



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 faceted



GX5.3 stippled



G5.3/4.8



GY5.3



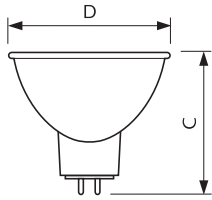
GZ6.35



G4/GZ4

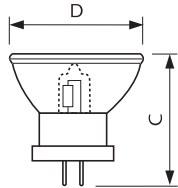
Dimensions (in mm) and applications areas

GX5.3



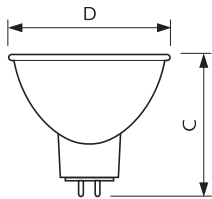
Product	C (Max)	D (Max)	Applications
13117 150W GX5.3 17V 1CT	47	50	Solar simulation, Projection, Overhead projector, Fiber optics
13163 250W GX5.3 24V 1CT	45	50	Solar simulation, Projection, Overhead projector, Fiber optics
5995 EJM 150W GX5.3 21V 1CT	44.5	50.7	Fiber optics
13164 200W GX5.3 24V 1CT	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
13629 150W GX5.3 21V 1CT	44.5	50.7	Fiber optics
13631 250W GX5.3 24V 1CT	44.5	50.7	Solar simulation, Projection, Overhead projector, Fiber optics
14515 FO 75W GX5.3 12V 1CT	42	50	Fiber optics
14527 150W GX5.3 21V 1CT	44.5	50.7	Fiber optics
13189 50W GX5.3 13.8V 1CT	45	50	Microfilm, Microfiche

G5.3/4.8



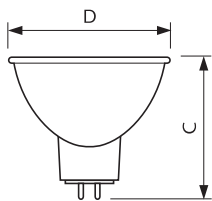
Product	C (Max)	D (Max)	Applications
13865 75W G5.3/4.8 12V 1CT	38	35	Dental hardening

GY5.3



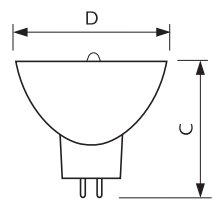
Product	C (Max)	D (Max)	Applications
13096 ELH 300W GY5.3 120V 1CT	44.5	50.7	Solar simulation, Projection, Overhead projector, Fiber optics
13095 250W GY5.3 120V 1CT	44.5	50.7	Solar simulation, Projection, Overhead projector, Fiber optics

GZ6.35



Product	C (Max)	D (Max)	Applications
13861 FO 42W GZ6.35 12V 1CT	42	50	Fiber optics, Projection
6834/25H FO 100W GZ6.35 12V 1CT	42	50	Fiber optics
6834FO 100W GZ6.35 12V 1CT	42	50	Fiber optics
6853 FO 75W GZ6.35 12V 1CT	42	50	Fiber optics
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



Product	C (Max)	D (Max)	Applications
14552 75W GZ4 12V 1CT	43	35	Dental hardening
13298 52W GZ4 10V 1CT	44	35	Dental hardening
13528 15W GZ4 6V 1CT	42	35	Microfilm, Microfiche
13165 35W GZ4 14V 1CT	45	35	Dental hardening



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

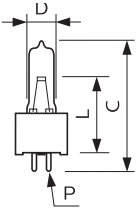
G5.3	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	6390 30W G5.3 10.8V 1CT	44	8.5	26.75	27	27.25	1.47	1.56	1.65	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	14531 360W G5.3 82V 1CT	57	11.5	30.8	31.8	32.8	1.47	1.56	1.65	Overhead projector,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

Fig. 6

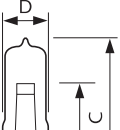
GY6.35	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	7023 100W GY6.35 12V 1CT	44	11.5	29.75	30	30.25	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7724 100W GY6.35 12V 1CT	44	10.7	29.65	30	30.35	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	14530 300W GY6.35 24V 1CT	55	13.5	32.75	33	33.25	1.20	1.25	1.30	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes

Fig. 7

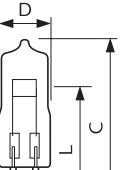
G4	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	6605 10W G4 6V 1CT	30	8.5	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	7387 10W G4 6V 1CT	30	8.8	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	7388 20W G4 6V 1CT	30	8.8	19.25	19.5	19.75	0.65	0.7	0.75	Microscopes
	5761 30W G4 6V 1CT	30	8.5	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. 8

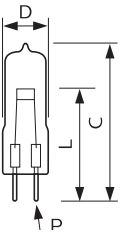
G6.35	Product	C (Max)	D (Max)	L (Min)	L (Norm)	L (Max)	P (Min)	P (Norm)	P (Max)	Applications
	6958 250W G6.35 24V 1CT	57	13.5	32.75	33	33.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7748XHP 250W G6.35 24V 1CT	55	13.5	32.75	33	33.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7787XHP 400W G6.35 36V 1CT	60	18	35.75	36	36.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7158 150W G6.35 24V 1CT	50	12.75	31.5	32	32.5	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	7158XHP 150W G6.35 24V 1CT	50	13.5	31.5	32	32.5	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes
	14623 95W G6.35 17V 1CT	50	12.75	31.5	32	32.5	0.95	1	1.05	Medical surgery lighting, projection
	7027 50W G6.35 12V 1CT	44	11.5	29.75	30	30.25	0.95	1	1.05	Overhead projector, Projection, Microfilm, Microscopes, Endoscopes

