

# UV FLOW

[www.bbtuvair.com](http://www.bbtuvair.com)

**FOR**

OFFICE  
SCHOOL  
HOSPITALS  
WAITING AREAS  
GYMS

HOTELS  
CINEMAS  
SHOPS  
PETROL STATION  
FOOD CHAIN STORES

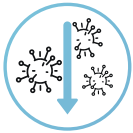
253,7 nm

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253,7 nm

**HOW IMPORTANT IS THE WELL-BEING**  
of your staff? The Invisible Threat may be  
putting them at risk.

It's time to do more than just wipe down surfaces.  
UV-C air treatment in occupied spaces



**Reduces  
bacteria**



**Saves  
space**



**Minimal  
maintenance**



**Cleans  
24/7 by 365**



**Improves  
IAQ**



**Non-harmful for  
people or animals**



**Lighting  
function**

## Fast, Continuous UV-C Air Purification

**Safe:** Allowed to use in occupied spaces. Non-harmful for people or animals (UV-C radiation shielded from leakage outside the lamp).

**Integration:** UV Flow integrated air purification and sterilization in one single device to save cost and space. Air purification is done by a HEPA filter which is able to eliminate 99.95% particles size 0.5 microns or larger. The ozonefree UV-C lamps collaborate with photocatalyst filters to kill 99% germs and virus.

**\*Photocatalyst:** Photocatalytic Oxidation (PCO) is a very powerful air purification technology which destroys microbes, viruses, volatile organic compounds (VOCs), and chemically active compounds (CACs) as small as 0.001 microns (nanometer).

**Easy Installation:** While Armstrong tile ceiling construction is the most popular office ceiling solution, UV FLOW make it the dimension 595 x 595 mm, a compatible size for any Armstrong ceiling for aesthetical consideration and easy installation.

**Illumination:** UV FLOW combines the modern lighting technology, device takes part in daily illumination task while indoor air is circulated and cleaning at its back.

