



# Knowing you're safe

**Philips UV purification lamp systems** offer highest reliability, enabling maximum protection of water and air quality

**PHILIPS**

sense and simplicity

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# Knowing you're safe

As the population rises, the demand for clean and safe water increases - but so does the risk of pollution. Water is more and more often contaminated with different micro-organisms such as Cryptosporidium and Giardia. Moreover, more than one billion people around the world still have no access to safe drinking water. At the same time, the air we breathe in indoor environments can be contaminated with micro-organisms such as bacteria and viruses that can make us ill.

Philips Lighting provides innovative, reliable and sustainable UV lamp systems that have the power to purify water and air, resulting in a healthier environment for all.

## Innovation

Our comprehensive portfolio of UV lamp and driver systems is always on the forefront of innovation. Just think of the eXtreme Power Technology (XPT) amalgam systems that contain high wattages of low pressure lamps, resulting in amazing power which allows even more flexibility in system design and application. Evidently, we work closely with our customers to develop and produce the most efficient solutions, creating tailor-made lamp systems when required.

## Reliability

To achieve the best performance from any installation, the delicate balance and interaction between lamp and

driver needs to be optimized. We are the only manufacturer that offers a complete in-house manufactured package of lamps, drivers and sleeves, ensuring the ultimate performance. Evidently, all our products are tested to the most stringent standards to ensure they provide the ultimate quality, reliability and performance.

When you choose Philips as a partner, you can be sure that we take complete responsibility for the system performance and reliability. You deal with one supplier for the total system. This helps to avoid problems on any compatibility failures and makes life easier for you.



## Sustainability

Sustainability has always been at the heart of Philips. We're leading the way towards systems that improve quality of life of people around the world with minimum environmental impact:

- It's estimated that absence of a safe water supply contributes to 80% of diseases and deaths in the developing world. With its UV lamp systems, Philips helps provide safe drinking water and air in a cost-effective way.
- Philips UV solutions contribute to a better environment, because they substitute potentially dangerous chemicals.
- Moreover our products contain industry-leading low amounts of mercury, help reduce waste thanks to their long lifetime and reduce energy use thanks to their high efficacy.

You can recognize our most sustainable products by the Green Logo. The Green Logo is only awarded when the product offers a significant environmental improvement.



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## UV technology

Ultra-Violet (UV) radiation is invisible to human eyes. It can be subdivided into three categories, UVA, UVB and UVC. UVC radiation is known to break the DNA of bacteria, viruses and spores. As a result, they are rendered harmless. UV radiation can be used for multiple purposes in water and air treatment, but is primarily employed as a disinfection process that inactivates micro-organisms without chemicals. For other applications, UV is used for the removal of organic and inorganic chemicals, including chlorine, chloramines, ozone and Total Organic Carbon (TOC) emerging contaminants.

## Benefits of UV are:

- Effective for all types of microorganisms, including bacteria, viruses, fungi, and protozoa such as Cryptosporidium and Giardia
- No disinfection by-products (DBPs) of health concern formed
- UVC acts instantly
- Low capital and operating cost
- Easy to operate and maintain
- Does not change the taste of water
- Safe and environmentally-friendly
- No overdose issues and dose can be easily adapted to specific needs



# Residential water and air purification

The quality of the air we breathe and the water we drink has a profound effect on our health and well-being. Many people do not have access to clean drinking water. Impure or contaminated drinking water can cause a range of diseases from typhoid and cholera to gastroenteritis and hepatitis A.

Households can purify their water by installing UV water purification systems at the point of entry in the home, at the point of use (such as the kitchen sink) or via separate

purifiers. Combined with a filter to remove suspended particulates or organic materials, the result is pure, clean and safe water.

Next to that, many households are troubled with harmful germs that float through the air, such as the flu and pneumonia. These can be rendered harmless through air purifiers equipped with Philips UV lamps and drivers. As a result, illnesses that are easily transmitted via the air are minimized and the overall air quality is improved.



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# Philips TUV PL-S

Philips TUV PL-S lamps are compact UVC (germicidal) lamps used in residential water and air disinfection units. The compact size of the lamp allows for a small system design and design flexibility. Philips TUV PL-S lamps offer almost constant UV output over their complete lifetime, for maximum security of disinfection and high system efficacy. Thanks to the single-ended lamp base, lamp replacement is easy.

Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Residential drinking water units
- Pond water units
- Air treatment units
- Stand-alone purifiers

Features	Benefits
Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection purposes	Security of effective disinfection over the useful lifetime of the lamp
Protective inside coating ensures almost constant UV output over the complete lifetime of the lamp	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
Special lamp glass filters out the 185 nm ozone-forming radiation	Good environmental choice because of lowest amount of mercury
2-Pin PL-S lamp base contains a special starter for almost instant starting on electromagnetic drivers	
4-Pin PL-S lamps are designed for use on electronic drivers	
Warning sign on lamp indicates that the lamp radiates UVC	

