, projection and scientific illumination systems. A special designed dichroic reflector ensures backwards dissipation of approximately 75% of the generated heat. This helps the optical system remain within temperature limits. In addition, you get all the proven advantages of halogen technology such as an excellent color rendering of 100 - ensuring colors appear naturally and faithfully, as they would in natural daylight - a comfortable crisp white light and a constant high light output over the lifetime of the lamps. A special blue-filter version, capable of blocking out unwanted light above 700 nm, is available for dental curing applications.

Benefits

- Creation of optimum visual conditions
- High performance light you can rely on during the whole lamp life
- Direct retrofit in existing applications, no re-alignment necessary when lamp is replaced

Features

- Excellent distortion-free quartz bulb
- Excellent color rendering of 100
- Dichroic coating on glass reflector radiates about 75% of the generated heat backwards, keeping the temperature within safe limits
- Special blue-filter version available for dental curing applications

GX5.3 smooth

GX5.3 facetted

GX5.3 stippled

G5.3/4.8

GZ6.35

G4/GZ4

Dimensions (in mm) and applications areas

GX5.3

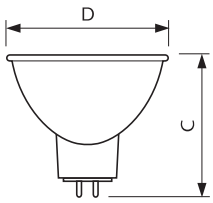


Fig. 1

Product	C (Max)	D (Max)	Applications
13163 250W GX5.3 24V 1CT	44.5	50	Solar simulation, Projection, Overhead projector, Fiber optics
5995 EJM 150W GX5.3 21V 1CT	44.5	50.7	Fiber optics
13164 200W GX5.3 24V 1CT	44.5	50.7	Dental hardening
13158 150W GX5.3 21V 1CT	44.5	50.7	Solar simulation, Projection, Overhead projector, Fiber optics
14501 150W GX5.3 20V	44.5	50.7	Microfilm, Microfiche
13289 50W GX5.3 13.8V 1CT	46	50	Microfilm, Microfiche
13629 150W GX5.3 21V 1CT	44.5	50.7	Fiber optics
13938XHP 50W GX5.3 22.8V 1CT	45	50	Medical surgery lighting
13186 90W GX5.3 14.5V 1CT	45	50	Microfilm, Microfiche

G5.3/4.8

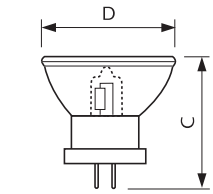


Fig. 2

Product	C (Max)	D (Max)	Applications
13865 75W G5.3/4.8 12V 1CT	35.5	35	Dental hardening

GZ6.35

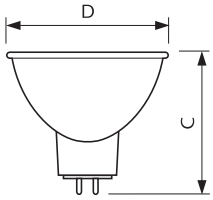


Fig. 3

Product	C (Max)	D (Max)	Applications
6834 100W GZ6.35 12V 1CT	42	50	Fiber optics, Projection
6834FO 100W GZ6.35 12V 1CT	42	50	Fiber optics
6423 150W GZ6.35 15V 1CT	42	50	Fiber optics, Projection
6423XHP FO 150W GZ6.35 15V 1CT	42	50	Fiber optics
6423FO 150W GZ6.35 15V 1CT/10X5F	42	50	Solar simulation, Projection, Overhead projector, Fiber optics
JCR 15V 150W 5H 1CT	43	50	Fiber optics

G4/GZ4

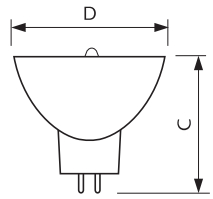


Fig. 4

Product	C (Max)	D (Max)	Applications
13528 15W GZ4 6V 1CT	42	35	Microfilm, Microfiche

Halogen non-reflector

All our halogen non-reflector lamps incorporate a distortion-free quartz bulb and a precisely positioned filament. These ensure optimal beam performance and consistent, high light output that is maintained over their lifetime - two elements that are crucial for applications where visual conditions are important. In addition, you get all the proven advantages of halogen technology such as an excellent color rendering of 100 - ensuring colors appear naturally and faithfully, as they would in natural daylight - a comfortable crisp white light and a constant high light output over the lifetime of the lamps. Our halogen non-reflector lamps are easy to install, replace and operate. A wide range of wattages is available for a broad variety of applications, including projection systems.

