

AIR DISINFECTION

WITH THE POWER OF LIGHT



in partnership with
@signify



ABOUT GERMS

Bacteria and viruses are present in the air, on food, plants and animals, in soil and water, and on just about every other surface...

Most bacteria and viruses won't harm us. However, some germs are difficult enemies because they're mutating to breach our immune system's defenses.

20%-25% of weekly contacts are made in the workplace, while on average **16% of influenza transmission occurs in the workplace**

Supermarket fridge doors have **1,235 times** more bacteria than the surface of your cell phone

Traditional grocery store shopping carts have **361 times** more bacteria than a bathroom doorknob

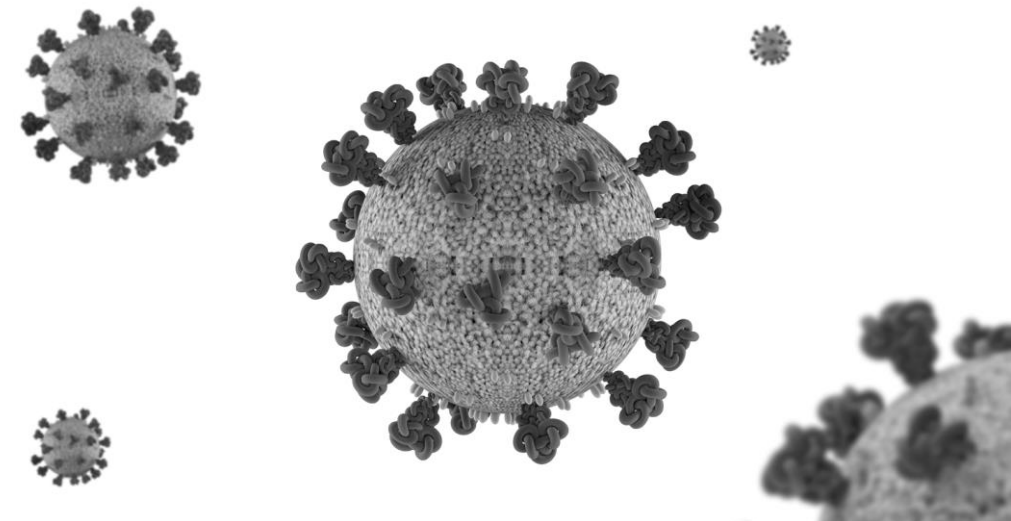
Within 2 to 4 hours, 40% to 60% of sampled surfaces in the buildings were contaminated with a harmless virus. **The first area contaminated was the coffee break room**

THE NEW ENEMY

The **COVID-19 pandemic**, also known as the coronavirus pandemic, is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), first identified in December 2019 in Wuhan, China.

The outbreak was declared a Public Health Emergency of International Concern in January 2020 and a pandemic in March 2020.

As of 31 October 2020, more than 45.4 million cases have been confirmed, with more than 1.18 million deaths attributed to COVID-19.



AIR AS THE MOST CRITICAL FACTOR

COVID-19 spreads from person to person mainly through the respiratory route after an infected person coughs, sneezes, sings, talks or breathes.

A new infection occurs when virus-containing particles exhaled by an infected person, either respiratory droplets or aerosols, get into the mouth, nose, or eyes of other people who are in close contact with the infected person.

Respiratory droplets may evaporate into droplet nuclei, which remain suspended in the air for prolonged periods of time, causing **airborne transmission particularly in crowded and inadequately ventilated indoor spaces.**

