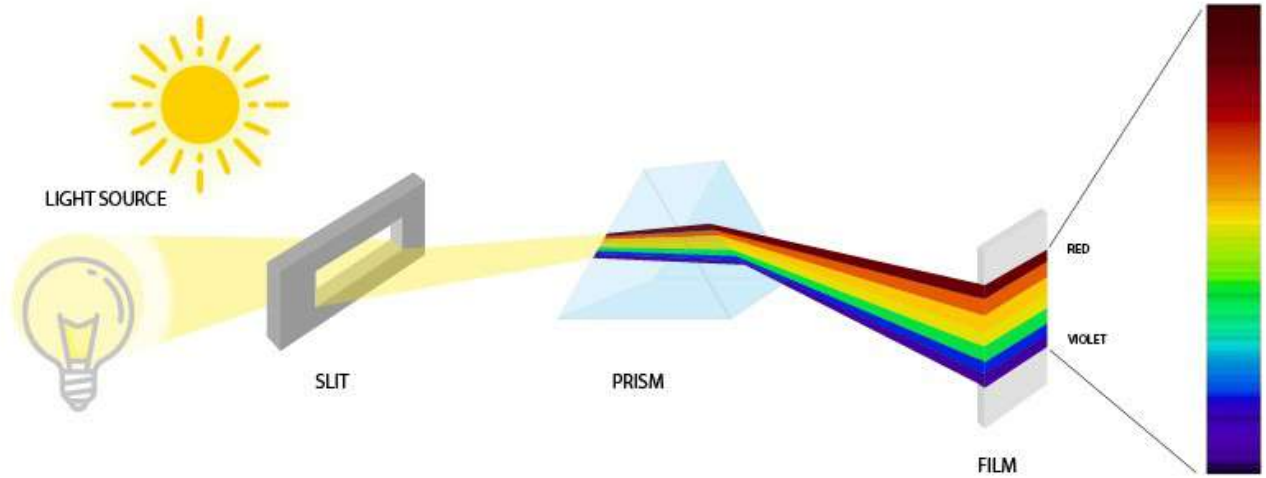


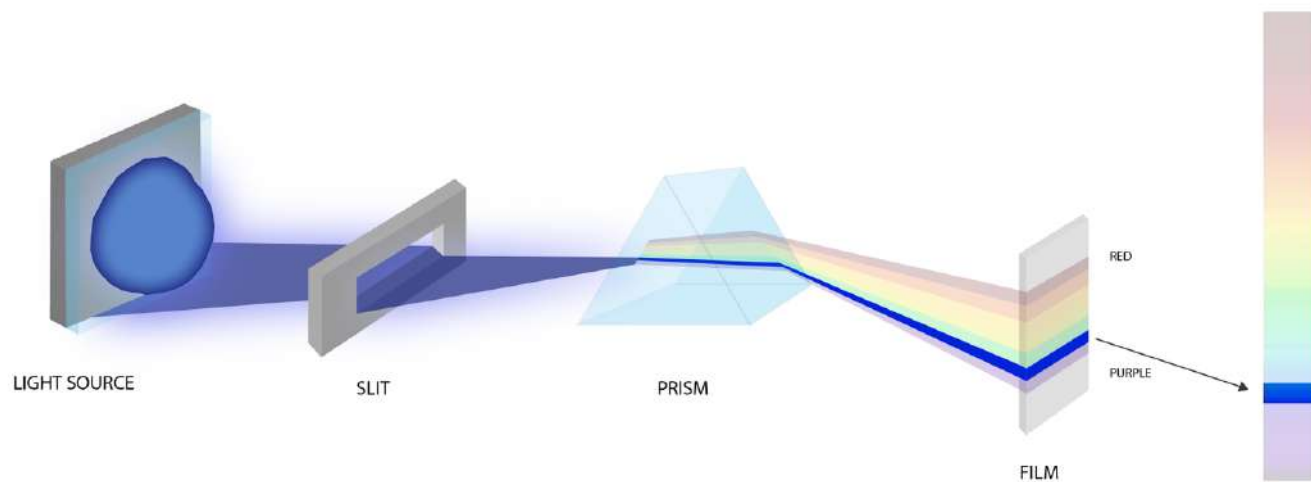


- Blue is clean -

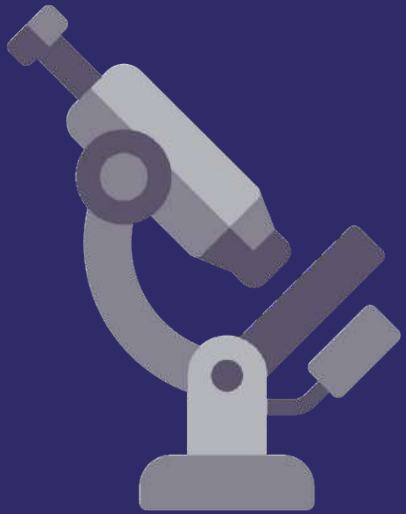
CHEMICAL FREE PHOTON DISINFECTION SOLUTIONS