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UVC 100 (h)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Packaging type	Packaging configuration	Ordering number 92790...
TUV PL-S 5W/2P	G23	1	5.5	35	1.0	0.180	9000	20	1CT	6x10 BOX	0504007
TUV PL-S 5W/4P	G23	2	5.1	27	1.0	0.190	9000	15	1CT	5x10 CC	0804007
TUV PL-S 7W/2P	G23	3	7.1	46	1.6	0.175	9000	20	UNP	5x10 CC	1104008
TUV PL-S 7W/4P	2G7	4	7.0	37	1.6	0.190	9000	20	1CT	5x10 CC	1504007
TUV PL-S 9W/2P	G23	5	9.0	60	2.4	0.170	9000	20	1CT	6x10 BOX	1704008
TUV PL-S 9W/4P	2G7	6	8.6	60	2.4	0.170	9000	20	1CT	6x10 BOX	1904007
TUV PL-S 11W/2P	G23	7	11.0	89	3.6	0.160	9000	20	1CT	6x10 BOX	2304007
TUV PL-S 13W/2P	GX23	8	13.0	56	3.4	0.290	9000	20	1CT	6x10 BOX	2804007

G23 2-pins

G23 4-pins

2G7

Dim.*	A	B	C	D	D1
no.	max.	max.	max.	max.	max.
1	67	83	105	28	13
3	97	112.5	135.5	28	13
5	129	145	167	28	13
7	198	213.3	236	28	13

Dim.*	A	B	C	D	D1
no.	max.	max.	max.	max.	max.
2	67	83	105	28	13
4	97	112.5	135.5	28	13
6	129	145	167	28	13

Dim.*	A	B	C	D	D1
no.	max.	max.	max.	max.	max.
8	139.5	155.2	178.2	28	13

\* Dimensions (mm)





# Philips TUV TL Mini

Philips TUV TL Mini lamps are slim double-ended UVC (germicidal) lamps used in residential water and air disinfection units. The small 16 mm diameter of the lamp allows for a small system design and design flexibility. Philips TUV TL Mini lamps offer almost constant UV output over their complete lifetime, for maximum security of disinfection and high system efficacy.

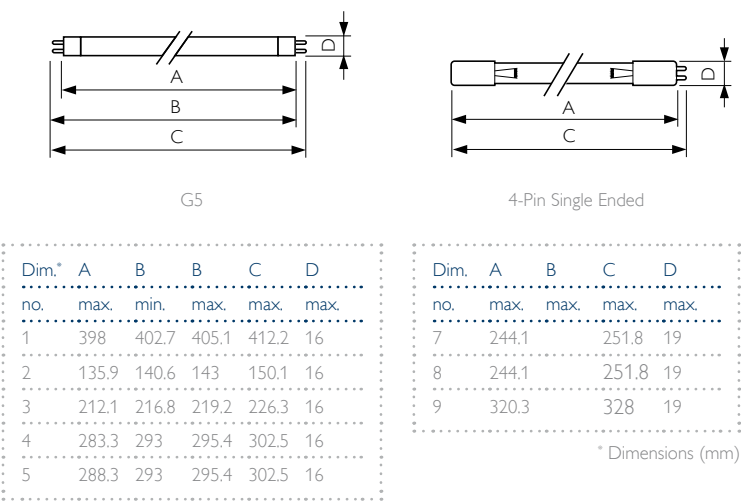
### Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Residential drinking water units
- Fish pond water units
- In-duct air treatment units
- Stand alone air purifiers

Features	Benefits
Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection purposes	Security of effective disinfection over the useful lifetime of the lamp
Protective inside coating ensures almost constant UV output over the complete lifetime of the lamp	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
Special lamp glass filters out the 185 nm ozone-forming radiation	Good environmental choice because of lowest amount of mercury
Warning sign on lamp indicates that the lamp radiates UVC	

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UVC 100 (h)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Packaging type	Packaging configuration	Ordering number
TUV 4W	G5	2	4	29	0.9	0.17	6000	20	1FM	10x25 BOX	928000104013
TUV 6W	G5	3	6	42	1.5	0.16	9000	20	1FM	10x25 BOX	928000704013
TUV 8W	G5	4	8	56	2.1	0.15	11000	15	1FM	10x25 BOX	928001104013
TUV 11W	G5	3	11	34	2.6	0.33	11000	15	1FM	10x25 BOX	928002204013
TUV 16W	G5	5	15	43	3.9	0.40	11000	15	1FM	10x25 BOX	928002004013
TUV 20W	G5	1	20	45	6.0	0.45	11000	15	1FM	10x25 BOX	928003404013
TUV 6W 4P SE	4 Pins Single Ended	7	6.0	42	1.7	0.160	9000	20	UNP	32	927971604099
TUV 11W 4P SE	4 Pins Single Ended	8	11.0	34	2.6	0.330	9000	15	UNP	32	927971204099
TUV 16W 4P SE	4 Pins Single Ended	9	15.0	43	4.0	0.400	9000	15	UNP	32	927971404099





# Municipal and industrial water purification

Every government aims to provide its citizens with safe and clean drinking water. If they can de-activate the micro-organisms in water cost-effectively by avoiding, or reducing, the use of chlorine, all the better. Philips is helping to do just that with a range of lamp systems designed to meet all the main municipal requirements.

Waste water must also be disinfected before it is discharged into the environment. Not only does this minimize the risk to the local population, it also helps to protect vulnerable natural eco systems in the discharge areas. Here too, our UV lamp systems are becoming increasingly popular. Highly cost-effective, they treat waste water without adding chemicals or residues. Safeguarding our communities and the environment.