Benefits

- Creation of optimum visual conditions
- High performance light you can rely on during the whole lamp life
- Direct retrofit in existing applications, no lamp adjustment required

Features

- Distortion-free, quartz bulb and precisely defined filament position for optimum beam performance and high light output
- Excellent color rendering of 100
- XHP version with xenon gas for maximum light output
- Flat filament available

G5.3

GY6.35

G4

G6.35

Dimensions (in mm) and applications areas

G5.3	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	6390 30W G5.3 10.8V 1CT	44	8.5	26.75	27	27.25	1.47	1.56	1.65	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	14531 360W G5.3 82V 1CT	57	11.5	30.8	31.8	32.8	1.47	1.56	1.65	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes

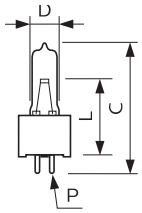


Fig. 5

GY6.35	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	7023 100W GY6.35 12V 1CT	44	11	29.75	30	30.25	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7724 100W GY6.35 12V 1CT	44	11	29.65	30	30.35	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7724I 100W GY6.35 12V 1CT	44	11	29.65	30	30.35	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes

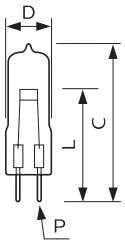


Fig. 6

G4	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	6605 10W G4 6V 1CT	31	9	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	7387 10W G4 6V 1CT	31	9	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	7388 20W G4 6V 1CT	31	9	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	5761 30W G4 6V 1CT	31	9	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	12345SL 20W G4 12V 1CT	30	8.5	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes

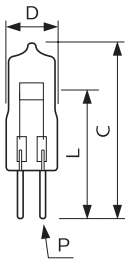


Fig. 7

G6.35	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	7748XHP 250W G6.35 24V 1CT	55	12	32.75	33	33.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7158 150W G6.35 24V 1CT	50	11	31.5	32	32	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7158XHP 150W G6.35 24V 1CT	50	11	31.5	32	32	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	13701 110W G6.35 22.8V 1CT	43	12	29.65	30	30.35	0.95	1	1.05	Medical surgery lighting, Overhead projector, Microfiche
	14623 95W G6.35 17V 1CT	50	11	31.5	32	32.5	0.95	1	1.05	Medical surgery lighting, projection
	7027 50W G6.35 12V 1CT	44	11	29.75	30	30.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	6550 150W G6.35 15V 1CT	44	11	29.75	30	30.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes

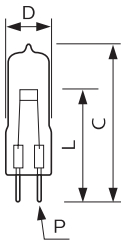


Fig. 8

Ceramic Discharge Metal-Halide (CDM)

The perfect color rendering and long life of these Ceramic Discharge Metal-halide lamps make them ideal for fiber optics lighting in shop displays, decorative lighting systems and swimming pool illumination systems.

Benefits
- Low cost of ownership
- Perfect colors

Features
- Long life
- High efficiency
- Very good Color Rendering Index of 96

CDM-SA/R

Dimensions (in mm) and applications areas

CDM-SA/R	Product	C (Max)	D (Max)	X (Norm)	Applications
	CDM-SA/R 150W/942 UNP	106	95.3	280	Fiber optics

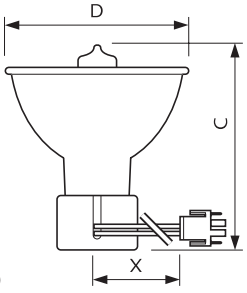


Fig. 9

Flexo Print

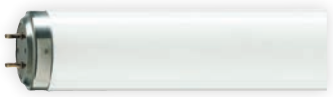
Flexo print TL lamps emit almost all of their light (99.9%) in the useful UVA and visible blue wavebands – between 350 and 400 nm – and have peak intensity at 370 nm (except for the /03 version). This makes them ideal for flexo printing equipment and photopolymerization processes. In addition, the 'R' lamps in the family have an internal 200-degree reflector to further optimize the lamp's overall efficiency.

Benefits

- Best match with photo sensitizers
- Highest output on irradiated area

Features

- Emit radiation in the range 380-480 nm with a peak at 370 nm
- Internal reflector



TL G13

Dimensions (in mm) and applications areas

TL G13

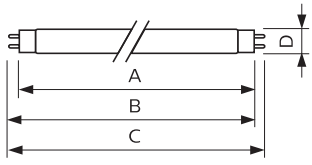


Fig. 10

Product	A (Max)	B (Min)	B (Max)	C (Max)	D (Max)	Applications
Actinic BL TL-K 40W/10-R	589.8	594.5	596.9	604	40.5	Reprography
TL 60W/10-R 1SL	1199.4	1204.1	1206.5	1213.6	40.5	Reprography
TL 80W/10-R SLV	1500	1504.7	1507.1	1514.2	40.5	Reprography
TUV TL-D 95W HO SLV/25	1500	1504.7	1507.1	1514.2	40.5	Reprography
TL 100W/10-R UV-A	1763.8	1768.5	1770.9	1778	40.5	Reprography
TL 140W/03	1500	1504.7	1507.1	1514.2	40.5	Reprography

