



UV-C Product Portfolio Professional

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Content

- Disinfecting air, surfaces and water
- What is UV-C and how does it work?
- UV-C Application | Surface and Air
- Hazards of UVC
- Why Philips?
- Usage of UV-C for applications
- UVC product portfolio

Disinfecting air, surfaces and water

Encounter with germs every day

- Bacteria and viruses are present in the air, on food, plants and animals, in soil and water
- Most bacteria and viruses don't harm us
- Some germs are difficult enemies because they're mutating to breach our immune system's defenses



361 times more bacteria than a bathroom doorknob



50% have fecal bacteria



1,235 times more bacteria than the surface of your cell phone.

What is UV-C and how does it work?

Ultraviolet (UV) light is invisible to human eyes.

UV-C wavelength

- **200 nm to 280 nm** UVC useful for disinfection and sensing
- Peak output of our germicidal lamps (**253.7nm**) is close (80-85%) to the maximum effectiveness of UV-C (265nm)
- Smaller UV-C wavelengths (222nm) are being explored as less harmful alternatives

No known micro-organisms resistant

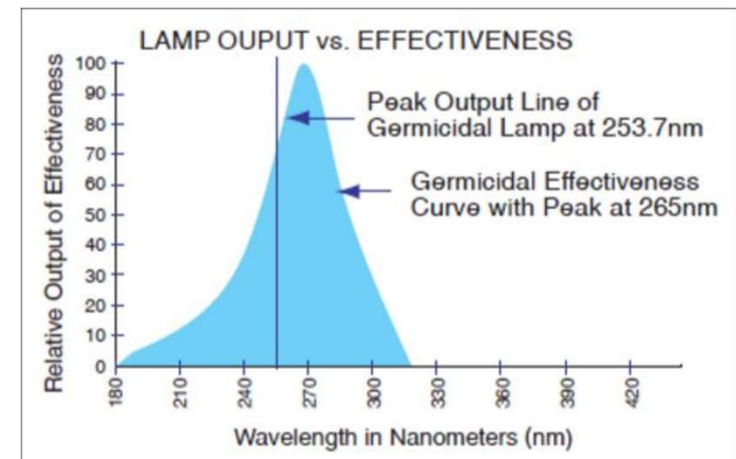
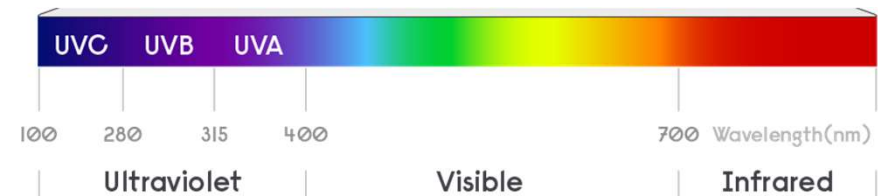
- UV-C break the DNA and RNA of bacteria, viruses and spores, meaning that they leave them harmless.

Effective

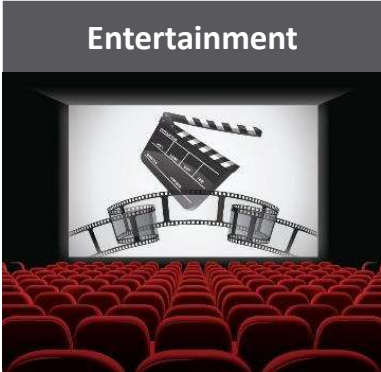
- Has been used in hospitals and governmental buildings for more than 30 years

UV-C solutions

- Utilizes conventional lighting, with LED now improving in efficiency



UV-C Application | Surface and Air



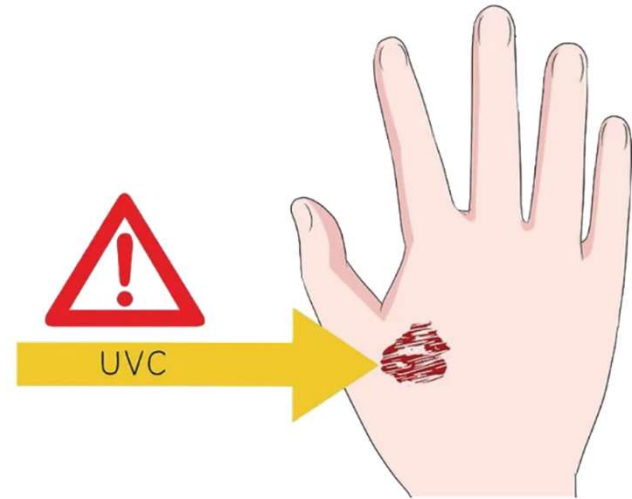
Hazards of UVC

Harmful to any living being

- Humans, animals, plants
- Eye damage- the retina in a short time of exposure
- Can cause a severe sunburn-like reaction to skin
- Potentially causes skin cancer

Corrodes various materials

- Large dose ionizes air on metal surface
- Change color of plastic
- Peeling of paint



Damage to paints



Damage to plastic



Essential to ensure

- 6 • Direct Exposure to UVC to be avoided in all applications , Remote Operation

Safe usage of UV-C for applications

UV-C lamps and devices must be used properly to be safe.

