PHILIPS

UV-C lamps

Pure protection

Working together to deliver cleaner water, air and surfaces, today and tomorrow

For further information visit
www.philips.com/uv-c
July 2024

Use the power of UV-C light for pure protection against viruses and bacteria

Content overview

Pure protection

Every day the air we breathe, the surfaces we touch, and the water we use can affect our health and wellbeing. Because bacteria and viruses that are left behind after routine cleaning can spread the risks and dangers of infections and disease. Philips UV-C lamps have the power to inactivate the DNA and RNA of micro-organisms, rendering them harmless.

Partnership
We offer equipment manufacturers and purification companies state-of-the-art UV-C solutions they need to remain competitive. But our expertise goes far beyond innovative products. We also have a proven track record in UV-C technologies and offer solid development support, including microbiological performance testing. A level of service and support that sets industry standards.

We're also naturally inquisitive and work with other companies to refine our ideas. We go out of our way to understand each application, immersing ourselves in the details to make sure that our UV-C solutions do exactly what you expect them to do for your equipment. This has resulted in the development of a complete package of UV-C lamps, drivers and modules in close co-operation with our partners. We're also investigating the introduction of UV-C LED solutions for equipment manufacturers.

Innovation
Innovation is at the heart of everything we do. Our comprehensive portfolio of UV-C lamp and driver systems offers the next generation of innovation that improves lives. To achieve the best performance from disinfection installations, we also optimize the delicate balance between lamp and driver and test them thoroughly to ensure the ultimate in quality, reliability and performance.

Sustainability
The environment matters to us too. We're leading the way in caring for our planet with innovative lamp systems designed to help maximize quality of life and minimize environmental impact:

- A lack of safe water supplies contributes to diseases and deaths in the developing world. Our UV-C lamp systems can help disinfect drinking water in a cost effective way.
- Our UV-C lamps can be used in a large variety of air disinfection systems for consumer and professional use, including in-duct systems, upper air luminaires and free standing luminaires.
- Bacteria and viruses that cause infections can live on plastic and steel surfaces for up to 3 days.* With our UV-C lamps you can disinfect surfaces overnight or when no one is present. Also they can be used in germicidal chambers or cabinets to disinfect objects.
- We contribute to create a better environment by substituting potentially dangerous chemicals in our UV-C solutions.
- Our products also contain industry-leading low amounts of mercury, have a long lifetime to reduce waste and a high efficacy to reduce energy use.

*Van Doremalen N, Bushmaker T, Morris DH et al. Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. N Engl J Med. 2020 Mar 17. doi: 10.1056/NEJMc2004973.

UV-C defeats micro-organisms*
Proven effective against viruses, bacteria, molds and spores.

UV-C protects against micro-organism growth
Helps keep the surface of water reservoirs clean from biofilm. Helps keep air treatment systems clean.

Reliable disinfection
Disinfection effect is directly related to UV dose (intensity and exposure time of micro-organisms). It's simple to measure effectiveness once system design is validated.

Easy and cost-effective
UV-C installations have low capital and operation costs and are easy to operate and maintain.

*Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae Revised, updated and expanded by Adel Haji Malayeri, Madjid Mohseni, Bill Cairns and James R. Bolton. With earlier contributions by Gabriel Chevrefils (2006) and Eric Caron (2006) With peer review by Benoit Barbeau, Harold Wright (1999) and Karl G. Linden.

Integrated UV modules

In addition to our extensive range of individual UV lamps and drivers for water and air purification systems, we offer integrated UV-C modules on a project by project basis.

Philips products have a strong reputation for high quality, providing end users with disinfection equipment that they can rely on to remain competitive. It's something we're committed to maintaining. That’s why we have developed the YourSource and the customized cap features. The objective? Helping you to secure maximum disinfection performance, today and tomorrow.