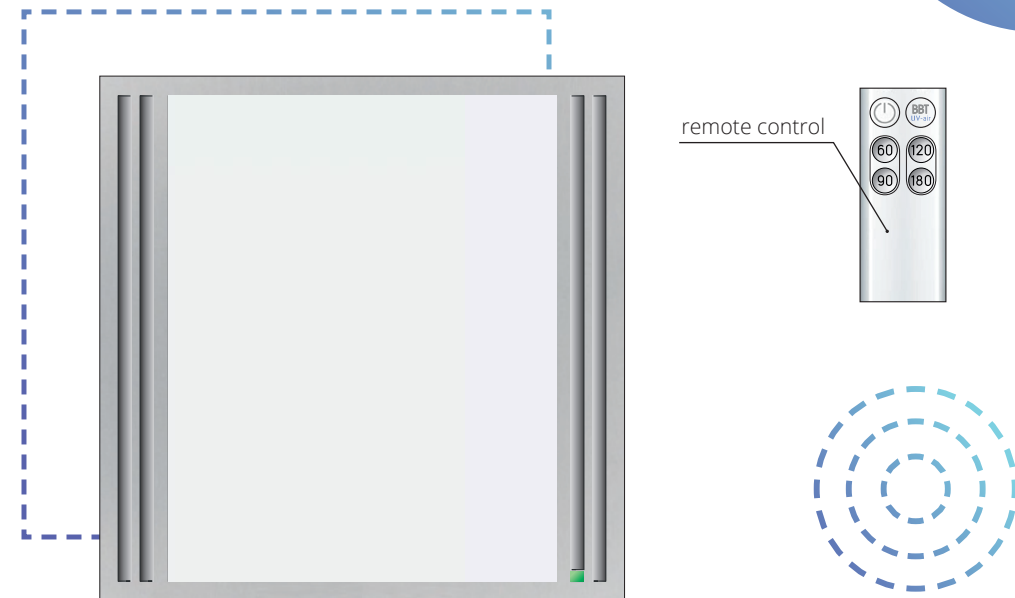
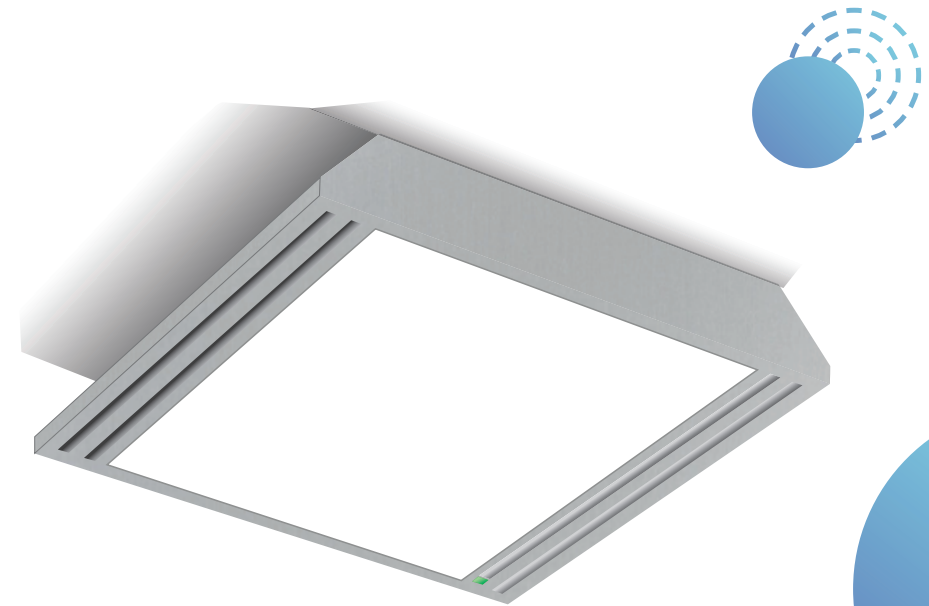
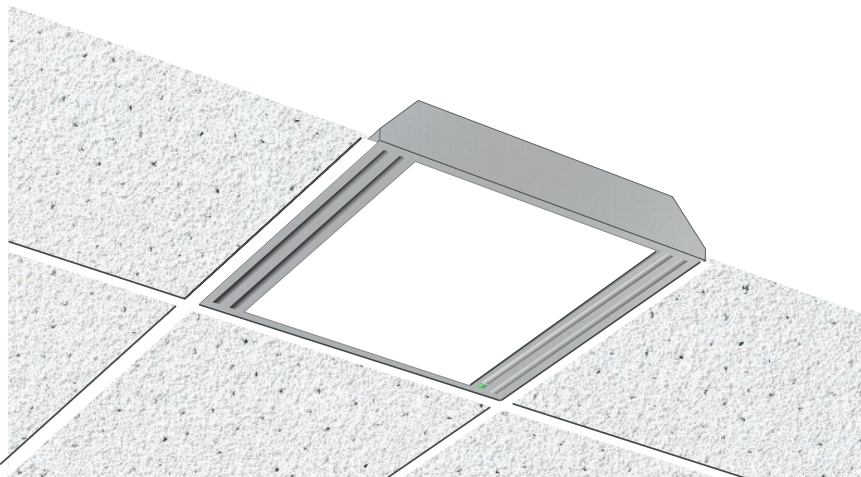
**Automatic:** The UV-C lamps and fans work simultaneously for the air cleaning. LED lighting panel can be controled separately while air disinfection is finished to save power. 4 time modes allow air cleaning duration on your own preference.