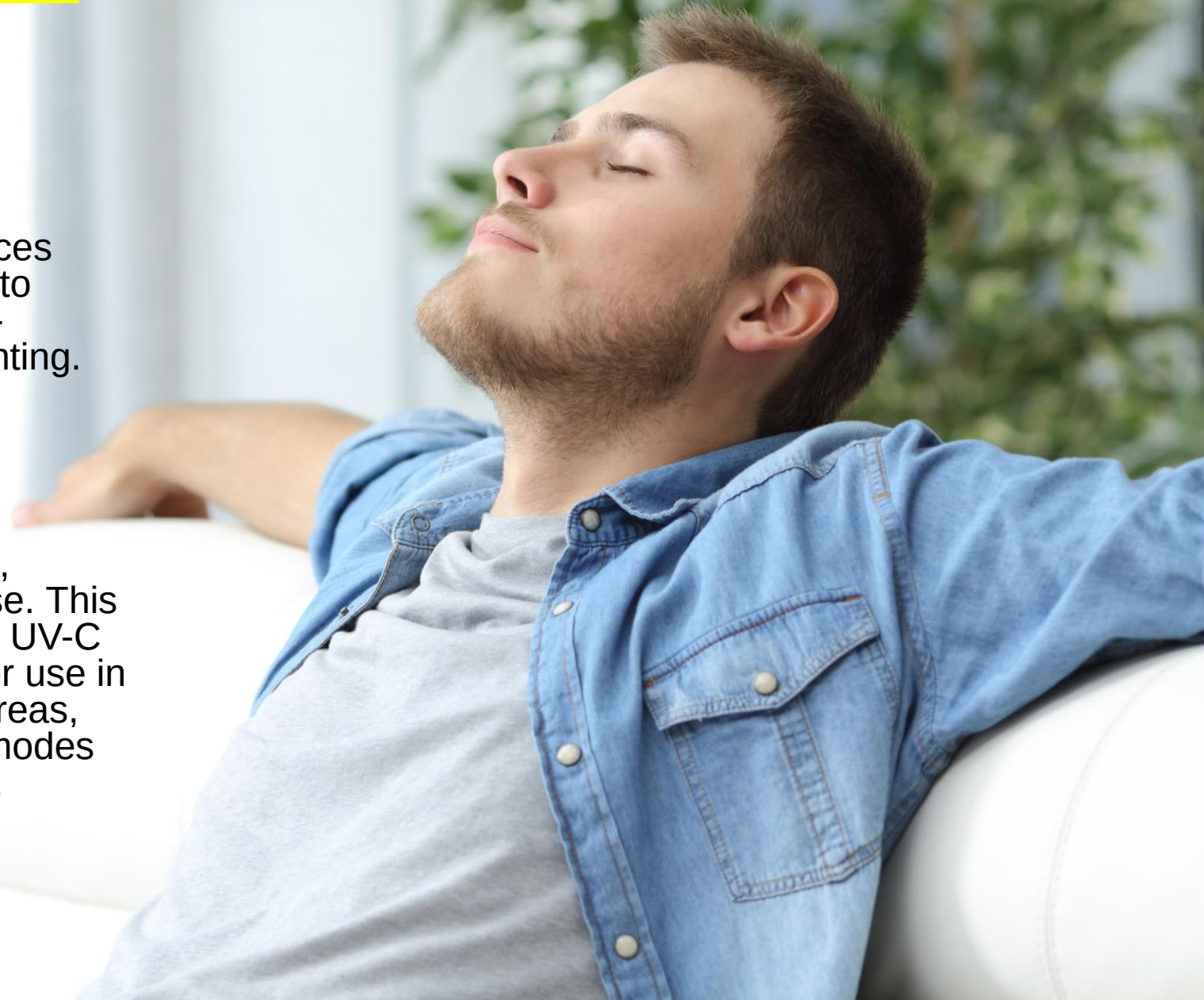
ABSOLUTE CONFIDENCE IN A WORLD OF UNCERTAINTY

UV-C disinfection

UV-C lighting disinfects radiated air and surfaces which contain bacteria and viruses and helps to reduce them from spreading further. All micro-organisms tested to date respond to UV-C lighting.

Philips UV-C disinfection luminaires

With **35 years of experience** in UV-C lighting, Signify has built up strong application expertise. This experience has led to develop a new range of UV-C disinfection luminaires and chambers, ideal for use in offices, retail outlets, factories, in hospitality areas, schools and public washrooms and even on modes of transport such as aircraft, buses and trains.



