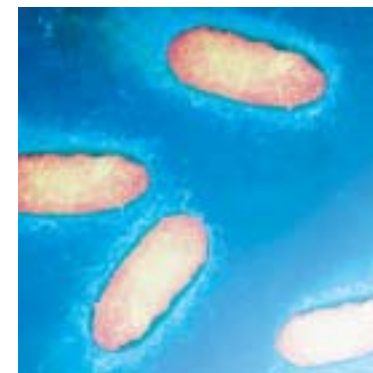


# Perfection Preserved

by the purest of light

We're not the only ones who enjoy swimming in the water or flying in the air



For more information or support:

Philips Lighting B.V.  
Zwaanhoefstraat 2  
4702 LC Roosendaal  
The Netherlands  
Tel: +31 165 577906  
Fax: +31 165 577907



[www.uvdisinfection.philips.com](http://www.uvdisinfection.philips.com)

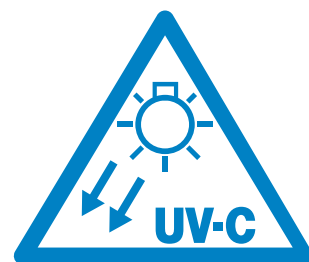
3222 635 45771  
Data subject to change 09/2003  
Printed in The Netherlands

**PHILIPS**

# TUV Low Pressure Mercury Lamps

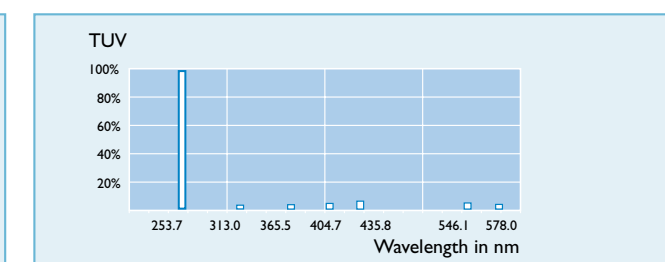
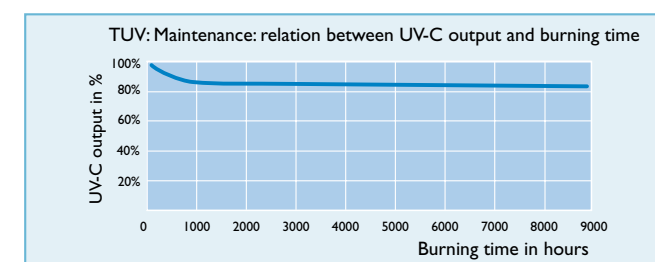
Philips TUV lamps emit short-wave ultraviolet radiation (UV-C) to kill or de-activate bacteria, viruses and other primitive organisms, even if the organisms have become immune to other disinfection methods. They are used for air, water and surface disinfection in equipment for hospitals, bacteriological research and pharmaceutical institutions, food processing industries such as dairies, breweries and bakeries, and also for disinfecting drinking and waste water, swimming pools, air conditioning systems, cold storage rooms, packing material etc.

- TUV disinfection lamps are low-pressure mercury-vapour discharge lamps consisting of a tubular glass envelope, emitting short-wave ultraviolet radiation with a radiation peak at 253.7 nm (UV-C) for germicidal action.
- The glass filters out the 185 nm ozone-forming line.
- A protective coating on the inside limits the depreciation of the useful UV-C radiation output.
- PL-S have a specially adapted starter providing almost instant starting characteristics already built into the lamp base.



NOTE: Radiation from UV-C lamps is harmful to eyes and skin. Equipment using these lamps must screen completely from direct view.