Fig. 9



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

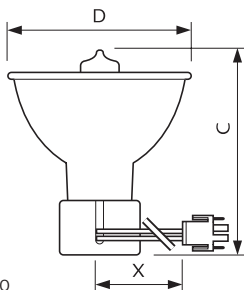


Fig. 10



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	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 ISL	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

Fig. 11

Specifications and ordering **information**

Halogen reflector

Full product name	Philips code	Lamp Wattage	Cap Base	Voltage	Operating Position	Lamp Luminosity	Color Temperature	Color Rendering Index (Ra8)
13117 150W GX5.3 17V 1CT	13117	150 W	GX5.3	17 V	any	23000 lx	3200 K	100
13163 250W GX5.3 24V 1CT	13163	250 W	GX5.3	24 V	≤105	-/-	3400 K	100
5995 EJM 150W GX5.3 21V 1CT	5995	150 W	GX5.3	21 V	≤90	1200 lx	3400 K	100
13158 150W GX5.3 21V 1CT	13158	150 W	GX5.3	21 V	≤90	320 lx	3400 K	100
13164 200W GX5.3 24V 1CT	13164	200 W	GX5.3	24 V	≤90	1100 lx	3400 K	100
14501 150W GX5.3 20V	14501	150 W	GX5.3	20 V	≤105	400 lx	3150 K	100
13629 150W GX5.3 21V 1CT	13629	150 W	GX5.3	21 V	≤90	900 lx	3250 K	100
13631 250W GX5.3 24V 1CT	13631	250 W	GX5.3	24 V	≤90	1500 lx	3400 K	100
14515 FO 75W GX5.3 12V 1CT	14515 FO	75 W	GX5.3	12 V	≤90	420 lm	2900 K	100
14527 150W GX5.3 21V 1CT	14527	150 W	GX5.3	21 V	≤90	1200 lx	3400 K	100
13189 50W GX5.3 13.8V 1CT	13189	50 W	GX5.3	13.8 V	≤105	380 lx	3150 K	100
13865 75W G5.3/4.8 12V 1CT	13865	75 W	G5.3	12 V	≤105	-/-	-/-	100
13096 ELH 300W GY5.3 120V 1CT	13096	300 W	GY5.3	120 V	≤90	850 lx	3350 K	100
13095 250W GY5.3 120V 1CT	13095	250 W	GY5.3	120 V	≤90	800 lx	3250 K	100
13861 FO 42W GZ6.35 12V 1CT	13861 FO	42 W	GZ6.35	12 V	≤90	230 lx	2900 K	100
6834/25H FO 100W GZ6.35 12V 1CT	6834/25H FO	100 W	GZ6.35	12 V	any	420 lm	3100 K	100
6834 FO 100W GZ6.35 12V 1CT	6834 FO	100 W	GZ6.35	12 V	≤105	750 lm	3400 K	100
6423XHP FO 150W GZ6.35 15V 1CT	6423XHP FO	150 W	GZ6.35	15 V	≤90	950 lm	3450 K	100
6423 FO 150W GZ6.35 15V 1CT/10X5F	6423 FO	150 W	GZ6.35	15 V	≤105	840 lm	3350 K	100
6853 FO 75W GZ6.35 12V 1CT	6853 FO	75 W	GZ6.35	12 V	≤105	600 lm	3400 K	100
JCR 15V 150W 5H 1CT	-/-	150 W	GZ6.35	15 V	≤90	73000 lx	3100 K	100
14552 75W GZ4 12V 1CT	14552	75 W	GZ4	12 V	≤105	-/-	-/-	100
13298 52W GZ4 10V 1CT	13298	52 W	GZ4	10 V	any	-/-	-/-	100
13528 15W GZ4 6V 1CT	13528	15 W	GZ4	6 V	≤105	700 lx	2900 K	100
13165 35W GZ4 14V 1CT	13165	35 W	GZ4	14 V	any	-/-	-/-	100