COVID-19 Employer Information for Office Buildings

“Consider using ultraviolet germicidal irradiation (UVGI) as a supplemental technique to inactivate potential airborne virus in the upper-room air of common occupied spaces, in accordance with industry guidelines”

**Center for Disease Control and Prevention, USA
U.S. Department of Health & Human Services**



**CENTERS FOR DISEASE
CONTROL AND PREVENTION**

On October 26th the CDC gave specific guidelines on the proper steps to create a safe and healthy workplace for workers and clients

Read the full article [here](#)



BOSTON UNIVERSITY

"Our test results show that above a specific dose of UV-C radiation, viruses were completely inactivated: in a matter of seconds we could no longer detect any virus."

Dr. Anthony Griffiths

Associate Professor of Microbiology at
Boston University School of Medicine



**PHILIPS UV-C
CREDIBILITY
AGAINST COVID-19**

Signify, the world leader in lighting, together with the National Emerging Infectious Diseases Laboratories (NEIDL) at Boston University in the USA have conducted research that validates the effectiveness of Signify's UV-C light sources on the inactivation of SARS-CoV-2, the virus that causes COVID-19

HOW DOES UV-C WORK?

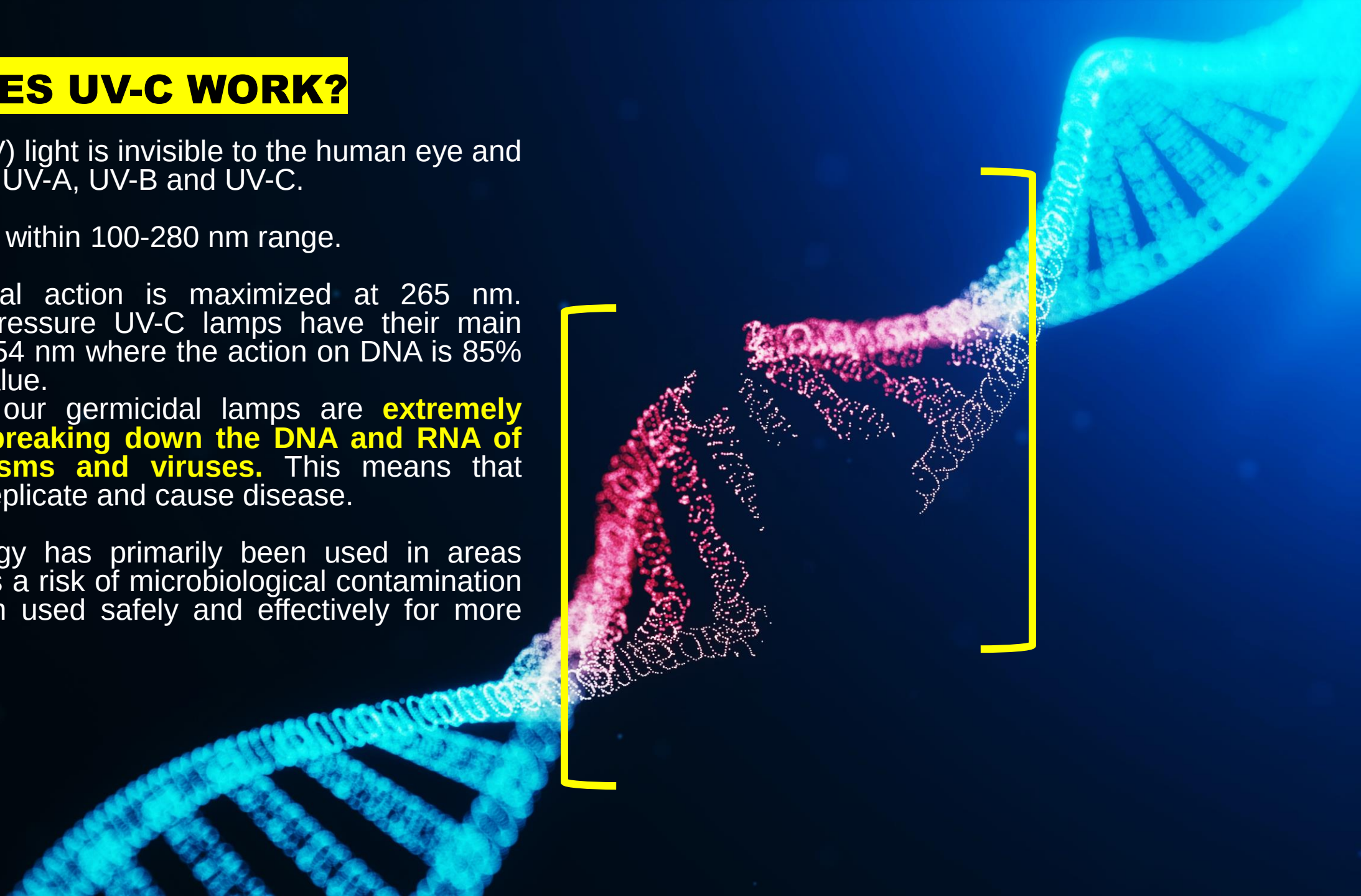
Ultraviolet (UV) light is invisible to the human eye and is divided into UV-A, UV-B and UV-C.