Application and technological expertise

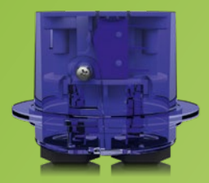
We have a proven track record in UV and UV-C technologies. Thanks to our deep understanding of the complex factors that need to be taken into account for water and air purification (including quality of the water, water flow and water temperature), we're a partner you can trust to design UV-C modules that are optimized for your application. To learn more about how our integrated modules could benefit you, go to www.philips.com/uv-c.

Double safety measure · Customized product · Integrated driver

YourSource

Customized, integrated module

Our YourSource UV-C module with integrated driver is available in wattages of between 5W and 40W to suit the needs of your application and should be customized to your equipment. As a result, it provides a seamless fit, both in terms of ergonomics and functionality. The end user can always be confident of the correct performance of the UV-C Module, because it can only be replaced by the original lamp the system has been designed for. An automatic safety switch avoids exposure to UV-C.



Customized product · Double safety measure

Customized caps

We can provide our lamps with a special customized cap, which allows for easy replacements and more after-sale control. The customized cap reassures equipment manufacturers that only the original lamp can be installed in their original equipment. An automatic safety switch avoids exposure to UV-C.

Customized products are also available on request. Simply contact us with your requirements to find out what's possible.

Compact and miniature mercury lamps

Residential water, air and surface treatment

The quality of the air we breathe and the water we drink can have 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 help disinfect their water by installing UV-C 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 disinfected water.

Next to that, many households are troubled with harmful germs that are airborne, such as the flu and pneumonia. These can be rendered harmless through air purifiers equipped with UV-C lamp systems.

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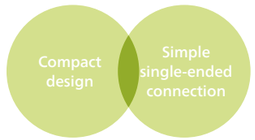
Philips TUV PL-S

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

Main applications

- Residential drinking water units
- Pond water units
- Air treatment units
- Stand-alone purifiers



Features

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

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

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

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

Benefits

Compact system design

Simple single-ended connection

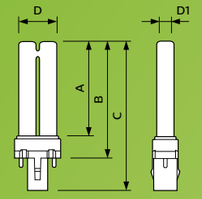
Effective disinfection over the useful lifetime of the lamp

Good environmental choice because of lowest amount of mercury

Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UV-C at 100h (W)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configu-ration	Ordering number 12 NC
5W/2P	G23	1	5,5	35	1,2	0,180	9000	20	14	1CT	6X10BOX	927900504007
5W/4P	2G7	2	5,1	27	1,1	0,190	9000	20	14	1CT	5X10BOX	927900804007
7W/2P	G23	3	7,1	46	1,8	0,175	9000	20	21	1CT	5X10BOX	927901104007
7W/4P	2G7	8	7	60	1,8	0,190	9000	20	23	1CT	5X10BOX	927901504007
9W/2P	G23	4	8,6	60	2,5	0,170	9000	20	29	1CT	6X10BOX	927901704007
9W/4P	2G7	5	8,6	60	2,5	0,170	9000	20	29	1CT	6X10BOX	927901904007
11W/2P	G23	6	11,6	89	3,4	0,160	9000	20	38	1CT	6X10BOX	927902304007
11W/4P	2G7	9	11,3	77	3,6	0,150	9000	20	44	1CT	6X10BOX	927902404007
13W/2P	GX23	7	13	56	3,7	0,290	9000	20	44	1CT	6X10BOX	927902804007

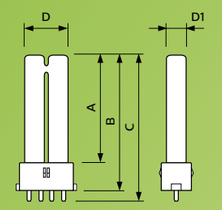
* Calculated with Keitz formula
Other 4-pin variations for all lamp types are available on request. Please contact us with your requirements.



