

# Why does ultraviolet light protect us from the coronavirus?

Following the global health alert caused by the coronavirus, scientists and health care providers around the world have begun a race against the clock to stop the virus.

The latest research on prevention is based on the effectiveness of ultraviolet (UV) light lamps for disinfecting hospitals, laboratories, public spaces, offices, etc.

But its use is not recent, ultraviolet light has been used for years to disinfect rooms, surfaces and surgical equipment. That is why research is focusing on the possibility of this same system to be able to fight the global pandemic we are living. In fact, some experts believe that the first UV disinfection system was used in 1910 in Marseille for water treatment.

For its part, China has been using it for weeks now to disinfect tickets, hospitals and even buses.

## **Is any ultraviolet light effective against coronavirus?**

The answer is no. UV light is invisible to humans because its wavelengths are too short for us to perceive it. However, that doesn't mean we can't feel its effects.

There are several categories of UV light according to the WHO:

- UV-A (400-315 nm): Its energy kind is the lowest and it represents 95% of the sun light that reaches the Earth. It is the one tanning us as it enters the deepest skin layers.

- UV-B (315-280 nm): It presents a higher energy level and enters the most superficial skin layers. It causes sunburn, skin cancer and eye damage, even if it only represents 5% of the total light reaching us, as most of it is absorbed by ozone layer.
- UV-C (280-200 nm) or germicidal UV. It is the most energetic kind of ultraviolet light. The ozone layer and the atmosphere completely absorb it. This is the perfect light for disinfection.

Seeing the information above, UV-C (or germicidal) is the only UV light effective against Covid-19, as it represents a wavelength capable of stopping the viral replication, and, as a result, it can extinguish the virus.

Researchers have proved that when bacteria and viruses are exposed to germicidal UV wavelength they absorb the radiation and a photolytic reaction takes place producing the segment dimerization of its nucleic acids (DNA and RNA); this makes them unable to replicate and infect and it is the reason why it helps to almost totally disinfect any space from the presence of microorganisms.

Its effectiveness to deactivate viruses like Covid-19 has been observed.

Unlike chemical sanitizers, UV radiation provokes a quick deactivation of the microorganisms following a physical process so it does not produce any waste and is respectful to the environment.

Today, thanks to the progress in the UV light sector, more functional devices are being produced which manage to eliminate 99.9% of the viruses and bacteria in our homes and workplaces; the germicidal UV-C light lamps from GERMILED represent a good example of this.

To benefit most from this technology we need know only a few guidelines in terms of safe use and the number of lamps needed to cover 100% of the space.

In the following link you can request more non-binding technical information or our [professional advice to sterilize your business](#).