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# Philips TUV Amalgam XPT System

Philips TUV Amalgam XPT system consists of an electronic driver that operates one TUV Amalgam XPT lamp, mounted in a sleeve. The electrical specifications are tailored to the lamp, ensuring an optimized performance of the Philips TUV Amalgam XPT system. Thanks to extensive testing before a lamp system is released, we can ensure maximum reliability and long lifetime.

### Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Municipal drinking water treatment equipment
- Municipal waste water treatment equipment
- Process water treatment equipment
- Swimming pool units
- Equipment for the production of ultra-pure water; for example for the semiconductor; pharmaceuticals and cosmetics industries (ozone version)

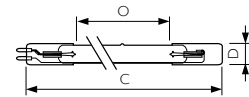
Features	Benefits
Short-wave UV radiation with a peak at 253,7 nm (UVC) for disinfection	Security of effective disinfection over the useful lifetime of the lamp
Special amalgam used for highest efficiency over wide temperature range	Approximately 10% energy savings, because lamps can be dimmed to reach the same UV output compared to similar lamps on the market
Protective inside coating ensures constant UV output over the complete lifetime of the lamp	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
Philips electronic driver available for a perfect interface	Best environmental choice because of long reliable life, less waste and industry leading low amount of mercury
Minimized amount of mercury	Extreme reliability of driver; with annual failure rate of less than 1%
Universal burning position possible for the T6 range, depending on lamp type and sleeve dimensions	High efficiency during dimming thanks to unique amalgam temperature control of the 800W lamps
Tailor-made solutions possible	
Lamp can be made from special quartz (open / synthetic) to maximize 185nm Ozone generation	

## Technical data

Lamp type	Cap-Base	Dim. no.	Lamp Wattage (W)	Lamp Voltage (V)	Lamp Current (A)	UVC 100 (h)	Useful Life (h)	Depreciation at useful lifetime (%)	Ordering number 92810...
TUV 130W XPT	4p-SE	1	140	70	2.1	48	12000	15	1805112
TUV 180W XPT	4p-SE	2	180	90	2.1	60	12000	15	6805112
TUV 200W XPT	4p-SE	3	200	100	2.1	66	12000	15	6905112
TUV 325W XPT	4p-SE	4	280	141	2.1	100	12000	15	2205112
TUV 325W XPT HO	4p-SE	5	325	158	2.1	110	12000	15	7005112
TUV 330W XPT	4p-SE	6	325	72	4.6	107	12000	15	1705112
TUV 800W XPT	4p-SE	7	800	100	8.0	> 240	12000	15	On request

Lamp type	Driver	Ordering number 9137...	Sleeve	Ordering number
TUV 130W XPT	TUV 130W XPT driver	00729703	Quartz sleeve 28/885	3222 019 53891
TUV 180W XPT	TUV 180-200W XPT driver	10054695	Quartz sleeve 28/1120	9298 005 00401
TUV 200W XPT	TUV 180-200W XPT driver	10054695	On request	-
TUV 325W XPT	TUV 325W XPT (HO) driver	10054995	Quartz sleeve 28/1625	3222 019 53901
TUV 325W XPT HO	TUV 325W XPT (HO) driver	10054995	Quartz sleeve 28/1625	3222 019 53901
TUV 330W XPT	-	-	On request	-
TUV 800W XPT	TUV 800W XPT driver	Prototype	-	-

All drivers are pre-heat and dimmable from 100 to 50%.



4-Pin Single Ended

Dim.* no.	C max.	D nom.	O nom.
1	842	19	740
2	1032	19	930
3	1147	19	1040
4	1582	19	1480
5	1582	19	1480
6	1554	32	1440
7	1790	38	1600

\* Dimensions (mm)





# Philips Dynapower System



Philips Dynapower system consists of an electronic DynaPower driver that operates one or two TUV Amalgam 230W, 260W and 335W XPT lamps. The driver allows for immediate energy savings compared to similar drivers on the market. Moreover, it can be dimmed down to 60% power level for additional energy savings. Further energy savings are realized by the TUV Amalgam XPT lamps, because they can be dimmed down to reach the same UV output as similar lamps on the market. This system is extremely reliable and robust.

### Main applications

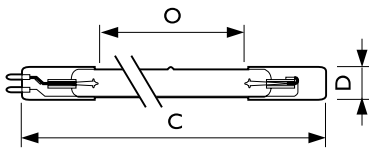
- Deactivation of bacteria, viruses and other micro-organisms
- Municipal drinking water treatment equipment
- Municipal waste water treatment equipment
- Process water treatment equipment

Features	Benefits
Operates 230W, 260W and 335W TUV Amalgam XPT lamps	Energy cost savings of approximately 10% compared with similar drivers or lamps
Single lamp operation possible	Dimmable up to 60% power level for additional energy savings
Cooler operating temperature for additional energy savings	Easier maintenance thanks to single lamp operation, allowing to detect easily which lamps need to be replaced
100% stress testing minimizing 0-hour failures	Best environmental choice thanks to maximum lifetime reliability, in combination with minimum substances, packaging and product weight
Protection against voltage peaks	Easier to maintain compliance with regulations thanks to reduced risk of failures
Permanent overvoltage protection	
Approximately 20 seconds start-up time (compared with 90 seconds for similar drivers on the market)	

# Technical data

Lamp type	Cap-Base	Lamp Wattage (W)	UVC 100 (h)	Useful Life (h)	Depreciation at useful lifetime (%)	Ordering number 92810...
TUV 230W XPT WE	4p-SE	230	78	12000	15	4005112
TUV 260W DIM XPT	4p-SE	235	87	12000	15	2805112
TUV 335W XPT SE	4p-SE	300	100	12000	15	3105112
TUV 335W WP XPT SE	4p-SE	300	100	12000	15	5705112