Specifications and ordering **information**

Halogen reflector

Full product name	Philips code	Lamp Wattage	Cap Base	Voltage	Operating Postition	Lamp Luminosity	Color Temperature	Color Rendering Index (Ra8)
13163 250W GX5.3 24V 1CT	13163	250 W	GX5.3	24 V	any	-/-	3400 K	100
5995 EJM 150W GX5.3 21V 1CT	5995	150 W	GX5.3	21 V	s90	1200 lx	3400 K	100
13164 200W GX5.3 24V 1CT	13164	200 W	GX5.3	24 V	s90	1100 lx	3400 K	100
13158 150W GX5.3 21V 1CT	13158	150 W	GX5.3	21 V	s90	320 lx	3400 K	100
14501 150W GX5.3 20V	14501	150 W	GX5.3	20 V	s105	400 lx	3150 K	100
13629 150W GX5.3 21V 1CT	13629	150 W	GX5.3	21 V	s90	900 lx	3250 K	100
13865 75W G5.3/4.8 12V 1CT	13865	75 W	G5.3	12 V	any	-/-	-/-	100
6834 FO 100W GZ6.35 12V 1CT	6834 FO	100 W	GZ6.35	12 V	P90/P15	-/-	3330 K	100
6423XHP FO 150W GZ6.35 15V 1CT	6423XHP FO	150 W	GZ6.35	15 V	P90/P15	-/-	3380 K	100
6423 FO 150W GZ6.35 15V 1CT/10X5F	6423 FO	150 W	GZ6.35	15 V	P90/P15	-/-	3380 K	100
JCR 15V 150W 5H 1CT	-/-	150 W	GZ6.35	15 V	s90	73000 lx	3100 K	100
13528 15W GZ4 6V 1CT	13528	15 W	GZ4	6 V	s105	700 lx	2900 K	100
6423XHP FO 150W GZ6.35 15V 1CT	6423XHP FO	150 W	GZ6.35	15 V	P90/P15	-/-	3380 K	100
6423 FO 150W GZ6.35 15V 1CT/10X5F	6423 FO	150 W	GZ6.35	15 V	P90/P15	-/-	3380 K	100
JCR 15V 150W 5H 1CT	-/-	150 W	GZ6.35	15 V	s90	73000 lx	3100 K	100
13528 15W GZ4 6V 1CT	13528	15 W	GZ4	6 V	s105	700 lx	2900 K	100

Life to 50% failures	ANSI code	LIF Code	Reflector Diameter	Reflector finish	Dimmable	lamps per outer box	Dimensional drawing	Order code
50 hr	ELC	A1/259	R50	smooth	Yes	50	Fig. 1	507095
40 hr	EJM	-/-	R50	smooth	Yes	24	Fig. 1	239426
50 hr	EJL	A1/252	R50	smooth	Yes	24	Fig. 1	315085
40 hr	ELD/EJN	-/-	R50	stippled	Yes	24	Fig. 1	316182
500 hr	DDL	-/-	R50	facetted	Yes	24	Fig. 1	315093
200 hr	EKE/ENA	-/-	R50	smooth	Yes	24	Fig. 1	315929
35 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 2	324053
50 hr	EFP	A1/231	R50	-/-	Yes	50	Fig. 3	314880
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 3	258921
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 3	314906
500 hr	-/-	-/-	R50	smooth	Yes	24	Fig. 3	249235
750 hr	-/-	-/-	R35	smooth	Yes	24	Fig. 4	324038
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 3	258921
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 3	314906
500 hr	-/-	-/-	R50	smooth	Yes	24	Fig. 3	249235
750 hr	-/-	-/-	R35	smooth	Yes	24	Fig. 4	324038