UV-C is found within 100-280 nm range.

The germicidal action is maximized at 265 nm. Philips low pressure UV-C lamps have their main emission at 254 nm where the action on DNA is 85% of the peak value.

As a result, our germicidal lamps are **extremely effective in breaking down the DNA and RNA of micro-organisms and viruses**. This means that they cannot replicate and cause disease.

The technology has primarily been used in areas where there is a risk of microbiological contamination and has been used safely and effectively for more than 35 years.



UV-C disinfection upper air wall mounted



PHILIPS

Designed for the disinfection of air in a lot of applications, with installation on walls.

- Wall mounted installation.
- Philips T5 TUV lamp included: 25W
- Complies with IEC 62471 standard for photobiological safety

UV-C disinfection upper air ceiling mounted



PHILIPS

Designed to be installed on false ceilings for the disinfection of air in a wide range of applications.

- Surface mounted on false ceilings.
- Philips PL-S TUV lamp included: 4x9W
- Complies with IEC 62471 standard for photobiological safety

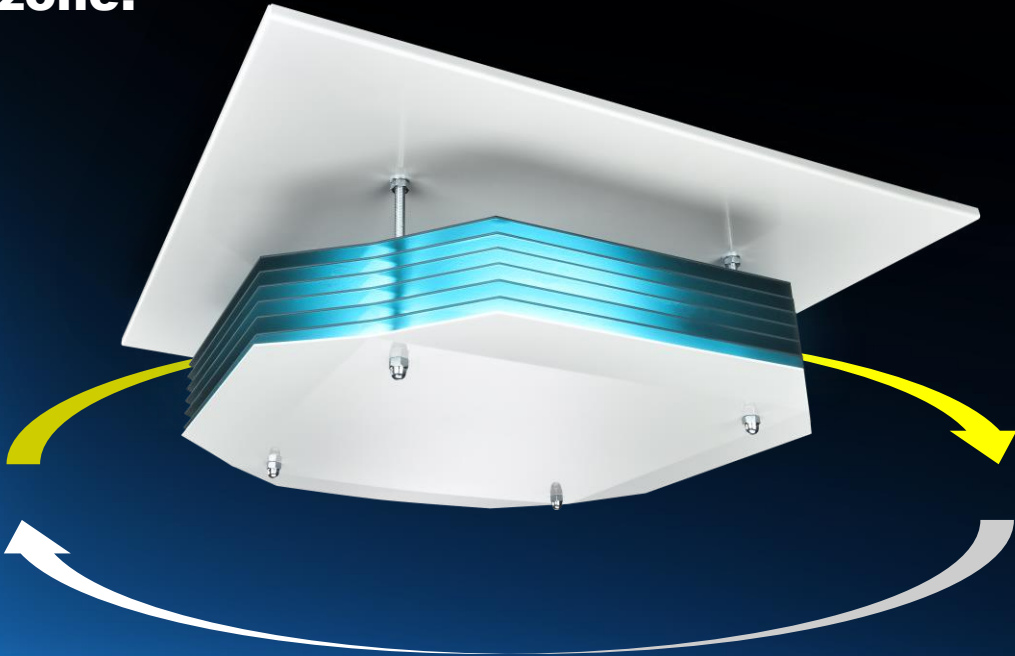


**YOUR FIT TO WORK
SOLUTIONS**

**Airborne viruses and bacteria
contaminate the air trapped indoors and
can pose a real health threat.
Upper air UV-C devices are powerful
instruments to disinfect the upper air
layers within rooms**

HOW DOES UPPER-AIR DISINFECTION WORK?

Air movement by convection, natural or mechanical ventilation ensures that the bacteria, viruses and other micro-organisms in the air pass through the UV zone.



The device radiates UV-C **only in the upper part of the room** thanks to **optics and louvers**, enabling a safe use for people present in the room

As it is used even when the room is occupied, **the complete upper layer of air is consistently exposed** to the UV-C rays

The natural movement of air **enables all air particles to be irradiated** by UV-C rays. This movement can be helped by mean of mechanical ventilation

As a result, **a wide volume of air is permanently treated**, inactivating all pathogens



EXAMPLE APPLICATIONS

SAFETY FIRST

**DIRECT EXPOSURE TO UV-C
IRRADIANCE CAN BE
DANGEROUS, SO SIGNIFY
AUTHORIZES & TRUSTS
GEP SCIENTISTS FOR THE
APPLICATION STUDY,
INSTALLATION AND
COMPLIANCE WITH ALL
RELATIVE REGULATIONS
AND SAFE USAGE POLICIES**