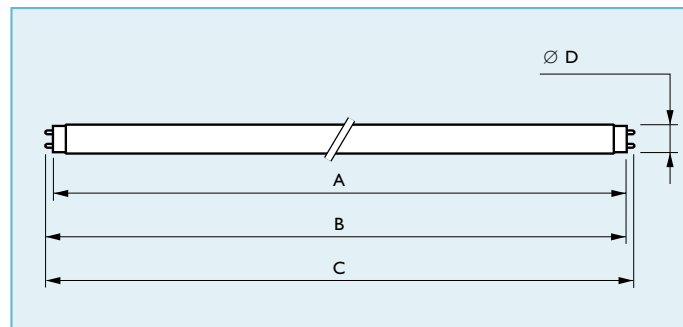
Type	Cap/ base	Lamp voltage V	Lamp current A	UV-C 100h W	μW/cm <sup>2</sup> at 1 meter W	Depreciation 8000 hr %	Useful lifetime h	
<b>TUV</b>								
TUV 4W	G5	29	0.17	0.9	9	25	6000	
TUV 6W	G5	42	0.16	1.5	15	25	8000	
TUV 8W	G5	56	0.15	2.1	21	25	8000	
TUV 10W	G13	46	0.23	2.2	23	25	8000	
TUV 11W	G5	37	0.33	2.2	21	20	8000	
TUV 15W	G13	51	0.34	4.7	48	15	8000	
TUV 16W	G5	46	0.35	3.2	33	20	8000	
TUV 25W	G13	46	0.60	7.0	69	15	8000	
TUV 30W	G13	100	0.37	11.2	100	15	8000	
TUV 36W	G13	103	0.44	15.3	145	15	8000	
TUV 55W	HO	83	0.77	18.0	150	15	8000	
TUV 75W	HO	108	0.84	26.0	220	15	8000	
TUV 115W-R	VHO	92	1.50	33.5	610	20	5000	
TUV 115W	VHO	92	1.50	38.8	360	15	5000	
<b>TUV PL-S</b>								
TUV 5W	G23	34	0.18	1.0	9	15	8000	
TUV 9W	G23	60	0.17	2.4	22	15	8000	
TUV 11W	G23	89	0.16	3.6	33	15	8000	
TUV 13W	GX23	59	0.29	3.4	31	15	8000	
<b>TUV PL-L</b>								
TUV 18W	2G11	60	0.37	5.5	51	15	8000	
TUV 35W	HO	2G11	40	0.85	11	15	8000	
TUV 36W	2G11	105	0.44	12.0	110	15	8000	
TUV 55W HF	2G11	103	0.54	17.0	156	15	8000	
TUV 60W	HO	2G11	118	0.67	18.0	166	15	8000
TUV 95W	HO	2G11	100	0.95	32.0	304	15	8000