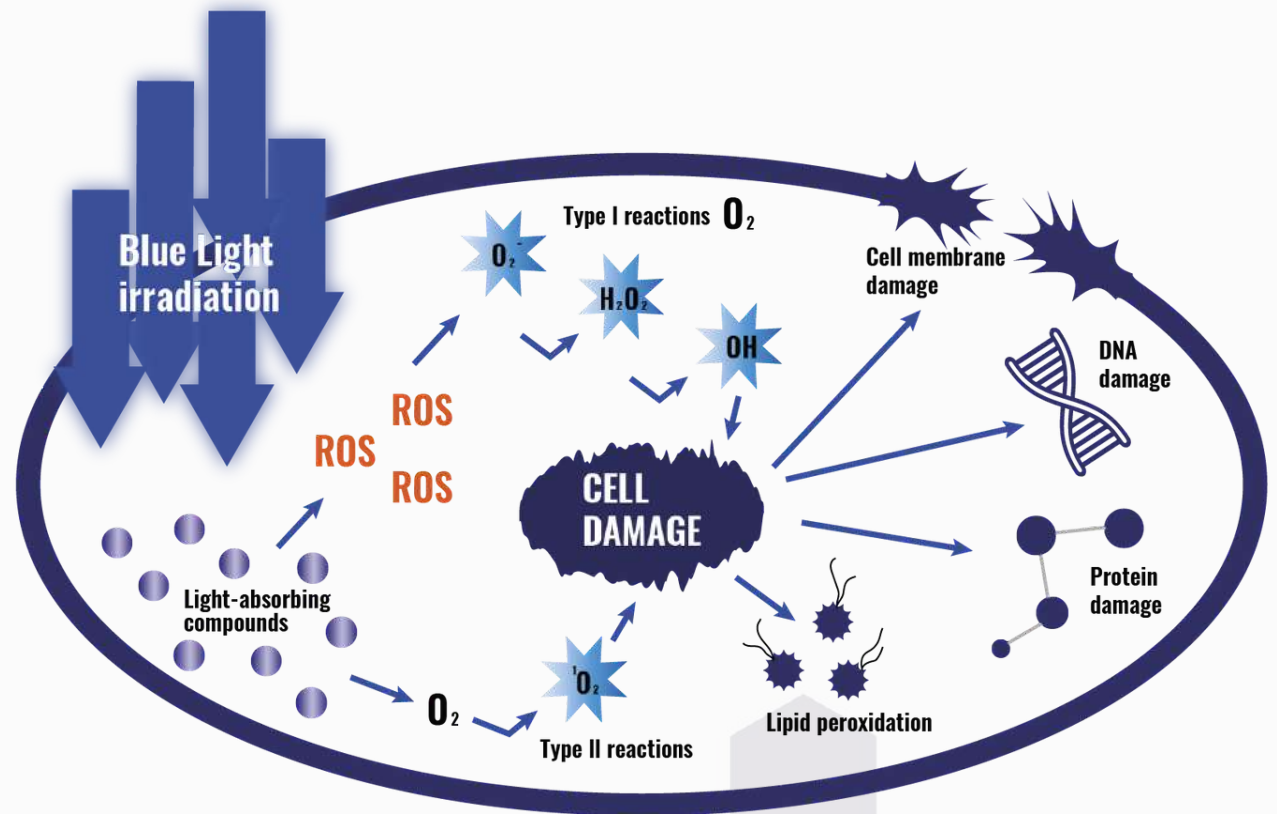
The development of LED technology during recent years has made it possible to produce very strictly limited spectrum.