# UV Flow

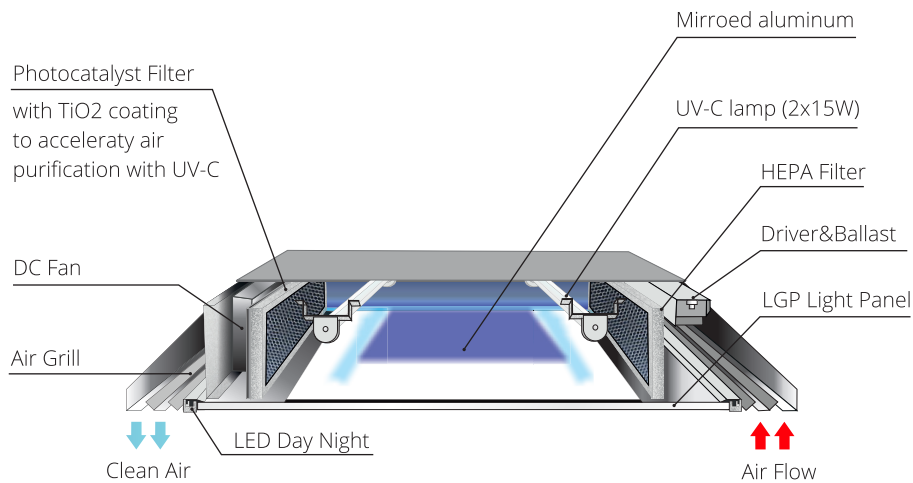
UV Flow is an integrated air cleaning device contains both air purification, sterilization and illumination. It is a one-stop solution for office and any kind of working environments to improve the indoor air quality. Unlike the conventional air purifier found in the market, UV Flow does not take up any precious workspace or wall space in your office, it is ceiling mount and fit in perfectly with your existing office ceiling tile set up. Inspired by the LED ceiling panel, the installation of UV Flow will become part of your office lighting, but not an exterior obstruction of your existing office design.

## SHIELDED UV-C!

Allows for use in occupied spaces



# Technical data

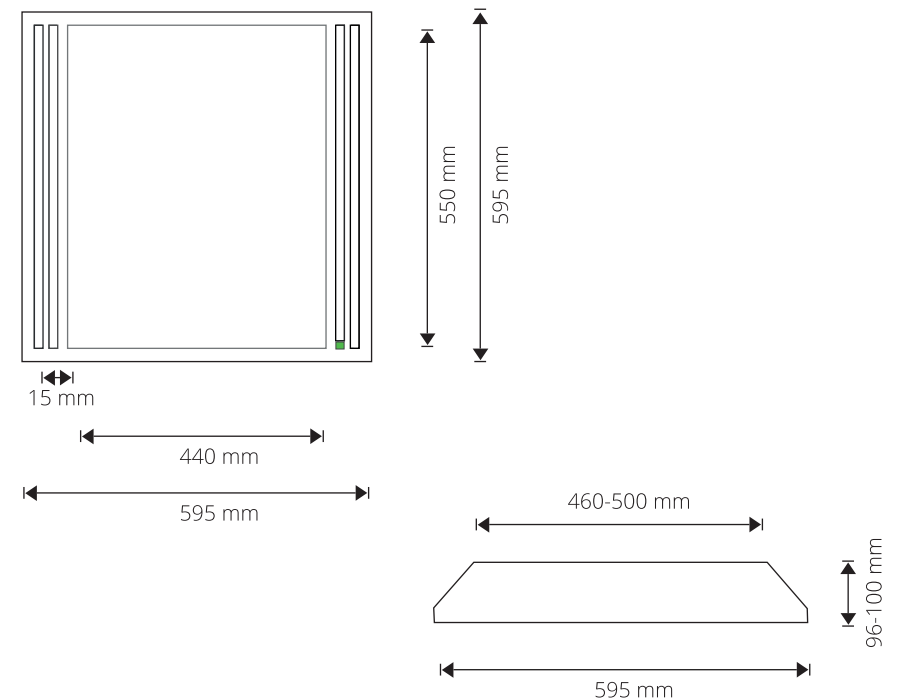
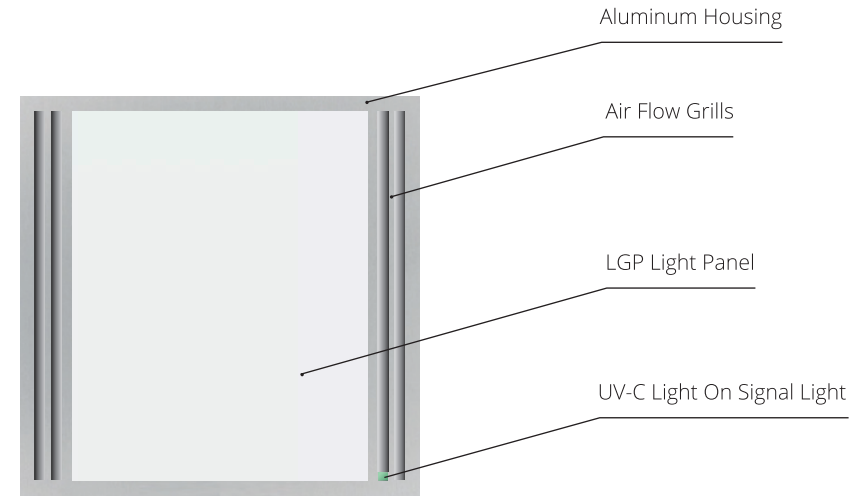