Better for the  
environment

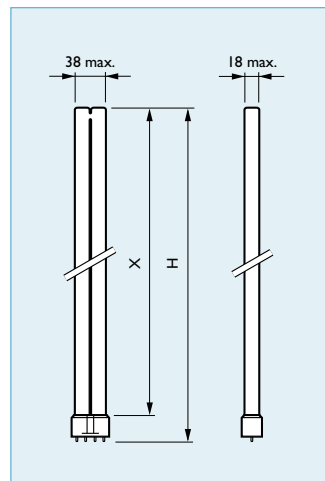
TUV Low Pressure  
Mercury Lamp

Better for your  
health

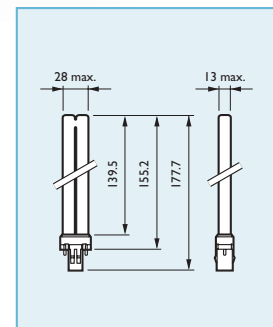


Dimensions in mm

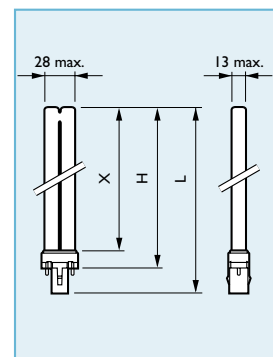
Type	A max.	B min.	B max.	C max.	D max.
<b>Cap/base G5</b>					
TUV 4W	135.9	140.6	143.0	150.1	16.0
TUV 6W	212.1	216.8	219.2	226.3	16.0
TUV 8W	288.3	293.0	295.4	302.5	16.0
TUV 11W	212.1	216.8	219.2	226.3	16.0
TUV 16W	288.3	293.0	295.4	302.5	16.0
<b>Cap/base G13</b>					
TUV 10W	331.5	336.2	338.6	345.7	28.0
TUV 15W	437.4	442.1	444.5	451.6	28.0
TUV 25W	437.4	442.1	444.5	451.6	28.0
TUV 30W	894.6	899.3	901.7	908.8	28.0
TUV 36W	1199.4	1204.1	1206.5	1213.6	28.0
TUV 55W HO	894.6	899.3	901.7	908.8	28.0
TUV 75W HO	1199.4	1204.1	1206.5	1213.6	28.0
TUV 115WVHO, -RVHO	1199.4	1204.1	1206.5	1213.6	40.5



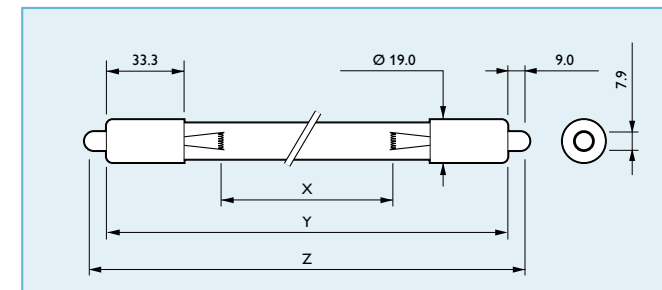
Type	X max.	H max.
<b>Cap/base 2G11</b>		
TUV 18W PL-L	195	225
TUV 35W HO PL-L	195	225
TUV 36W PL-L	385	415
TUV 55W HF PL-L	505	535
TUV 60W HO PL-L	385	415
TUV 95W HO PL-L	505	535



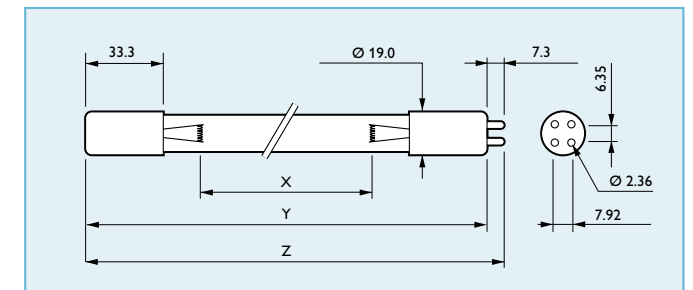
TUV PL-S 13W GX23



Type	X max.	H max.	L max.
<b>Cap/base G23</b>			
TUV 5W PL-S	67	83	105
TUV 9W PL-S	129	145	167
TUV 11W PL-S	198	214	236



Type	X	Y	Z
<b>Cap/base single-pin</b>			
TUV 36 SP T5	762	842.4±3.0	860.4±3.5
TUV 64 SP T5	1473	1553.6±3.0	1571.6±3.5



Type	X	Y	Z
<b>Cap/base 4-pin, single-ended</b>			
TUV 36 (HO) 4P-SE T5	762	842.4±3.0	849.5±3.5
TUV 64 (HO) 4P-SE T5	1473	1553.6±3.0	1561.0±3.5
TUV 11W 4P-SE	161	241.1±3.0	248.4±3.5
TUV 16W 4P-SE	237	317.3±3.0	324.6±3.5
TUV 25W 4P-SE	466	545.9±0	553.2±3.5