Antimicrobial effect of blue light



Over 1000 researches published during the last 15 years.



The ability of blue light to destroy microbes is based on its ability to energize naturally light-sensitive compounds inside the micro-organism so that they start producing reactive oxygen radicals. Reactive oxygen species (ROS) are molecules containing a very reactive oxygen, causing the bacteria to damage and destroy internally. Blue light has such penetrating abilities that the light used in the photon disinfection systems can even reach through biofilm produced by bacteria.

PROBLEM



Listeria causes approximately 25,000 cases of food poisoning per year in the United States and there are almost 500 fatalities annually – causing damages up to \$2,33 billion.



The consequences of antibiotic resistance in Europe:

- 25,000 fatalities annually
- 2,5 million additional inpatient days
- Expenditures per year reaches approximately €1,5 billion.

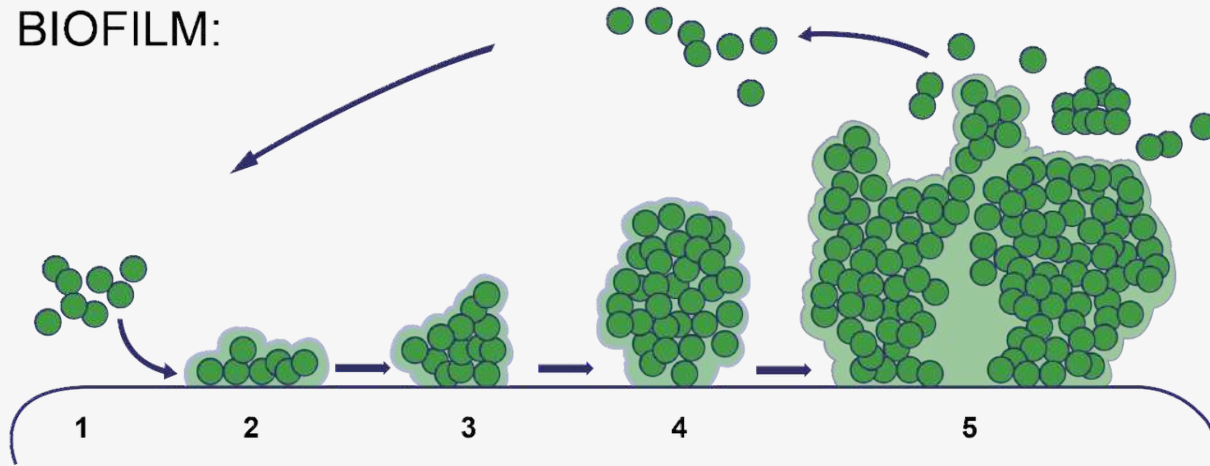


According to a study commissioned by the New England Journal of Medicine, 20% of chickens, cattle, turkeys, and pigs are contaminated with salmonella.

What is the price tag of one infection or fatality, that might have been avoided?

PROBLEM

BIOFILM:



1. Airborne bacteria attaches to the surface.
2. Bacteria starts to grow and divide, forming a dense cellular layer.
3. While growing, the bacteria produce mucus and extracellular substances that forms an outer protective nourishing barrier.
4. The bacteria continues to grow and divide, protected by the biofilm.
5. If the biofilm breaks, bacteria are released back to the air.

Research evidence shows that blue light is very effective even on bacteria inside biofilm.

ANTiBAC AiRTUBE & ANTiBAC MARIo

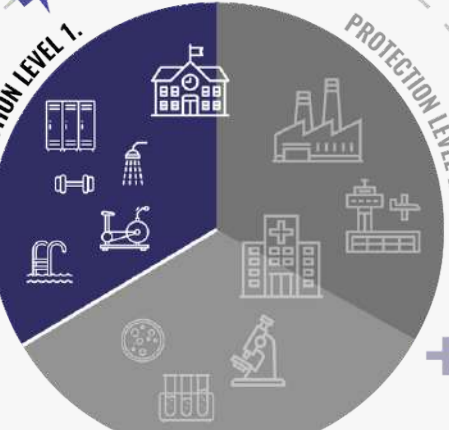
Antimicrobial lighting system

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PROTECTION LEVEL 1.

PROTECTION LEVEL 2.