<b>Art. Number</b>	<b>AS7.1001</b>
<b>UV-C lamp power</b>	15 W x 2
<b>LED panel power</b>	40 W
<b>LED panel parameters</b>	4500 Lm, 3000K / 4000K / 6000K, CRI 80, PF 0.9, (DIM optional on request), flicker-free, driver Philips
<b>System power</b>	78 W
<b>UV-C lamp type</b>	2 x Ozone-free, 253.7 nm wavelength
<b>Rate of air disinfection</b>	99%
<b>UV-C lamp lifetime</b>	8000 hours
<b>Filters</b>	HEPA & Aluminium TiO <sub>2</sub> Photocatalyst
<b>Voltage</b>	220 - 240V / 50-60Hz ( x 110V available on request)
<b>Sound pressure level</b>	50 dB
<b>Fixture material</b>	Iron + Aluminum
<b>Recommended floor area</b>	30 - 60 m <sup>2</sup>
<b>Recommended room volume</b>	Recommended room volume 50 - 100m <sup>3</sup> (2 fans x 50m <sup>3</sup> /H or 100 CFM)
<b>Mounting type</b>	Ceiling
<b>IP rate</b>	20
<b>Dimensions</b>	595 x 595 x 100 mm
<b>Weight</b>	6.7 kgs
<b>Additional accessories</b>	Remote control, Hanging set with cables
<b>Packing box dimensions</b>	615 x 110 x 615 mm

# Technology

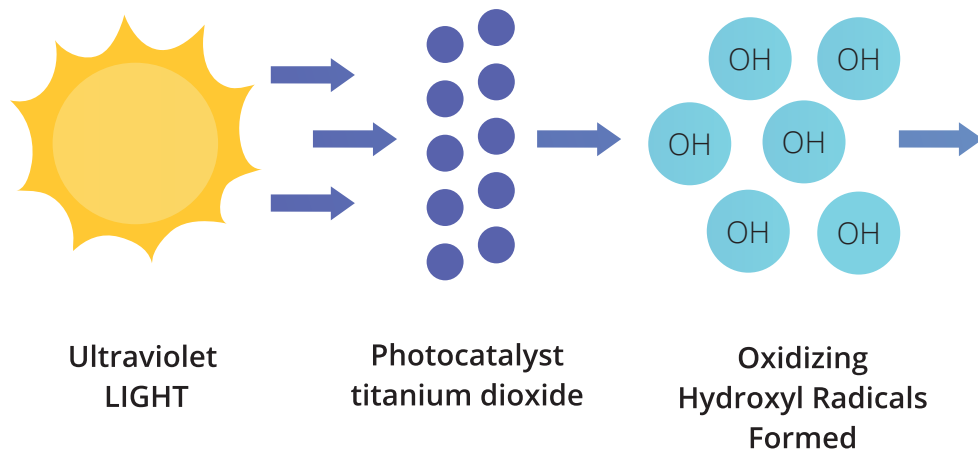
## HOW UV FLOW WORKS

- 1 Air Flow containing airborne microorganisms is drawn into system through vent openings at the bottom of the unit.
- 2 Ventilators (2pcs DC fans) create differential pressure to continuously draw 100CFM of air into the unit.
- 3 The UV-C lamps hidden inside the housing, whole construction of the UV FLOW prevents UV-C leakage into the room.
- 4 The 15W UV-C bulbs (2\*15W=30W) operates at 253.7 nanometers, reducing bioaerosols (bacteria, germs and viruses) from indoor room air. The housing inside covered by mirrored aluminum for highest efficacy and rate of disinfection.
- 5 Indoor air is pushed through the bottom to the side, it pass through UV-C emanation, HEPA and photocatalytic filters for high level air purifying and comes out from another side as treated clean air.
- 6 The grill designed exit vent on sides of the unit disperses treated air evenly throughout the room.
- 7 For prophylaxis air purifier can be turned on for 1-2 hours per day, and in case of sickness of people or high cross of people it can be left turned on for the whole working day.