Lamp type	Driver	Ordering number 91371...
TUV 230W XPT WE	DynaPower	3229695
TUV 260W DIM XPT	DynaPower	3229695
TUV 335W XPT SE	DynaPower	3229695
TUV 335W WP XPT SE	DynaPower	3229695



4-Pin Single Ended

dimensions	C	D	O
TUV 230W XPT WE	1514	25	1400
TUV 260W DIM XPT	1514	32	1400
TUV 335W XPT SE	1514	32	1400
TUV 335W WP XPT SE	1514	32	1400



# Philips Medium Pressure Mercury

Philips Medium Pressure Mercury lamps are available in a wide range of up to 180 W per centimeter; with an arc length between 10 and 140 centimeter. The lamps can be fitted with various types of end fitting from our catalogue, or equipped with customer special fittings, cables or pins. The lamps are made from selected types of quartz glass, with transmission characteristics tailored to the application.

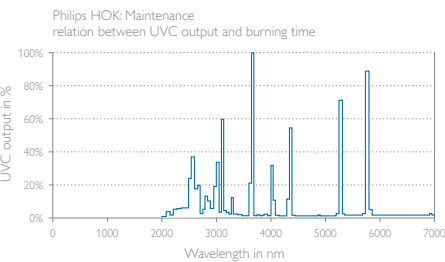
Philips Medium Pressure Mercury lamps contain sophisticated quantities of mercury bromides, providing a self-cleaning halogen cycle, to control the depreciation of UV radiation over lamp life.

### Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Water treatment (waste-, drinking- or process water)
- Surface treatment
- Advanced oxidation (with special quartz glass)
- Ship ballast water treatment

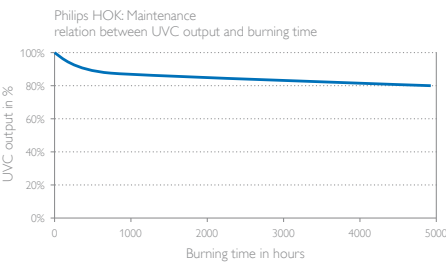
### Spectral output

The lamps emit a wide band spectrum in the UVC range. In contrast to Low Pressure lamps, considerable amounts of radiation around the 254 nm is emitted. The power density is very high compared with Low Pressure lamps. Lamps can be made in special quartz to either substantially lower the emission below 240 nm, or to maximize radiation at 185 nm. The former type is used in installations where nitrite formation must be avoided; the latter type is used in installations for ozone production or advanced oxidation.



### Operation

Philips Medium Pressure Mercury lamps can be tailored to operate on conventional electromagnetic or electronic drivers. Lamps in special frames for single ended operation are available on request. A permissible bulb temperature for HOK type lamps is in the 600 – 900 C range, for HTK type lamps 500 – 700 C. Permissible pinch temperature is 300 C, higher pinch temperatures up to 420 C are possible using the **Philips patented Pinch Protection**.



# Technical data

Type	Tube diameter mm	Arc length mm	Lamp Wattage max (W)	Lamp Voltage typical (V)	Lamp Current typical (A)	UVC 100 (h)	Irradiance muW/cm²
HOK 10/120	22	105	1100	130	8.5	140	1400
HOK 20/100	22	195	2100	240	9.5	250	2500
HOK 25/120	22	250	2900	420	7.0	380	3800
HOK 35/120	22	350	4200	490	8.5	520	5200
HOK 50/120	22	500	6000	670	8.8	750	7500
HOK 65/120	22	650	7800	840	9.2	1000	10000
HOK 80/120	22	800	9600	1030	9.2	1200	12000
HOK 105/120	22	1050	13000	1300	9.4	1600	16000
HOK 140/120	22	1400	16800	1850	9.0	2100	21000
HOK 50/180	25	550	8700	430	20.0	1130	11300
HTK 7/30	14	700	2000	1400	1.6	310	1600
HTK 7/60	14	700	4000	1400	3.1	160	3100

Note: bulb diameters for HOK lamps are typically around 22 mm nominal for 120W/cm lamps. For lamp loading up to 180W/cm, the bulb diameters is around 27.5mm. HTK bulb diameters are 14mm nominal. Standard lamps are available (contact our sales department for details), different dimensions are available on request.

### Customization possible on

- Connectors
- Pins
- Cables





# Philips TUV T5

TUV T5 lamps are single- or double-ended UVC (germicidal) lamps used in professional water and air disinfection units. The small 16 mm diameter of the lamp allows for a small system design and design flexibility. TUV T5 lamps offer almost constant UV output over their complete lifetime, for maximum security of disinfection and high system efficacy.