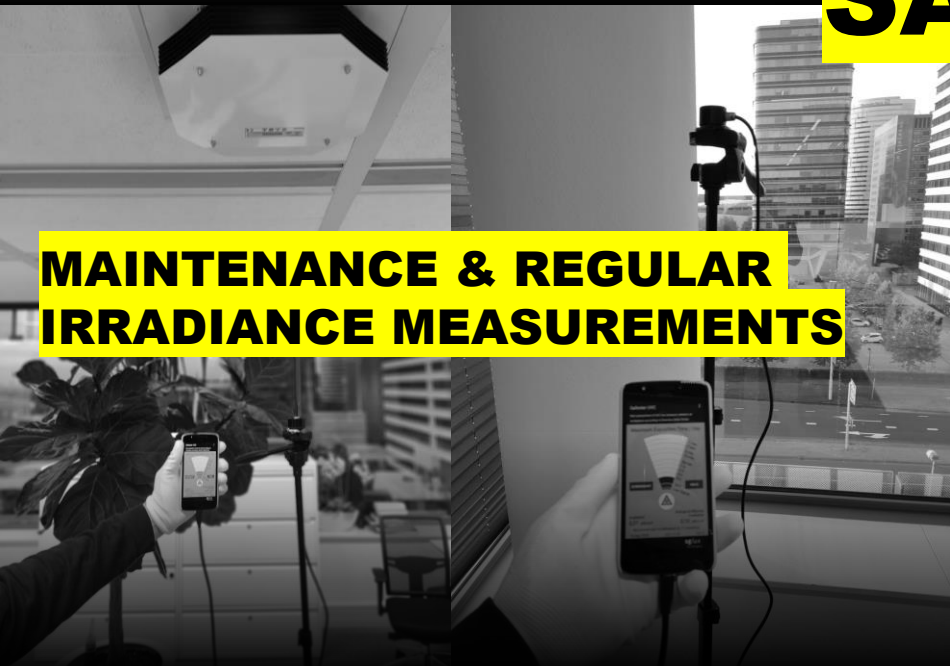


**INSTALLATION DESIGN
STUDY IN 2 PHASES**

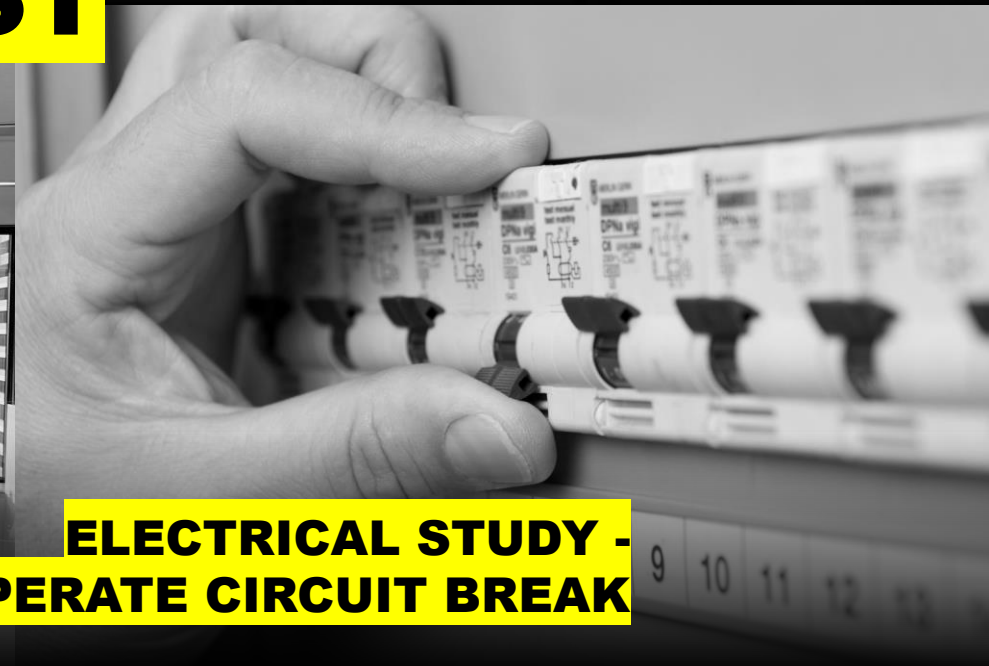


**CERTIFIED INSTALLERS
TRAINED BY SIGNIFY**

SAFETY FIRST



**MAINTENANCE & REGULAR
IRRADIANCE MEASUREMENTS**



**ELECTRICAL STUDY -
SEPERATE CIRCUIT BREAK**

ASSESS

Our engineers will assess your premises to identify potential areas for UV-C installation, record ventilation and air flow data, humidity and temperature levels, light output and workspace functionalities to optimize the solution suggested based on system requirements and regulations

DESIGN

GEP customizes the solution and finalizes the design of your UVC system including the final luminaires positions with the right light output, optimum installation procedures, mounting height, angle and system functionality

INSTALL

Certified installers trained and authorized by Signify, follow the designing plan based on the specific timeframe for your organization. They follow all necessary safety instructions from GEP engineers who are responsible to supervise the project and inspect the process till commissioning

MAINTAIN

We keep your UVC system high performing by keeping the record of your luminaires life-time, performing regular checks of proper usage, frequently measuring irradiance levels and cleaning the devices for maximum system efficiency.

We annually review and renew your system efficiency and safe usage certificate of validation by Philips

HOLISTIC APPROACH



**Reduce risk of exposure for
your employees, customers
and guests**

**Protect your
stakeholders without
activity interruption**

**Increase customers' visits by
turning your premises into
appealing and safe**

**Promote your brand as
an employer who cares
for safety**

**Increase employees'
productivity feeling safer and
confident to work**

**Maximize employees' and
customers' loyalty by
investing in their safety**

**Low capital and
maintenance costs while
keeping benefits for lifetime**

YOUR GAINS

TAKE CARE OF YOUR AIR



in partnership with
@signify

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