Lamps are always shielded from direct radiation

- The lamps sources should not be visible directly
- Under no circumstance humans should come in direct contact with UVC radiation

UVC applications

- When a UVC lamp is On (Glowing) no human should be present even momentarily
- The application should be designed in a way that equipment is operated remotely
- Medical application needs clearance from Legal:
No medical claims can be made, Local laws apply

Instructions to OEM customers

Communicate clearly the warnings on their website and applications, as we do on our leaflets. Disclaimers may apply

Motion/presence
detection and **auto
switch off sensors**

Operate only
with proper
**protection
equipment and
shielding**

It is visible whether
UV-C lighting is
on/off thanks to
**blue hue during
operation**

UV-C has **limited
penetration walls,
glass <3mm**

Safeguards

Why Philips?

Manufacturer

- All different UV technologies in house
- Customize a complete UV lamp system solution
- A complete range of UV lamps, drivers, and integrated modules

Automated manufacturing process

- Cutting-edge vision system
- Retain the high quality of our lamps

Trusted

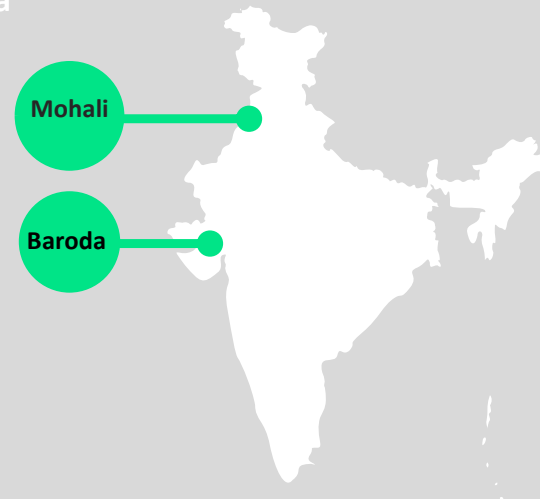
35 years experience in UV-C lighting and strong application expertise

Environment friendly

- Lowest mercury content

Philips is Global Market Leader in the general Lighting as well as UV lamps industry

Factories at Baroda and Mohali and multiple manufacturing facilities across India



UVC product Portfolio for professional use

UVC product portfolio

UV-C Battens



Effective

253.7 nm UV-C, No Ozone

UV-C Battens With Sensor



Enhanced Safety

Inbuilt presence sensor for auto switch off in case of any human/pet presence

UV-C Chambers



Fast

Can disinfect objects in matter of time- 5 mins to eliminate 99% bacteria and viruses to save time.
360 degree UV ray coverage to all surfaces of object

UV-C Battens



Effective Lamp

- 253.7 nm UV-C, No Ozone
- High efficiency: High UV content to wattage



High Efficacy

High Reflective Al Reflector to improve efficacy and direct light towards the target areas