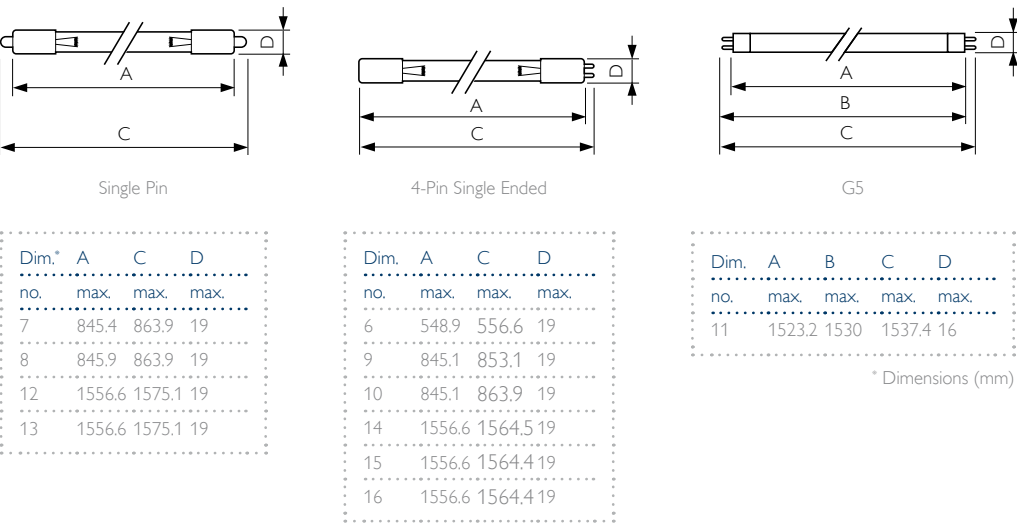
### Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Industrial water disinfection equipment, e.g. for food & beverage industry
- Small municipal water treatment systems
- Swimming pool units
- Residential drinking water units (6, 11 and 16W lamps)
- Air treatment systems (High Output lamp versions)

Features	Benefits
Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection	Security of effective disinfection over the useful lifetime of the lamp
Small diameter	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
Protective inside coating ensures almost constant UV output over the complete lifetime of the lamp	Good environmental choice because of lowest amount of mercury
Special lamp glass filters out the 185 nm ozone-forming radiation	
High temperature and UV-resistant lamp bases	
High output versions available for optimum UVC output per lamp length, allowing for further reduction of system size	
Warning sign on lamp indicates that the lamp radiates UVC	

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UVC 100 (h)	Lamp Current (A)	Useful life (h)	Depre- ciation at useful lifetime (%)	Packa- ging type	Packaging configu- ration	Ordering number
TUV 25W 4P SE	4 Pins Single Ended	6	23.0	82	8.0	0.350	9000	20	UNP	32	927972204099
TUV 36T5 HE SP	Single Pin	7	40.0	94	14.0	0.425	9000	15	UNP	32	927970004099
TUV 36T5 HO SP	Single Pin	8	75.0	97	23.0	0.800	11000	15	UNP	32	927972504099
TUV 36T5 HO 4P SE	4 Pins Single Ended	9	75.0	97	23.0	0.800	11000	15	UNP	32	927972104099
TUV 36T5 HE 4P SE	4 Pins Single Ended	10	40.0	94	14.0	0.425	9000	15	UNP	32	927970204099
TUV 64T5 HE G5	G5	11	75.0	176		0.425	9000	15	UNP	40	928000404099
TUV 64T5 HE SP	Single Pin	12	75.0	176	29.0	0.425	9000	15	UNP	32	927970504099
TUV 64T5 HO SP	Single Pin	13	140.0	175	45.0	0.800	9000	15	UNP	32	927972604099
TUV 64T5 HE 2P SE	2 Pins Single Ended	14	75.0	176	29.0	0.425	9000	15	UNP	32	927970904099
TUV 64T5 HE 4P SE	4 Pins Single Ended	15	75.0	176	29.0	0.425	9000	15	UNP	32	927970704099
TUV 64T5 HO 4P SE	4 Pins Single Ended	16	145.0	175	45.0	0.800	9000	15	UNP	32	927971104099
TUV 64T5 HE 4P SE	4 Pins Single Ended	17	75.0	176	29.0	0.425	9000	15	UNP	32	927970804099





# Commercial and Professional air purification

Increasingly, we spend more time indoors, for example at work, on trains and in aircrafts, in schools, cinemas and shopping centres. The air we breathe in these environments is anything but clean. In fact, it's often re-circulated along with all the bacteria, viruses, pollen, smoke and toxic gases that are trapped along with it.

In hospitals this can be a real problem. Hospital acquired infections affect around 10% of patients during their stay. And there is increasing evidence that up to 20% of these

infections, like the flu, moulds, pneumonia and MRSA, is transmitted via the air - at a huge price, both in terms of human life and financial costs. Tuberculosis is even 100% transmitted via the air.

Philips UV purification lamp systems provide a safe, reliable and sustainable solution. Ideal for use in ventilation air ducts, air disinfection units or stand-alone air purifiers, they help protect against airborne pathogens, creating a safer and healthier indoor environment with the power of light.



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# Philips TUV PL-L

Philips TUV PL-L lamps are compact UVC (germicidal) lamps used in water and air disinfection units. The compact size of the lamp allows for a small system design and design flexibility. Philips TUV PL-L lamps offer almost constant UV output over their complete lifetime, for maximum security of disinfection and high system efficacy. Thanks to the single-ended lamp base, lamp replacement is easy.