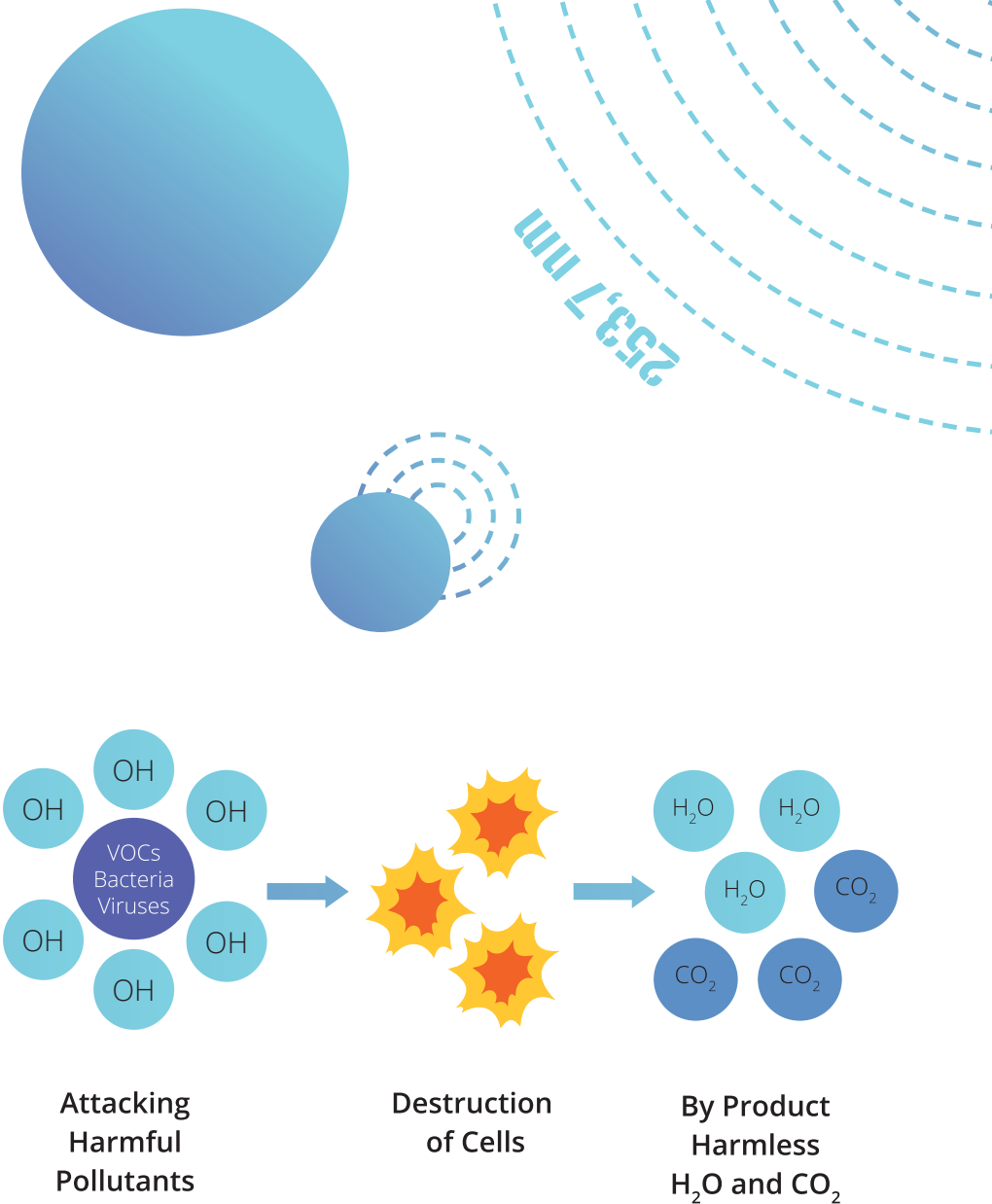


# \*How PCO works

The Photocatalytic Oxidation process combines UVC irradiation with a substance (catalyst) titanium dioxide (TiO<sub>2</sub>) which results in a reaction that changes harmful contaminants into water, carbon dioxide. As the harmful contaminant-filled polluted air circulates through the chambers the microbes are "attacked" by free hydroxy radicals and super-oxide ions (created by UV light and titanium dioxide), breaking their