G23

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
4	129	145	167	28	13
6	198	213,3	236	28	13

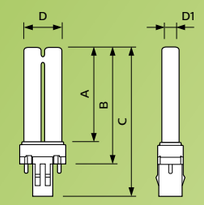
* Dimensions (mm)



2G7

Dim.*	A	B	C	D	D1
no.	max.	max.	max.	max.	max.
2	65,2	83	89	28	13
5	129	145	167	28	13
8	95,2	113	119	28	13
9	196	213	220	28	13

* Dimensions (mm)



GX23

Dim.*	A	B	C	D	D1
no.	max.	max.	max.	max.	max.
7	139,5	155,2	178,2	28	13

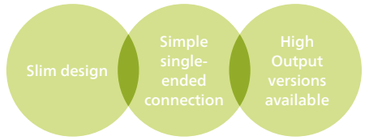
* Dimensions (mm)

Philips TUV TL Mini

Philips TUV TL Mini lamps are slim double-ended UV-C (germicidal) lamps used in residential water and air disinfection units, as well as for specific surface treatment applications. 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-C output over their complete lifetime.

Main applications

- Residential drinking water units
- Fish pond water units
- Stand alone air purifiers
- Sanitation cabinets
- Babybottle sterilizers



Features

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

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

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

Benefits

Slim system design

Simple single-ended connection

Large range of High Output versions available for optimum UV-C output per lamp length, allowing for reduction of system size

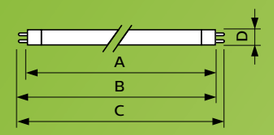
Effective disinfection over the useful lifetime of the lamp

Good environmental choice because of lowest amount of mercury

Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	UV-C at 100h (W)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configu-ration	Ordering number 12 NC
4W	G5	1	4	29	0,9	0,170	6000	25	9,4	1FM	10X25BOX	928000104013
6W	G5	2	6	42	1,8	0,160	9000	20	18	1FM	10X25BOX	928000704013
8W	G5	3	7,1	56	2,5	0,145	9000	15	25	1FM	10X25BOX	928001104013
10W	G5	4	9	48.5	2.8	0,220	9000	15	29	1FM	10X25BOX	927801404001
11W**	G5	2	11,5	34	2,7	0,400	9000	15	27	1FM	10X25BOX	928002204013
16W**	G5	3	15	43	4,4	0,400	9000	15	42	1FM	10X25BOX	928002004013
20W	G5	5	20	45	6,3	0,450	9000	20	62	1FM	10X25BOX	928003404013
25W	G5	6	23	82	8,4	0,350	9000	20	82	1FM	10X25BOX	928002604013
11W 4P SE**	4 Pins Single Ended	7	11,5	34	2,7	0,400	9000	15	27	UNP	32	927971204099
16W 4P SE**	4 Pins Single Ended	8	15	43	4,4	0,400	9000	15	42	UNP	32	927971404099
20W 4P SE	4 Pins Single Ended	9	20	45	6,3	0,450	9000	20	62	UNP	32	927973404099
25W 4P SE	4 Pins Single Ended	10	23	82	8,4	0,350	9000	20	82	UNP	32	927972204099

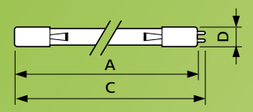
* Calculated with Keitz formula
** High Output lamps
Customized products with bespoke caps, dimensions and power are possible upon request. Please contact us with your requirements.



G5

Dim.* no.	A	B min.	B max.	C	D
1	135.9	142.3	143	150.1	16
2	212.1	218.2	219.2	226.3	16
3	288.3	294	295.4	302.5	16
4	291.1	295.8	298.2	305.3	16
5	398	402.7	405.1	412.2	16
6	516.9	521.6	524	531.1	16

* Dimensions (mm)



4 Pins Single Ended

Dim.* no.	A max.	C max.	D max.
7	244.1	251.8	19
8	320.3	328	19
9	430	437.7	19
10	548.9	556.6	19

* Dimensions (mm)

High power amalgam and mercury lamps

Municipal and industrial water and air treatment

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. We are helping to do just that with a range of lamp systems designed to meet all the main municipal requirements and comply with new legistlation..

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-C lamp systems are becoming increasingly popular.

Highly cost-effective, they treat waste water without adding chemicals or residues. Helping to protect our communities and the environment.