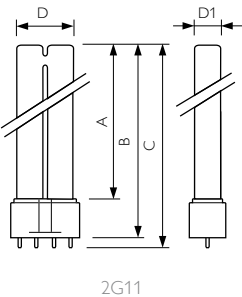
Main applications

- Deactivation of bacteria, viruses and other micro-organisms
- Air disinfection systems in for example hospitals, universities and laboratories
- In-duct air treatment units
- Stand alone air purifiers
- Residential drinking water units
- Fish pond and process water units

Features	Benefits
Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection purposes	Security of effective disinfection over the useful lifetime of the lamp
Protective inside coating ensures almost constant UV output over the complete lifetime of the lamp	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
Special lamp glass filters out the 185 nm ozone-forming radiation	Good environmental choice because of lowest amount of mercury
Hight Output versions contain wind-chill correction for improved performance in moving air and reducing amount of required lamps	
Warning sign on lamp indicates that the lamp radiates UVC	

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UVC 100 (h)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Packaging type	Packaging configuration	Ordering number 92790...
TUV PL-L 18W/4P	2G11	2	18	60	5.5	0.370	9000	15	1CT	25	3004007
TUV PL-L 24W/4P	2G11	3	24	87	7.0	0.345	9000	15	UNP	50	3204016
TUV PL-L 35W/4P HO	2G11	1	35	42	11.0	0.850	9000	15	1CT	25	4204007
TUV PL-L 36W/4P Secura	2G11	4	36	108	7.6	0.440	9000	15	1CT	25	9104001
TUV PL-L 36W/4P	2G11	5	36	105	12.0	0.440	9000	15	1CT	25	3404007
TUV PL-L 36W/4P	2G11	5	36	105	12.0	0.440	9000	15	UNP	50	3404016
TUV PL-L 55W/4P HF	2G11	6	55	103	17.0	0.540	9000	15	1CT	25	8704007
TUV PL-L 60W/4P HO	2G11	7	60	118	19.0	0.680	9000	15	1CT	25	9004007
TUV PL-L 95W/4P HO	2G11	8	90	115	27.0	0.800	9000	15	1CT	25	9804007



Dim.* no.	A max.	B max.	C max.	D max.	D1 max.
1	195	220	225	39	18
2	195	220	225	38	18
3	290	315	320	39	18
4	405	430	437	52	18
5	385	410	415	38	18
6	505	530	535	38	18
7	390	415	420	40	18
8	505	530	535	39	18

\* Dimensions (mm)



# Philips TUV T8

TUV T8 lamps are double-ended UVC (germicidal) lamps used in professional air disinfection units. TUV T8 lamps offer almost constant UV output over their complete lifetime, for maximum security of disinfection and high system efficacy. Moreover, they have a long and reliable lifetime, which allows maintenance to be planned for in advance.

### Main applications

- Air disinfection systems in professional applications such as universities, hospitals, jails and laboratories.
- Upper air and whole room disinfection equipment in hospitals, intensive care units and surgery rooms
- Areas with low maintenance and/or disruptive costs
- Fish ponds and process water units

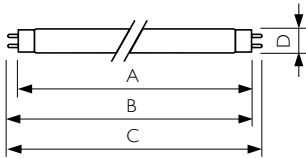
Features	Benefits
Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection purposes	Security of effective disinfection over the useful lifetime of the lamp
Protective inside coating ensures constant UV output over the complete lifetime of the lamp	Maintenance can be planned in advance, virtually eliminating the need for expensive spot replacement of prematurely failed lamps
Long lifetime of 18,000 hours*	High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection
High reliability with the lowest percentage of lamps that fail prematurely in the market (90% of all lamps still operate on full output and quality after 15,000 hours*)	Good environmental choice because of lowest amount of mercury
Special lamp glass filters out the 185 nm ozone-forming radiation	
High Output versions available for optimum UVC output per lamp length, allowing for reduction of system size	
Warning sign on lamp indicates that the lamp radiates UVC	

\* based on operation on a Philips electronic driver

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	Lamp Current (A)	Useful life on EM gear (h)	Useful life on HF gear (h)	Depreciation at useful lifetime (%)
TUV 10W	G13	4	9.0	44.5	0.230	9000	-	15
TUV 15W	G13	1	15.9	54.0	0.340	9000	18000	10
TUV T8 F17	G13	5	16.7	72.0	0.265	9000	-	15
TUV 25W	G13	1	25.5	48.0	0.600	9000	18000	15
TUV 30W	G13	2	30.0	102.0	0.370	9000	18000	10
TUV 36W	G13	3	36.0	103.0	0.440	9000	18000	10
TUV 55W HO	G13	2	54.0	86.0	0.770	9000	18000	10
TUV 75W HO	G13	3	75.0	110.0	0.840	9000	18000	10

Type	Packaging type	Packaging configuration	Ordering number	UVC 100h on EM gear	UVC 100h on HF gear
TUV 10W	SLV	25	928024204005	2.5	-
TUV 15W	SLV	25	928039004005	4.9	5.1
TUV T8 F17	SLV	25	927941904020	4.5	-
TUV 25W	SLV	25	928039404005	7.0	7.5
TUV 30W	SLV	25	928039504005	12.0	13.1
TUV 36W	SLV	6	928048604003	15.0	14.7
TUV 55W HO	SLV	6	928049504003	17.5	19.6
TUV 75W HO	SLV	6	928049404003	25.5	28.1



G13

Dim.*	A	B	B	C	D
no.	max.	min.	max.	max.	max.
1	437.4	442.1	444.5	451.6	28
2	894.6	899.3	901.7	908.8	28
3	1199.4	1204.1	1206.5	1213.6	28
4	331.5	336.2	338.6	345.7	28
5	589.8	594.5	596.9	604	28

\* Dimensions (mm)





# Philips TUV T8 Xtra



TUV T8 Xtra lamps are double-ended UVC (germicidal) lamps used in professional water and air disinfection units. Thanks to the unique X-technology TUV T8 Xtra lamps even double the life of conventional types. This extra long and reliable lifetime is even up to 36,000 hours when the lamps are operated on HF Gear. As a result these lamps need to be replaced less often, significantly reducing cost and disruption. Thanks to the reliable lifetime, maintenance can be planned in advance.