cellular structure apart and destroying both the intracellular mass and DNA/HNA chromosomes. The result is harmless water & carbon dioxide. PCO is a very powerful air purification technology and has the ability to destroy particles as small as 0.001 microns (nanometer). The combination of PCO and UV-C lamps in UV FLOW helps to disinfect air from smallest microorganisms to improve indoor air quality.

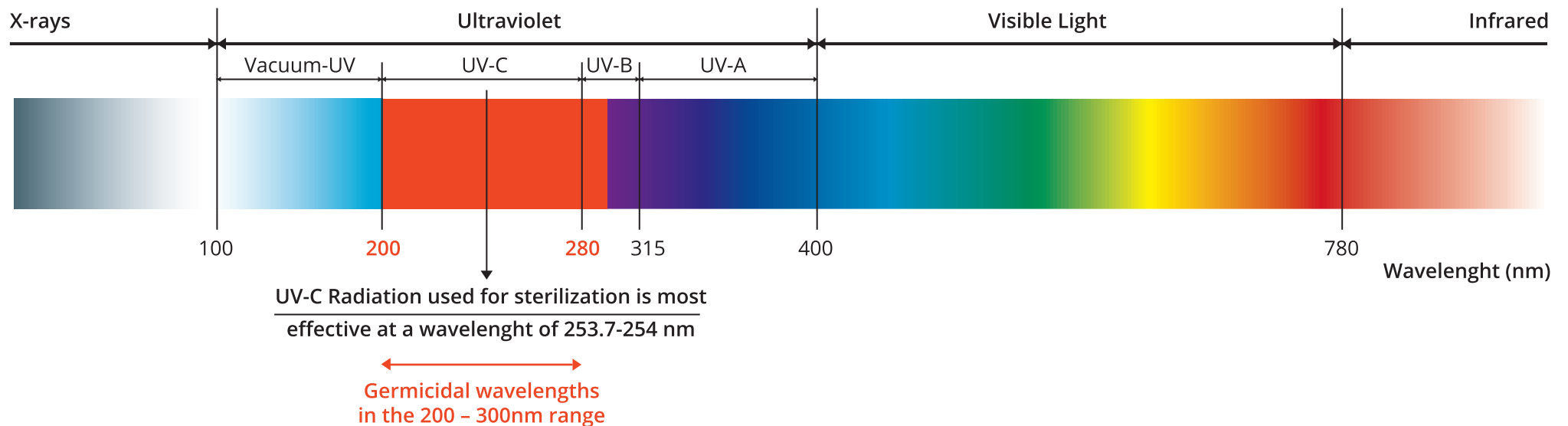
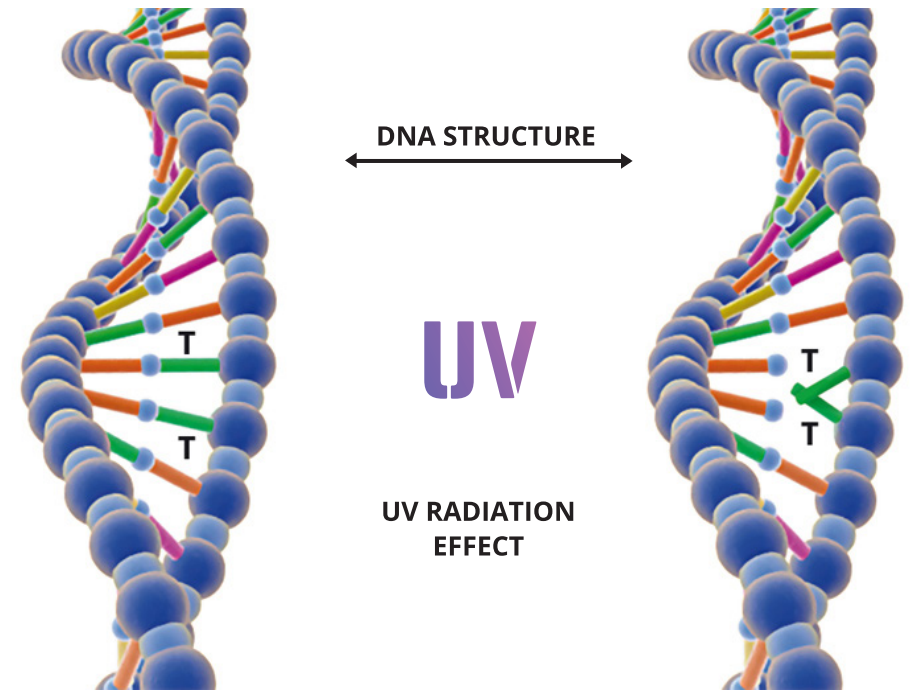