Philips TUV Amalgam XPT System page 16-17

Philips Dynapower System page 18-19

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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.
These lamps should always be designed-in with support of the Signify organization, this to prevent performance issues. Please contact your sales representative.

Main applications

- 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

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

Special amalgam used for highest efficiency over wide temperature range

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

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

Philips electronic driver available for a perfect interface

Universal burning position possible depending on the application

Lamp can be made from special quartz (open / synthetic) to maximize 185 nm Ozone generation

Benefits

High Power allows for design of compact installations

High system efficiency

Approximately 10% energy savings, because lamps can be dimmed to reach the same UV output compared to similar lamps on the market

Effective disinfection over the useful lifetime of the lamp

Best environmental choice because of long reliable life, less waste and industry leading low amount of mercury

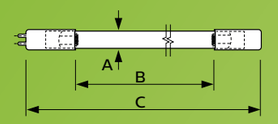
Extreme reliability of driver, with annual failure rate of less than 1%

High efficiency during dimming thanks to unique amalgam temperature control of the 800W lamps

Technical data

Type	Cap-Base	Dim. no	Technical Lamp Wattage (W)	Lamp Voltage (V)	Lamp Current (A)	UV-C[1] at 0h (W)	UV-C[1] at 100h (W)	Useful life[2] (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Ordering number 12 NC
130W XPT SE	G10.2Q	1	130	70	2,1	48	46	12000	10	428	928101805112
180W XPT SE	G10.2Q	2	180	90	2,1	63	61	12000	10	543	928106805112
200W XPT SE	G10.2Q	3	200	100	2,1	68	66	12000	10	572	928106905112
325W XPT HO SE	G10.2Q	4	325	158	2,1	118	115	12000	10	878	928107005112
800W XHO SE	G10.2Q	6	800	103	8	277	265	12000	10	1946	928107605112
330W XPT DE	GX10.2Q	5	330	78	3,6	97	95	12000	10	734	928107205112

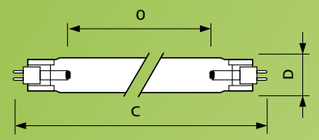
1 Nominal UVC output (fixed current) under laboratory conditions
2 Expected useful lifetime is 12000 h with an intensity decrease of 10% at 254 nm, based on the 100 h UVC value. ** TUV800W depreciation is 15%
Lifetime and depreciation strongly depend on operation conditions
* Calculated with Keitz formula



4 Pins Single Ended

Dim.*	A	B	C
no.	nom.	nom.	max.
1	19	740	842
2	19	930	1032
3	19	1040	1147
4	19	1480	1582
6	38 (max.41)	1609	1791

* Dimensions (mm)

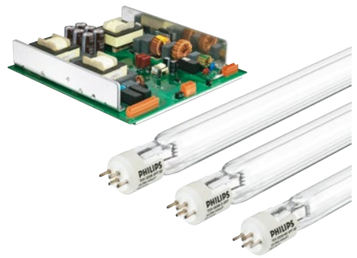


Double ended

Dim.*	O	C	D
5	1440	1556	32(max. 34)

* Dimensions (mm)

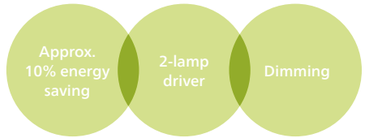
Philips DynaPower System



The Philips DynaPower lamp and driver offers you a best-in-class, no-risk alternative for specific amalgam open channel systems. The delicate balance between lamp and driver has been optimized to achieve the best possible performance. The Philips lamps and drivers are all designed and manufactured in-house, to give you guaranteed peace of mind. These lamps should always be designed-in with support of the Signify organization, this to prevent performance issues. Please contact your sales representative

Main applications

- Municipal drinking water treatment equipment
- Municipal waste water treatment equipment
- Process water treatment equipment



Features

Operates 230W, 260W (HO) and 335W (HO) TUV Amalgam XPT lamps

Single lamp operation possible

Cooler operating temperature for additional energy savings

100% stress testing minimizing 0-hour failures

Protection against voltage peaks

Permanent overvoltage protection

Approximately 20 seconds start-up time (compared with 90 seconds for similar drivers on the market)