Type	Cap/ base	Tube diameter mm	Lamp voltage V	Lamp current mA	Lamp wattage W	UV-C 100h W	μW/cm <sup>2</sup> at 1 meter W	Depreciation 8000h %	Useful lifetime h
TUV 36 T5 HO 4P-SE	4-pin single-ended	16	97*	800*	75*	25.0	230	20	9000
TUV 64 T5 HO 4P-SE	4-pin single-ended	16	175*	800*	145*	48.0	442	20	9000
TUV 36 SP T5	single-pin	16	94*	425*	40*	15.0	144	15	9000
TUV 64 SP T5	single-pin	16	176*	425*	75*	31.0	280	15	9000
TUV 36 4P-SE T5	4-pin single-ended	16	94*	425*	40*	15.0	144	15	9000
TUV 64 4P-SE T5	4-pin single-ended	16	176*	425*	75*	31.0	280	15	9000
TUV 11W 4P-SE	4-pin single-ended	16	37**	330**	11**	2.2	21	25	8000
TUV 16W 4P-SE	4-pin single-ended	16	46**	400**	16**	3.9	23	25	8000
TUV 25W 4P-SE	4-pin single-ended	16	82	350	25	7.2	66	25	8000

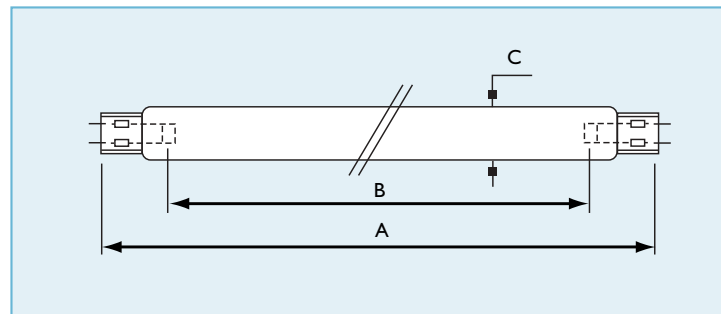
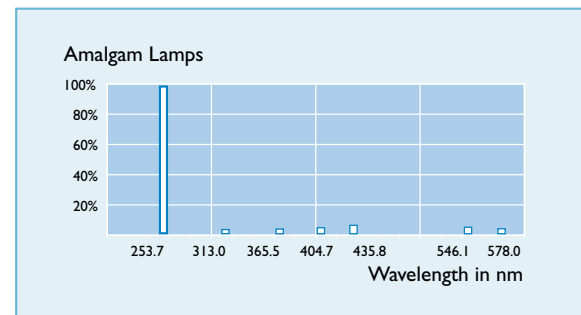
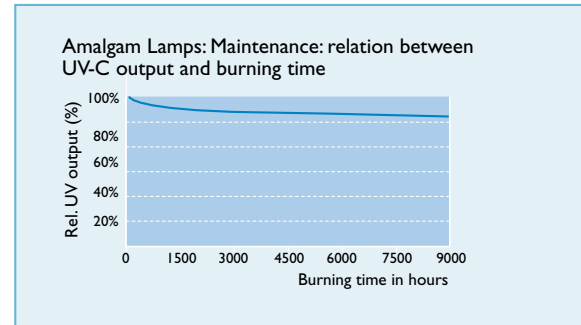
\* When used with electronic gear 25 kHz HF

\*\* When used with conventional magnetic ballast 50 Hz

# Low Pressure Amalgam Lamps

The amalgam lamp combines advantages of the low-pressure and the medium-pressure lamp. By doing this the gap is filled between the low-pressure and the medium-pressure applications. The amalgam lamp combines high efficiencies with relative high power densities operating in a broad temperature range.

For Philips, the advantages of the amalgam concept are clear. By using our long history of lamp development we were able to design a lamp with a very high UV-C efficiency and by applying our patented coating technology we are able to guarantee a maintenance of 85% after 9000 hours operating in a broad temperature range.



Type	Cap/base	Lamp voltage V	Lamp current mA	Lamp wattage W	UVC 100h W	Depreciation 9000h %	Useful lifetime h
TUV 240W XPT	4p-SE	125	1.85	240	85	25	9000
TUV 260W XPT	GY5.4	75	3.8	260	92	15	9000
TUV 270W XPT	GX9.5/26	75	3.8	270	94	15	9000

Type	A max (mm)	B max (mm)	C max (mm)	bf-bf (mm)
TUV 240W XPT	1540	1440	19	1600
TUV 260W XPT	1480	1400	32	1500
TUV 270W XPT	1520	1440	33	1540

# HOK/HTK/HTQ Medium Pressure Mercury Lamps

## Medium Pressure Mercury UV lamps

Philips Lighting BV manufactures, and internationally distributes a wide range of high quality medium pressure mercury ultraviolet lamps.