\*See page 1 item: Photocatalyst



# Why use UV-C lamps?

Ultraviolet (UV) light has been used for many years in industry and in health and hygiene regimes. According to the International Ultraviolet Association: "The portion of the UV spectrum (the 'germicidal' region) that is important for the disinfection of water and air is the range that is absorbed by DNA (RNA in some viruses). This germicidal range is approximately 200-300 nm." The DNA, RNA and proteins of microorganisms absorb the ultraviolet light from UV Halo lamp in the wavelength 253.7 nm (wavelength not only is most effective for sterilization by inactivating the cells of bacteria and germs, but also it doesn't generate harmful ozone, so it makes UV HALO ozone-free, environmentally friendly, chemical-free and health protective device).





# What viruses and bacteria does the UV-C lamp kill?

## UV energy provides 99% kill rate for:

Virus bacteriophage (E.coli)

Shigella dysenteriae  
(Dysentery)

Dust mite

Black mold

Rotavirus

Hepatitis virus

Influenza virus

Streptococcus hemolyticus

Poliovirus

AND MANY OTHER VIRUSES, BACTERIA AND PARASITES.



# Does UV lamp protect from COVID-19?

## Is it harmful for people?

There's no yet confirmed data that UV lamp kills 100% of COVID-19 virus (research in progress). However it is already proved that ultraviolet light can be an effective measure for decontaminating surfaces that may be contaminated by the SARS-CoV-2 virus by inducing photodimers in the genomes of microorganisms. Ultraviolet light has been demonstrated to be capable of destroying viruses, bacteria and fungi in hundreds of laboratory studies (Kowalski 2009). The SARS-CoV-2 virus has not yet been specifically tested for its ultraviolet susceptibility but many other tests on related coronaviruses, including the SARS coronavirus, have concluded that they are highly susceptible to ultraviolet inactivation. ASHRAE recommends ultraviolet germicidal irradiation as one strategy to address COVID-19 disease transmission (ASHRAE 2020).

### IT IS SCIENTIFICALLY PROVED THAT UV LIGHT:

- Kills influenza viruses of all kinds
- Destroys pathogenic bacteria and microbes
- Destroys mold and removes unpleasant odors
- Disinfect and completely clean the air, objects and surfaces of the premises from various types of infections.

The FLOW UVC lamps are shielded to the outside meaning that there is no direct safety issues. Therefore the device is suitable for continuous (24 hour) operation in the presence of any persons.

## Zones of application



# Recommended time of disinfection

**60-90  
minutes**

35-42 m<sup>2</sup> office space

**120  
minutes**

35-42 m<sup>2</sup> shops areas,  
working premises

**180  
minutes**

40-60 m<sup>2</sup> petrol station stores,  
bakery, waiting areas

**180  
minutes**

40-60 m<sup>2</sup> food stores, gym