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

Benefits

Energy savings of approximately 10% compared with similar drivers or lamps, and up to as much as 35% for the HO system

Dimmable up to 60% power level for additional energy savings

The highest levels of service and support with a single supplier for lamp and driver

3-year guarantee on driver and 16,000 operating hours guarantee on lamp

Easier maintenance thanks to single lamp operation, allowing to detect easily which lamps need to be replaced

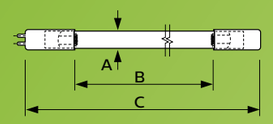
Best environmental choice thanks to maximum lifetime reliability, in combination with minimum substances, packaging and product weight

Easier to maintain compliance with regulations thanks to reduced risk of failures

Technical data

Type	Cap-Base	Dim. no.	Technical Lamp Wattage (W)	Lamp Voltage (V)	Lamp Current (A)	UV-C at 100h (W)	Useful life (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configuration	Ordering number 12NC
230W WE XPT SE	G5.4X17Q		230	88	3,06	78	16000	10	610	UNP	32	928104005112
260W XPT DIM	G5.4X17Q		260	76	3,06	80	16000	10	626	UNP	32	928102805112
260W XPT HO	G5.4X17Q		260	89	2,7	98	16000	10	766	UNP	32	928104405112
335W XPT SE	G5.4X17Q		335	77	3,06	93	16000	10	727	UNP	32	928103105112
335W WP XPT SE	G17X10		335	77	3,06	93	16000	10	727	UNP	32	928105705112
335W XPT HO SE	G5.4X17Q		335	94	3,34	123	16000	10	1085	UNP	32	928103505112

1 Nominal UVC output (fixed current) under laboratory conditions
2 Expected useful lifetime is 16000 h with an intensity decrease of 10% at 254 nm, based on the 100 h UVC value
Lifetime and depreciation strongly depends on operation conditions
* Calculated with Keitz formula



4 Pins Single Ended

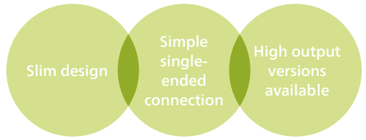
Dimensions	A	B	C
TUV 230W WE XPT SE	25	1400	1514
TUV 260W XPT DIM	32	1400	1514
TUV 260W XPT HO	32	1400	1514
TUV 335W XPT SE	32	1400	1514
TUV 335W WP XPT SE	32	1400	1514
TUV 335W XPT HO	32	1400	1514

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.

Main applications

- Industrial water disinfection equipment, e.g. for food & beverage industry
- Small municipal water treatment systems
- Swimming pool units
- Air treatment systems (High Output lamp versions)



Features

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

Small diameter

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

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

Benefits

Slim system design

Simple single-ended connection

High Output versions for improved performance in moving air and reducing amount of required lamps

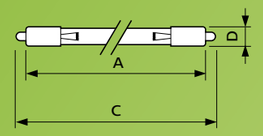
Effective disinfection over the useful lifetime of the lamp