Specifications and ordering **information**

Halogen non-reflector

Full product name	Philips code	Lamp Wattage	Cap Base	Voltage	Operating Postition	Lamp Luminosity	Color Temperature	Color Rendering Index (Ra8)
6390 30W G5.3 10.8V 1CT	6390	30 W	G5.3	10.8 V	s90	570 lm	3100 K	100
14531 360W G5.3 82V 1CT	14531	360 W	G5.3	82 V	s90	10000 lm	3300 K	100
7023 100W GY6.35 12V 1CT	7023	100 W	GY6.35	12 V	s90	3600 lm	3450 K	100
7724 100W GY6.35 12V 1CT	7724	100 W	GY6.35	12 V	s90	2700 lm	3200 K	100
6605 10W G4 6V 1CT	6605	10 W	G4	6 V	any	150 lm	2700 K	100
7387 10W G4 6V 1CT	7387	10 W	G4	6 V	s90	200 lm	3200 K	100
7388 20W G4 6V 1CT	7388	20 W	G4	6 V	any	460 lm	3350 K	100
5761 30W G4 6V 1CT	5761	30 W	G4	6 V	any	765 lm	3200 K	100
12345SL 20W G4 12V 1CT	12345SL	20 W	G4	12 V	any	640 lm	3100 K	100
7748XHP 250W G6.35 24V 1CT	7748XHP	250 W	G6.35	24 V	s90	9800 lm	3550 K	100
7158 150W G6.35 24V 1CT	7158	150 W	G6.35	24 V	s90	6000 lm	3450 K	100
7158XHP 150W G6.35 24V 1CT	7158XHP	150 W	G6.35	24 V	s90	6000 lm	3450 K	100
14623 95W G6.35 17V 1CT	14623	95 W	G6.35	17 V	s90	2150 lm	3050K	100
7027 50W G6.35 12V 1CT	7027	50 W	G6.35	12 V	s90	1600 lm	3350 K	100
14623 95W G6.35 17V 1CT	14623	95 W	G6.35	17 V	s90	2150 lm	3050K	100
7027 50W G6.35 12V 1CT	7027	50 W	G6.35	12 V	s90	1600 lm	3350 K	100
6550 150W G6.35 15V 1CT	6550	150 W	G6.35	15 V	s90	5600 lm	3450 K	100

CDM

Full product name	Lamp Wattage	Cap Base	Lamp Current	Operating Postition	Lamp Luminosity	Color Temperature	Color Rendering Index (Ra8)
CDM-SA/R 150W/942 UNP	150 W	Ceramic Cap-Cable	1.8 A	any	5000 lm	4200 K	96

Flexo Print

Full product name	Lamp Wattage	Cap Base	Useful life	Bulb	Color code	Color Designation	Lamp Current
Actinic BL TL-K 40W/10-R	40 W	G13	2000 hr	T12	10-R	Ultra Violet A	0.86 A
TL 60W/10-R 1SL	60 W	G13	1000 hr	T12	10-R	Ultra Violet A	0.7 A
TL 80W/10-R SLV	80 W	G13	1000 hr	T12	10-R	Ultra Violet A	0.83 A
TL 100W/10-R UV-A	100 W	G13	1000 hr	T12	10-R	Ultra Violet A	0.97 A
TUV TL-D 95W HO SLV/25*	95 W	G13	8000 hr	T8	-/-	Ultra Violet C	0.62 A
TL 140W/03	140 W	G13	3000 hr	T12	3	Blue	1.46 A

* For further details please contact our local Key Account Manager

Life to 50% failures	ANSI code	LIF Code	lamps per outer box	Dimensional drawing	Order code
1000 hr	DZA	-/-	24	Fig. 5	324004
75 hr	EYB	-/-	24	Fig. 5	232579
50 hr	FCR	A1/215	100	Fig. 6	261016
2000 hr	EVA	M28	100	Fig. 6	256768
2000 hr	EVA	M42	100	Fig. 7	256842
100 hr	-/-	M29	100	Fig. 7	261263
100 hr	ESA	M30	100	Fig. 7	256784
100 hr	ESB	-/-	100	Fig. 7	257139
100 hr	-/-	-/-	24	Fig. 7	324046
50 hr	-/-	A1/223	100	Fig. 8	231753
50 hr	EHJ	A1/216	100	Fig. 8	206078
50 hr	FCS	A1/216	100	Fig. 8	231746
2000 hr	FCS	-/-	100	Fig. 8	158816
50 hr	-/-	A1/220	100	Fig. 8	316273
2000 hr	-/-	-/-	100	Fig. 8	158816
50 hr	BRL	A1/220	100	Fig. 8	316273
50 hr	BRJ	A1/234	100	Fig. 8	844480

Life to 50% failures	Color code	Color Designation	Dimmable	Lamps per outer box	Dimensional drawing	Order code
6000 hr	942	Cool White	No	1	Fig. 9	382788

Radiation Output	Dimensional drawing	Order code
8.0 W	Fig. 10	246751
16 W	Fig. 10	261693
19 W	Fig. 10	268854
26.0 W	Fig. 10	246942
22.5 W	Fig. 10	203117
34.2 W	Fig. 10	308080

Legend

Icons

- Solar simulation
- Projection
- Overhead Projector (OHP)
- Fiber optics
- Dental hardening
- Microfilm
- Microscopes
- Endoscopes
- Medical surgery lighting

Operating Position

- s105
- s90
- p90/p15
- any

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