## Main applications

- Air disinfection systems in professional applications such as universities, hospitals, jails and laboratories.
- Upper air and whole room disinfection equipment in hospitals, intensive care units and surgery rooms
- Areas where absolute security of effective disinfection is crucial
- Areas where maintenance costs are high (e.g. high ceilings, difficult access) and/or disruptive costs are high (e.g. areas like operating theatres where lamp failure is unacceptable for safety reasons)

## Features

Short-wave UV radiation with a peak at 253.7 nm (UVC) for disinfection purposes

Protective inside coating ensures constant UV output over the complete lifetime of the lamp

Long lifetime of 36,000 hours\* (double the life of conventional types) thanks to unique X-technology

High reliability with the lowest percentage of lamps that fail prematurely in the market (90% of all lamps still operate on full output and quality after 30,000 hours\*)

Special lamp glass filters out the 185 nm ozone-forming radiation

High Output versions available for optimum UVC output per lamp length, allowing for reduction of system size

Warning sign on lamp indicates that the lamp radiates UVC

## Benefits

Security of effective disinfection over the useful lifetime of the lamp

Reduction of maintenance costs and disruption thanks to doubled lifetime

Maintenance can be planned in advance, virtually eliminating the need for expensive spot replacement of prematurely failed lamps

High system efficacy because it is not required to over-design the purification system to maintain effectiveness of disinfection

Good environmental choice because of lowest amount of mercury

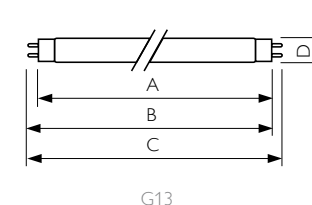
Directly replaces conventional T8 lamps, so it is not required to modify the system to enjoy the benefits

\* based on operation on a Philips electronic driver

# Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	Lamp Current (A)	Useful life on EM gear (h)	Useful life on HF gear (h)	Depreciation at useful lifetime (%)
TUV 15W Xtra	G13	1	15.9	54.0	0.335	18000	36000	10
TUV 25W Xtra	G13	1	25.5	48.0	0.612	18000	36000	15
TUV 30W Xtra	G13	2	30.0	102.0	0.365	18000	36000	10
TUV 36W Xtra	G13	3	36.0	103.0	0.440	18000	36000	10
TUV 55W Xtra	G13	2	54.0	86.0	0.770	18000	36000	10
TUV 75W Xtra	G13	3	75.0	110.0	0.835	18000	36000	10

Type	Packaging type	Packaging configuration	Ordering number 9280...	UVC 100h on EM gear	UVC 100h on HF gear
TUV 15W Xtra	SLV	25	39104008	4.9	5.1
TUV 25W Xtra	SLV	25	39704008	7.0	7.5
TUV 30W Xtra	SLV	25	39804008	12.0	13.1
TUV 36W Xtra	SLV	6	39904008	15.0	14.7
TUV 55W Xtra	SLV	6	49104008	17.5	19.6
TUV 75W Xtra	SLV	6	49904008	25.5	28.1



Dim.*	A	B	B	C	D
no.	max.	min.	max.	max.	max.
1	437.4	442.1	444.5	451.6	28
2	894.6	899.3	901.7	908.8	28
3	1199.4	1204.1	1206.5	1213.6	28

\* Dimensions (mm)



# The right driver for the right lamp

	12 NC Philips Electronic driver 50 Hz	Philips Electronic Driver 50 Hz	Philips Advance Electronic driver 60 Hz	Philips Advance Electromagnetic driver 60 Hz
TUV PL-S				
TUV PL-S 5W/2P				LC49CTP LPL59TP H1B9TPW H2B9TPW
TUV PL-S 5W/4P	913700422666	HF-M BLUE 105 LH TL/PL-S 230-240V		LC49CTP LPL59TP H1B9TPW H2B9TPW
TUV PL-S 7W/2P				LC49CTP LPL59TP H1B9TPW H2B9TPW
TUV PL-S 7W/4P	913700421366	HF-M BLUE 109 LH TL/PL-S 230-240V HF-M RED 109 SH TL/PL-S 230-240V	RMB1P1 13S1 1L RMB1P1 13S1 2L	
TUV PL-S 9W/2P				LC49CTP LPL59TP H1B9TPW H2B9TPW
TUV PL-S 9W/4P	913700421366 913700422866	HF-M BLUE 109 LH TL/PL-S 230-240V HF-M RED 109 SH TL/PL-S 230-240V	RMB1P1 13S1 1L RMB1P1 13S1 2L	
TUV PL-S 13W/2P				LC13TP LO1322TP H1B13TPW H2B9TPW
TUV TL Mini				
Philips TUV 4W	913700422666	HF-M BLUE 105 LH TL/PL-S 230-240V		LC49CTP w/starter LPL59TP w/starter
Philips TUV 6W	913700421366	HF-M BLUE 109 LH TL/PL-S 230-240V		LC49CTP w/starter LPL59TP w/starter
Philips TUV 8W	913700422866	HF-M RED 109 SH TL/PL-S 230-240V	RMB13S1 1L RMB13S1 2L	LC49CTP w/starter LPL59TP w/starter
Philips TUV 11W	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz		LOI322TP w/starter RLQ120TP RL2SP20TP
Philips TUV 16W	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz		LC1420CPT w/starter HM2SP20TP
Philips TUV 20W	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz		
TUV T5				
Philips TUV 6W 4P SE	913700421366	HF-M BLUE 109 LH TL/PL-S 230-240V		LC49CTP w/starter LPL59TP w/starter
Philips TUV 11W 4P SE	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz		LOI322TP w/starter RLQ120TP RL2SP20TP
Philips TUV 16W 4P SE	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz		LC1420CPT w/starter HM2SP20TP
Philips TUV 25W 4P SE	913700612966 913700613066	HF-P 1 14-35 TL5 HE EII 220-240V 50/60Hz HF-P 2 14-35 TL5 HE EII 220-240V 50/60Hz	1UV2S36M2LD 1L 1UV2S36M2LD 2L 1CN2S39 1L 1CN2S39 2L	