Good environmental choice because of lowest amount of mercury

Technical data

Type	Cap-Base	Dim. no.	Technical Lamp Wattage (W)	Lamp Voltage (V)	UV-C at 100h (W)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configu-ration	Ordering number 12 NC
36T5 HE SP	Single pin	1	40	97	14,8	0,425	9000	20	138	UNP	32	927970004099
64T5 HE SP	Single pin	2	75	184	32,7	0,425	9000	20	251	UNP	32	927970504099
24T5 HE 4P SE	4 pins single ended	3	33	78	11,9	0,425	9000	20	114	UNP	32	927948204099
24T5 HO 4P SE	4 pins single ended	3	61	77	18,2	0,800	9000	20	175	UNP	32	927948304099
36T5 HE 4P SE	4 Pin Single Ended	4	40	97	14,8	0,425	9000	20	138	UNP	32	927970204099
36T5 HO 4P SE	4 Pin Single Ended	4	75	97	24,4	0,800	9000	20	227	UNP	32	927972104099
48T5 HE 4P SE	4 pins single ended	5	58,4	138	21,9	0,425	9000	20	189	UNP	32	927948604099
48T5 HO 4P SE	4 pins single ended	5	107	135	33,3	0,800	9000	20	289	UNP	32	927948704099
64T5 HE 4P SE	4 Pin Single Ended	6	75	184	32,7	0,425	9000	20	251	UNP	32	927970704099
64T5 HO 4P SE	4 Pin Single Ende5	6	145	175	50,6	0,800	9000	20	389	UNP	32	927971104099
24T5 HE	G5	7	33	78	11,9	0,425	9000	20	114	UNP	40	927928204024
24T5 HO	G5	7	61	77	18,2	0,800	9000	20	175	UNP	40	927928304014
36T5 HE	G5	8	40	97	14,8	0,425	9000	20	138	UNP	40	928000204024
36T5 HO	G5	8	75	97	24,4	0,800	9000	20	227	UNP	40	928002404014
48T5 HE	G5	9	58,4	138	21,9	0,425	9000	20	189	UNP	40	927928704024
48T5 HO	G5	9	107	135	33,3	0,800	9000	20	289	UNP	40	927928804014
64T5 HE	G5	10	75	184	32,7	0,425	9000	20	251	UNP	40	928000404024
64T5 HO	G5	10	145	175	50,6	0,800	9000	20	389	UNP	40	928000304014

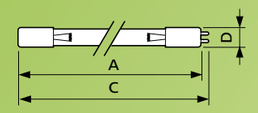
* Calculated with Keitz formula
Customized products with bespoke caps, dimensions and power are possible upon request. Please contact us with your requirements.



Single Pin

Dim.*	A	C	D
no.	max.	max.	max.
1	845.4	863.9	19
2	1556.6	1575.1	19

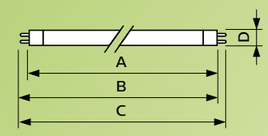
* Dimensions (mm)



4 Pins Single Ended

Dim.*	A	C	D
no.	max.	max.	max.
3	693.0	700.7	19.5
4	845.4	853.1	19
5	1149.0	1156.7	19.5
6	1556.6	1564.4	19

* Dimensions (mm)



G5

Dim.*	A	B	B	C	D
no.	.	min.	max.		
7	661.0	665.8	668.2	675.2	16
8	813.4	818.1	820.5	827.6	16
9	1117.0	1121.8	1124.2	1131.2	16
10	1524.6	1529.3	1531.7	1538.8	16

* Dimensions (mm)

Medium power compact and tubular mercury lamps

Commercial and professional water, air and surface treatment

Increasingly, we spend more time indoors, for example at work, in airplanes, schools and shopping malls.
The air we breathe in these environments is often re-circulated and can contain bacteria, viruses, pollen, smoke and toxic gases.

Philips UV-C disinfection lamp systems help provide a reliable and sustainable solution that are ideal for use in ventilation air ducts, air disinfection units or stand-alone air purifiers.

These types of UV-C disinfection lamps can also be used in germidical chambers and cabinets, moveable carts, robots and open luminaires.
They can help protect against airborne pathogens as well as micro-organisms present on surfaces with the power of light.

Philips TUV PL-L
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Philips TUV T8
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Philips TUV T5
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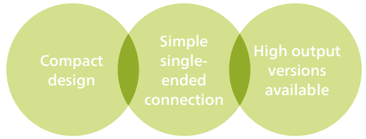
Philips TUV PL-L

Philips TUV PL-L lamps are compact UV-C (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-C output over their complete lifetime. Thanks to the single-ended lamp base, lamp replacement is easy, making maintenance hassle free.