These quartz lamps are available up to 120 Watts per cm, with an arc length of 4 to 140 cm, in a variety of end fittings. The lamps are made from selected types of quartz glass, manufactured at Philips Lighting's own factories.

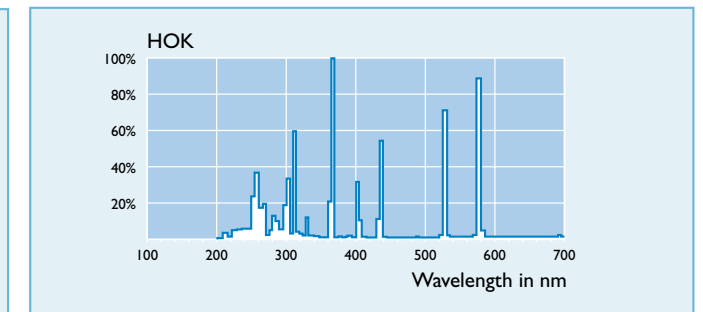
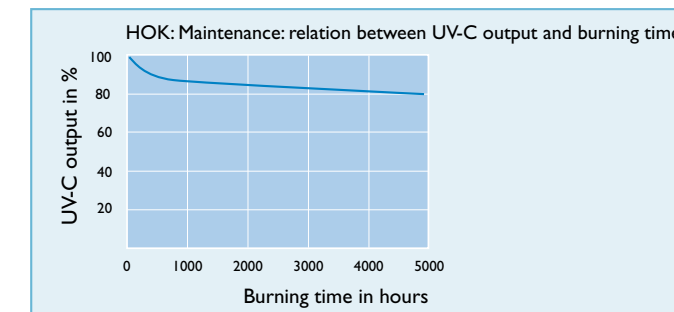
Philips Lighting medium pressure lamps contain sophisticated

quantities of mercury bromides, providing a self-cleaning halogen cycle, to control the decline of UV radiation over lamplife.

## Spectral output

The lamps emit the characteristic spectrum of mercury discharge lamps. The HOK and HTK types also radiate wavelengths below 240 nm, whereby ozone is formed.

The special quartz of the HTQ lamps absorbs radiation below 240 nm.



Type	Arc length mm	Tube diameter mm	Lamp wattage W	Lamp current A	Lamp voltage V	UV-C >210nm	μW/cm² at 1 meter W	UV-B W	UV-A W
HOK 4/120	31	14	400	3.5	125	53	488	32	31
HOK 4/120 SE*	31	14	400	3.5	125	53	488	32	31
HOK 10/120	106	22	1000	8.5	130	150	1380	90	80
HOK 20/120	208	22	2000	9	230	305	2806	185	160
HOK 35/120	348	22	4300	10.3	510	759	6983	403	351
HOK 50/120	500	22	6000	10	1050	1060	9752	546	462
HOK 65/120	637	22	7800	10.3	910	1278	11758	741	722
HOK 80/120	800	22	9600	10.5	1080	1568	14426	926	829
HOK 105/120	1057	22	12400	10	1430	2021	18593	1244	1042
HOK 140/120	1407	22	17000	10	1920	2860	26312	1646	1380
HOK 20/100	195	22	2000	9.6	245	325	2990	198	175
HTK 7/60	700	14	4000	3.1	1400	593	5456	380	321
HTQ 7	700	14	2000	1.7	1400	130	1196	165	142
HTQ 14	1400	22	4000	3.1	1400	280	2576	350	300

\* SE = single ended

Please note:

Permissible bulb temperatures: HOK: 600 - 900°C  
HTK, HTQ: 500 - 70 °C

Permissible pinch temperatures: 300°C