# The right driver for the right lamp

	12 NC Philips Electronic driver 50 Hz	Philips Electronic Driver 50 Hz	Philips Advance Electronic driver 60 Hz	Philips Advance Electromagnetic driver 60 Hz
TUV T5				
Philips TUV 36T5 HE SP			1CN2P60SC 1L 1CN2P60SC 2L	RSM175STP
Philips TUV 36T5 HE 4P SE	913700191266 913700613366 913700191166	HF-P 158 TL-D EII 220-240V 50/60Hz HF-P 154 TL5 HO EII 220-240V 50/60Hz HF-P 136 TL-D EII 220-240V 50/60Hz	1CN2P60SC 1L 1CN2P60SC 2L 1CN2S5490C 1L 1CN2S5490C 2L	RSM175STP
Philips TUV 36T5 HO 4P SE	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	IUV2S60M4LD 1L IUV2S60M4LD 2L	
Philips TUV 64T5 HE 4P SE	913700613366	HF-P 154 TL5 HO EII 220-240V 50/60Hz		
Philips TUV 64T5 HO 4P SP			1UV2S60M4LD 1L 1UV2S60M4LD 2L	
Philips TUV PL-L				
Philips TUV PL-L 18W/4P	913700420666 913700418066	HF-M RED 124 SH TL/TL5/PL-L 230-240V HF-M BLUE 124 LH TL/TL5/PL-L 230-240V	1UV2S18H1LD 1L 1UV2S18H1LD 2L	LC25TP w/starter
Philips TUV PL-L 24W/4P	913700420666 913700418066	HF-M RED 124 SH TL/TL5/PL-L 230-240V HF-M BLUE 124 LH TL/TL5/PL-L 230-240V	1UV2S36M2LD 1L 1UV2S36M2LD 2L 1CN2S39 1L 1CN2S39 2L	
Philips TUV PL-L 35W/4P HO	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	1UV2S60M4LD 1L 1UV2S60M4LD 2L	
Philips TUV PL-L 36W/4P	913700192066 913700192366	HF-P 136 PL-L EII 220-240V 50/60Hz HF-P 236 PL-L EII 220-240V 50/60Hz	1UV2S36M2LD 1L 1UV2S36M2LD 2L 1CN2S39 1L 1CN2S39 2L	
Philips TUV PL-L 55W/4P HF	913700192266 913700192566	HF-P 155 PL-L EII 220-240V 50/60Hz HF-P 255 PL-L EII 220-240V 50/60Hz	1CN2S5490C 1L 1CN2S5490C 2L 1CN1S80 1L	
Philips TUV PL-L 60W /4P HO	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	1UV2S60M4LD 1L 1UV2S60M4LD 2L	
Philips TUV PL-L 95W/4P HO	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	1UV2S60M4LD 1L	
TUV T8 and TUV T8 Xtra				
Philips TUV 10W	913700648566 913700648666	HF-P 118 PL-T/C III 220-240V 50/60Hz HF-P 218 PL-T/C III 220-240V 50/60Hz		
Philips TUV 15W	913700191066 913700191466	HF-P 118 TL-D EII 220-240V 50/60Hz HF-P 218 TL-D EII 220-240V 50/60Hz		LC1420CTP w/starter HM2SP20TP
Philips TUV 25W	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz		
Philips TUV 30W	913700191166	HF-P 136 TL-D EII 220-240V 50/60Hz	REL1B540SC 1L REL2S40SC 2L	LX1140FTP
Philips TUV 36W	913700191166 913700191566	HF-P 136 TL-D EII 220-240V 50/60Hz HF-P 236 TL-D EII 220-240V 50/60Hz	IUV2S36M2LD 1L IUV2S36M2LD 2L 1CN2S5490C 1L 1CN2S5490C 2L	
Philips TUV 55W HO	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	1UV2S60M4LD 1L 1UV2S60M4LD 2L	
Philips TUV 75W HO	913700180066	HF-P 1 60-120 PL-H 220-240V 50/60Hz	1UV2S60M4LD 1L 1UV2S60M4LD 2L	



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