Main applications

- 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

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

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

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

Benefits

Compact system design

Simple single-ended connection

Hight Output versions for improved performance in moving air and reducing amount of required lamps

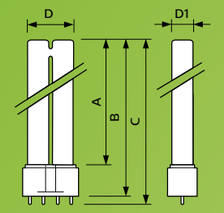
Effective disinfection over the useful lifetime of the lamp

Good environmental choice because of lowest amount of mercury

Technical data

Type	Cap-Base	Dim. no.	Technical Lamp Wattage (W)	Lamp Voltage (V)	UV-C at 100h (W)	Lamp Current (A)	Useful life (h)	Depreciation at useful lifetime (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configu-ration	Ordering number 12 NC
18W/4P	2G11	1	18	58	5	0,375	9000	20	51	1CT	25	927903004007
24W/4P	2G11	2	24	87	7,6	0,345	9000	20	77	1CT	25	927903204007
36W/4P	2G11	3	36	106	12,2	0,435	9000	20	121	1CT	25	927903404007
55W/4P HF	2G11	4	55	105	18,7	0,525	9000	20	183	1CT	25	927908704007
35W/4P HO	2G11	5	35	42	9,1	0,850	9000	20	92	1CT	25	927904204007
60W/4P HO	2G11	3	67	84	20,6	0,800	9000	20	205	1CT	25	927909004007
95W/4P HO	2G11	4	90	115	28,1	0.800	9000	20	275	1CT	25	927909804007

* Calculated with Keitz formula



2G11

Dim.* no.	A max.	B max.	C max.	D1 max.	D max.
1	195	220	227	18	39
2	290	315	322	18	39
3	385	410	417	18	39
4	510	535	542	18	39
5	195	220	227	18	39

* Dimensions (mm)

Philips TUV T8

TUV T8 lamps are double-ended UV-C (germicidal) lamps used in professional air disinfection units. TUV T8 lamps offer almost constant UV output over their complete lifetime. 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
- Areas with low maintenance and/or disruptive costs
- Fish ponds and process water units
- High reliability with the lowest percentage of lamps that fail prematurely in the market

Features

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

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

Long lifetime of 18,000 hours*

90% of all lamps still operate on full output and quality after 15,000 hours*

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

* Based on operation on a Philips electronic driver.

Benefits

Effective disinfection over the useful lifetime of the lamp

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

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

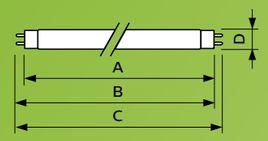
Good environmental choice because of lowest amount of mercury

High reliability with the lowest percentage of lamps that fail prematurely in the market

Technical data

Type	Cap-Base	Dim. no.	Technical Lamp Wattage (W)	Lamp Voltage (V)	UV-C at 100h (W)	Lamp Current (A)	Useful life (h)	Depreciation at useful life (%)	Irradiance at 1m (µW/cm²)*	Packaging type	Packaging configuration	Ordering number 12NC
15W	G13	1	15,5	55	5,1	0,335	9000	15	51	SLV	25	928039004005
T8 F17	G13	2	16,7	72	6	0,236	9000	15	58	SLV	25	927941904020
25W	G13	1	25	48	7,3	0,600	9000	15	72	SLV	25	928039404005
30W	G13	3	30	102	12,3	0,365	9000	15	112	SLV	25	928039504005
36W	G13	4	36	103	16,4	0,440	9000	15	138	SLV	25	928048604003
55W HO	G13	3	54	86	19,7	0,765	9000	15	180	SLV	25	928049504003
75W HO	G13	4	75	110	27,8	0,835	9000	15	235	SLV	25	928049404003

* Calculated with Keitz formula



G13

Dim.*	A	B	C	D
1	437.4	444.5	451.6	28
2	589.8	596.9	604	28
3	894.6	901.7	908.8	28
4	1199.4	1206.5	1213.6	28