Life to 50% failures	ANSI code	LIF Code	Reflector Diameter	Reflector finish	Dimmable	lamps per outer box	Dimensional drawing	Order code
1000 hr	-/-	-/-	R50	smooth	Yes	50	Fig. 1	376145
35 hr	ELC	A1/259	R50	smooth	Yes	50	Fig. 1	507095
40 hr	EJM	-/-	R50	smooth	Yes	24	Fig. 1	239426
40 hr	ELD/EJN	-/-	R50	stippled	Yes	24	Fig. 1	316182
50 hr	EJL	A1/252	R50	smooth	Yes	24	Fig. 1	315085
500 hr	DDL	-/-	R50	facetted	Yes	24	Fig. 1	315093
200 hr	EKE/ENA	-/-	R50	smooth	Yes	24	Fig. 1	315929
50 hr	ELC/FA	A1/259	R50	facetted	Yes	24	Fig. 1	231035
1600 hr	-/-	-/-	R50	-/-	Yes	50	Fig. 1	258764
40 hr	EJA	-/-	R50	-/-	Yes	24	Fig. 1	441428
1000 hr	EPZ/DJT	-/-	R50	smooth	Yes	50	Fig. 1	314963
50 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 2	264234
35 hr	ELH	-/-	R50	facetted	Yes	24	Fig. 3	316190
175 hr	ENH	-/-	R50	facetted	Yes	24	Fig. 3	316216
4000 hr	-/-	-/-	R50	-/-	Yes	50	Fig. 4	258756
2500 hr	EFP/25H	A1/231/25H	R50	smooth	Yes	50	Fig. 4	300798
50 hr	EFP	A1/231	R50	-/-	Yes	50	Fig. 4	314880
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 4	258921
50 hr	EFR	A1/232	R50	-/-	Yes	50	Fig. 4	314906
50 hr	EFN	A1/230	R50	-/-	Yes	50	Fig. 4	315028
500 hr	-/-	-/-	R50	smooth	Yes	24	Fig. 4	249235
50 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 5	161109
25 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 5	160945
750 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 5	315044
50 hr	-/-	-/-	R35	smooth	Yes	50	Fig. 5	442954

Specifications and ordering **information**

Halogen non-reflector

Full product name	Philips code	Lamp Wattage	Cap Base	Voltage	Operating Position	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	3400 lm	3400 K	100
7724 100W GY6.35 12V 1CT	7724	100 W	GY6.35	12 V	s90	2550 lm	3100 K	100
14530 300W GY6.35 24V 1CT	14530	300 W	GY6.35	24 V	s90	10450 lm	3500 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	any	197 lm	3200 K	100
7388 20W G4 6V 1CT	7388	20 W	G4	6 V	any	475 lm	3200 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
6958 250W G6.35 24V 1CT	6958	250 W	G6.35	24 V	s90	8400 lm	3400 K	100
7748XHP 250W G6.35 24V 1CT	7748XHP	250 W	G6.35	24 V	s90	10000 lm	3400 K	100
7787XHP 400W GY6.35 36V 1CT	7787XHP	400 W	G6.35	36 V	s90	16000 lm	3400 K	100
7158 150W G6.35 24V 1CT	7158	150 W	G6.35	24 V	s90	5200 lm	3400 K	100
7158XHP 150W G6.35 24V 1CT	7158XHP	150 W	G6.35	24 V	s90	6000 lm	3400 K	100
14623 95W G6.35 17V 1CT	14623	95 W	G6.35	17 V	s90	2150 lm	2900 K	100
7027 50W G6.35 12V 1CT	7027	50 W	G6.35	12 V	s90	1500 lm	3300 K	100

CDM

Full product name	Lamp Wattage	Cap Base	Lamp Current	Operating Position	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	03	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	-/-	100	Fig. 6	281170
75 hr	EYB	-/-	24	Fig. 6	232579
50 hr	FCR	A1/215	100	Fig. 7	261016
2000 hr	EVA	M28	100	Fig. 7	256768
50 hr	FLW	-/-	24	Fig. 7	204925
2000 hr	-/-	M42	100	Fig. 8	256842
100 hr	ESA/FHD	M29	100	Fig. 8	261263
100 hr	ESB	M30	100	Fig. 8	256784
100 hr	-/-	-/-	100	Fig. 8	257139
100 hr	-/-	-/-	100	Fig. 8	261974
300 hr	EVC/FGX	M33	100	Fig. 9	795765
50 hr	EHJ	A1/223	100	Fig. 9	231753
50 hr	EVD	A1/239	24	Fig. 9	231779
50 hr	FCS	A1/216	100	Fig. 9	206078
40 hr	FCS	A1/216	100	Fig. 9	231746
2000 hr	-/-	-/-	100	Fig. 9	158816
50 hr	BRL/BCD	A1/220	100	Fig. 9	316273

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. 10	382788

Radiation Output	Dimensional drawing	Order code
8.0 W	Fig. 11	246751
16 W	Fig. 11	261693
19 W	Fig. 11	268854
26.0 W	Fig. 11	246942
22.5 W	Fig. 11	203117
34.2 W	Fig. 11	308080

Legend

Icons



Solar simulation



Projection



Overhead Projector (OHP)



Fiber optics



Dental hardening



Microfilm



Heating



Microfiche



Microscopes



Endoscopes



Medical surgery lighting

Operating Position



s105



s90



any