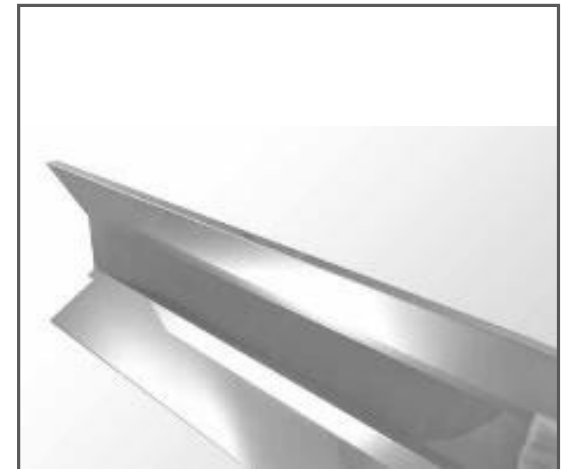
Durable

Anti-UV Coating to ensure robust and long-lasting housing and holders

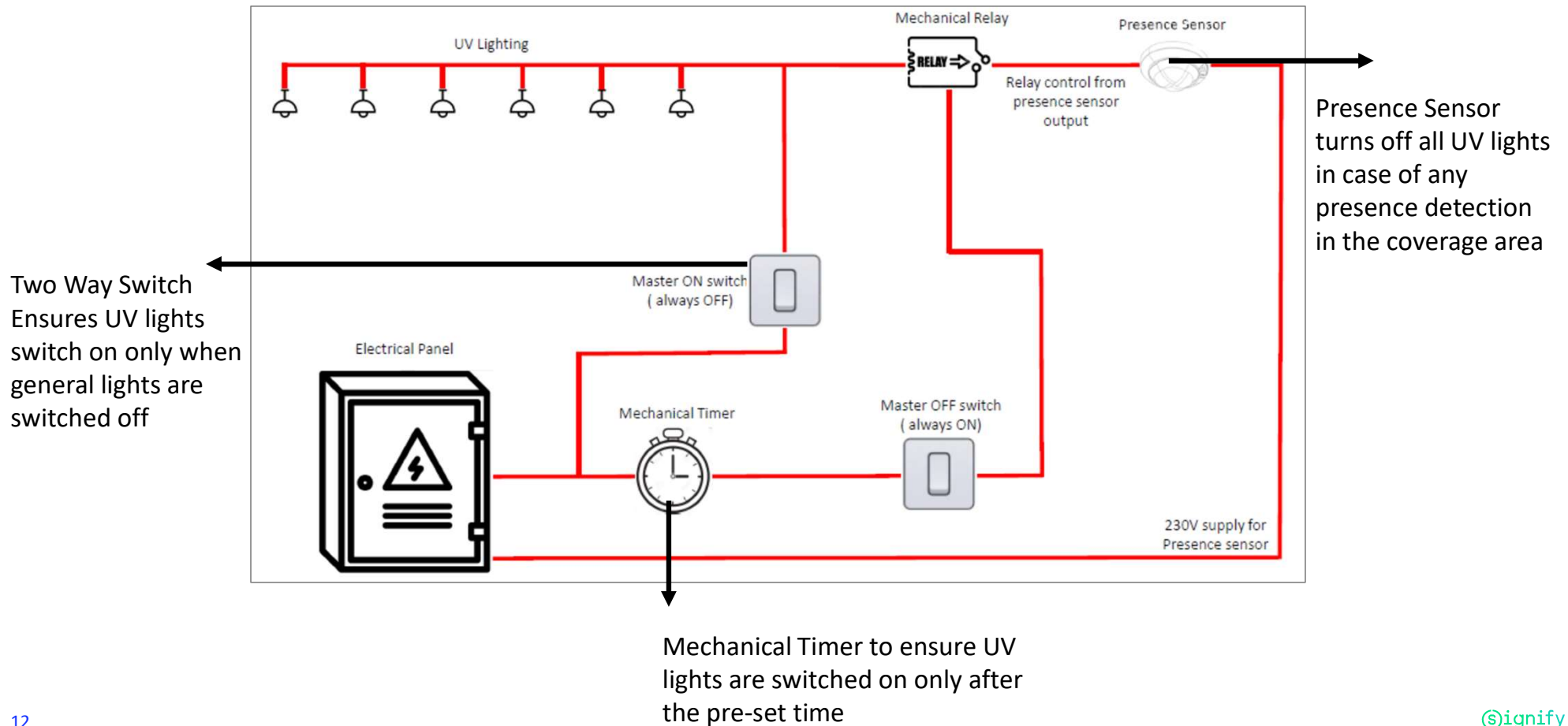


Applications

Offices, Hospitals, stores, schools and public transport.



Application Illustration: UV-C Disinfection system with multiple levels of safety measures



UV-C Battens With Sensor



Enhanced Safety

Inbuilt presence sensor for auto switch off in case of any human/ pet presence



Effective Lamp

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- High efficiency: High UV content to wattage



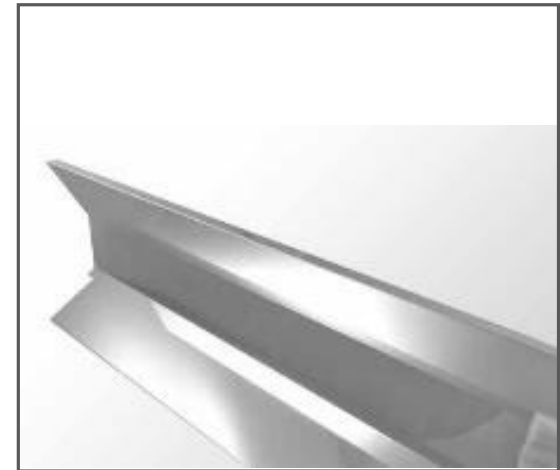
High Efficacy

High Reflective Al Reflector to improve efficacy and direct light towards the target areas




Durable

Anti-UV Coating to ensure robust and long-lasting housing and holders



UV-C Battens Applications

Patient Rooms



Hospitals

Class Rooms



School/ Universities

Mess/ Cafeteria



Hostel/Workers Mess

Hallways/Corridors



Factories/Hospitals/ Offices

Toilets



Factories/Hospitals/Offices/Metro St/Airports

BOH Areas



Factories/Hospitals/ Hotels/Metro St/Airports

Hotel Rooms




Hotels/ Guest Houses/ Hospitality

Industrial Kitchens




Hotels/Hostels/ Restaurants/Industries

Office Cabins



Govt. & Pvt Offices

School/Buildings



Govt. & Pvt Offices, Schools, Universities

UV-C Chambers



Effective

360 degree UV ray coverage to all surfaces of object



Fast

Can disinfect objects in matter of time, 5 mins to eliminate 99% bacteria and viruses to save time



Safety

- Chamber only starts when the door is securely closed
- Auto power off when the chamber is open ensuring no UV light exposure to user



Environment friendly

No collateral damage to the environment of use



UV-C Chamber Applications

Hospitals



Class Rooms



Industrial Kitchens



Salons



Construction sites



Disclaimer

- This product produces a UV-C irradiance. Studies have shown that a UV-C irradiance kills common viruses and bacteria.
- Use of UVC devices to be done in accordance with the manufacturer usage guidelines to avoid exposure and ensure safety

Signify