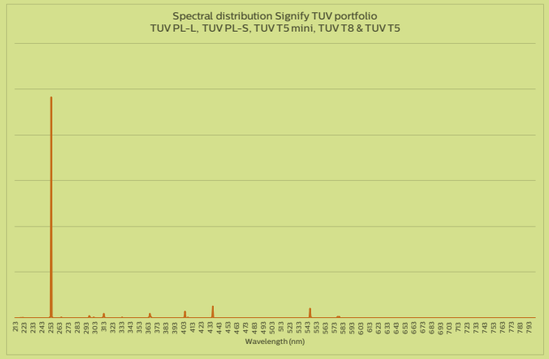
* Dimensions (mm)

Warnings and Instructions for UV lamps, modules and systems

1. UV-C radiation is harmful for eyes and skin, therefore people and animals should always avoid direct exposure to UV-C. When installing the lamps make sure the installation manual of the device is followed and lamps are not switched on during installation. All Philips TUV lamps have warning text and signs on the boxes and individual packaging.

	UV-C RISK GROUP 3
	**WARNING: These lamps are not for general residential or commercial use. Do not purchase this ultraviolet lamp unless it will be installed in a fixture/system specifically designed to accommodate an ultraviolet lamp. If you install these lamps in general purpose lighting fixtures, you may expose yourself and others to dangerous ultraviolet radiation, possibly leading to severe skin and eye damage.**

2. WARNING: All plants and/or animals that are exposed to UV-C and/or ozone for a long time may become damaged and/or discolored.
3. Materials that are exposed to UV-C and/or ozone for a long time may become damaged and/or discolored.
4. Our UV-C sources are not intended and shall not be used in applications or activities which may cause death, personal injury and/or damage to the environment.
5. UV-C wavelengths generated by TUV sources:



In addition to the warnings, there shall be instructions for the safe use during assembly, installation, maintenance and disposal in the document. For Lamps (mercury containing) following should be added in the instructions/user manual.

System Disposal
We recommend that the Philips TUV lamps are disposed of in an appropriate way at the end of their (economic) lifetime. These lamps contain mercury (Hg), necessary for the performance of these lamps. Therefor these lamps should be treated as special waste and be disposed of in accordance with local regulations.

For Signify information on recycling and collection:
https://www.signify.com/global/sustainability/product-compliance/collection-and-recycling

Detailed information on waste and recycling that customers shall adhere to:
Europe (EU):
Directives 2008/98/EC +amd EU/2018/851
Directive 2019/19/EU (WEEE)
USA:
https://www.epa.gov/mercury/mercury-consumer-products#biz

Information for Businesses and Industries
Under the Resource Conservation and Recovery Act, some widely generated hazardous wastes, including mercury-containing wastes like mercury-containing bulbs, certain spent batteries, thermostats, barometers, manometer, temperature and pressure gauges, and certain switches, are designated as “universal wastes”. Businesses and industries that qualify as universal waste handlers must follow specific requirements for storing, transporting, and disposing of these wastes. Households are exempt from these regulations.
Note that some states and local jurisdictions have elected to pass regulations that are more stringent than the federal hazardous waste regulations. Several states and municipalities do not recognize the exemption for households; others regulate all fluorescent bulbs as hazardous, regardless of their mercury content. For example, Vermont bans all mercury-containing waste from landfills, including mercury-containing waste generated by households.

Safe Use instructions how to handle a broken bulb:
1. Evacuate people and animals from the room.
2. Ventilate the room for at least 15 minutes prior to starting the clean up.
3. Wear personal protective equipment such as (disposable) gloves and safety glasses.
4. Collect the broken pieces and debris with two pieces of stiff paper or cardboard.
5. Use sticky tape to pick up any remaining fine glass or powder.
6. Clean the area after collecting the debris with a damp cloth or towel to remove any residual particles.
7. Collect all the pieces and debris in a sealable container (glass) and dispose of as special waste.

Detailed information can be found at following sites:
USA: requirements for handling broken mercury products:
https://www.epa.gov/cfl/cleaning-broken-cfl

CANADA:
https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/everyday-things-emit-radiation/compact-flourescent-lamps.html#a6

Protect against viruses and bacteria with UV-C