PROTECTION LEVEL 3.

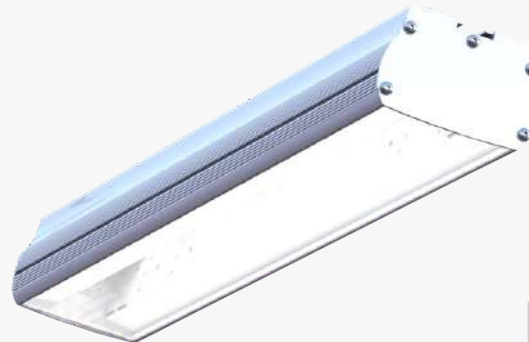


ANTiBAC AiRTUBE



Replace old fluorescent tubes with bright **white light** that limits the growth of microbes!

ANTiBAC MARIo

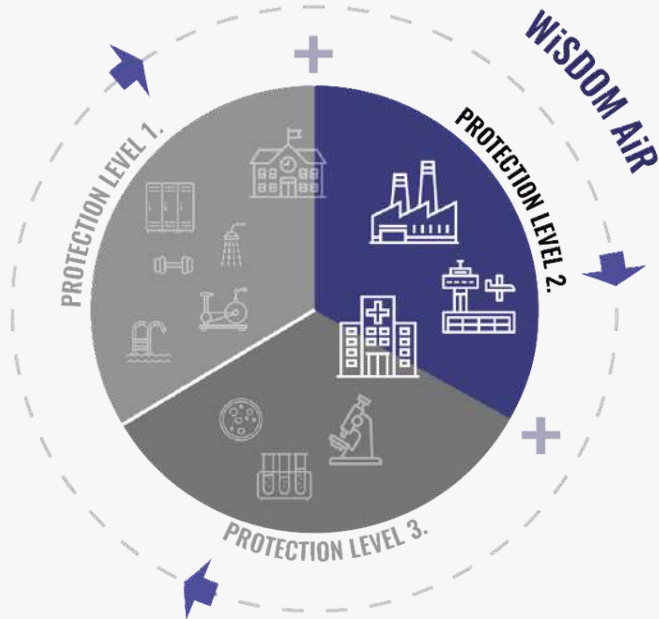
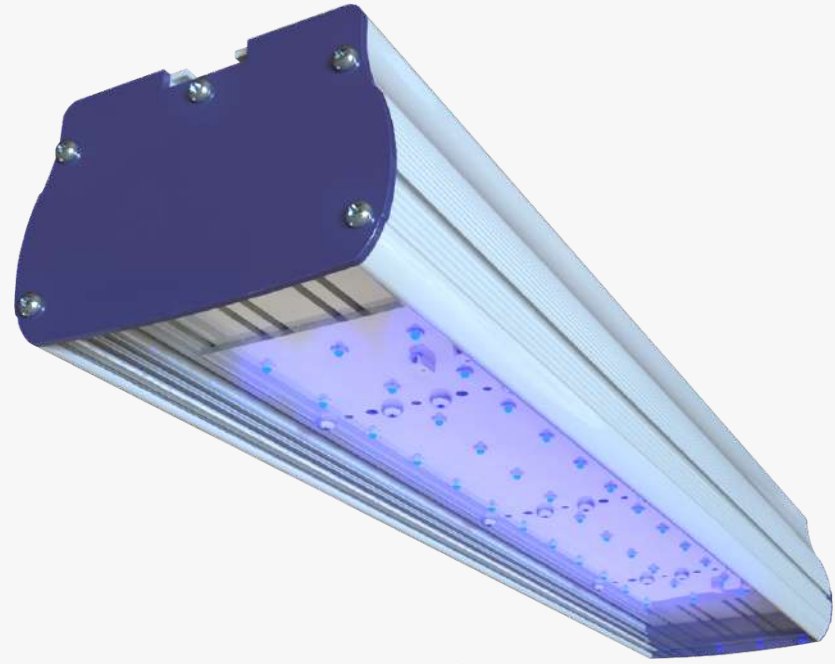


Bright white light improves vitality and increases success in precision tasks.

Modern design luminaire for areas with a need for high luminous flux.

WiSDOM AiR

Photon disinfection luminaire



Harmless intensive **blue light** disinfects both surfaces and air

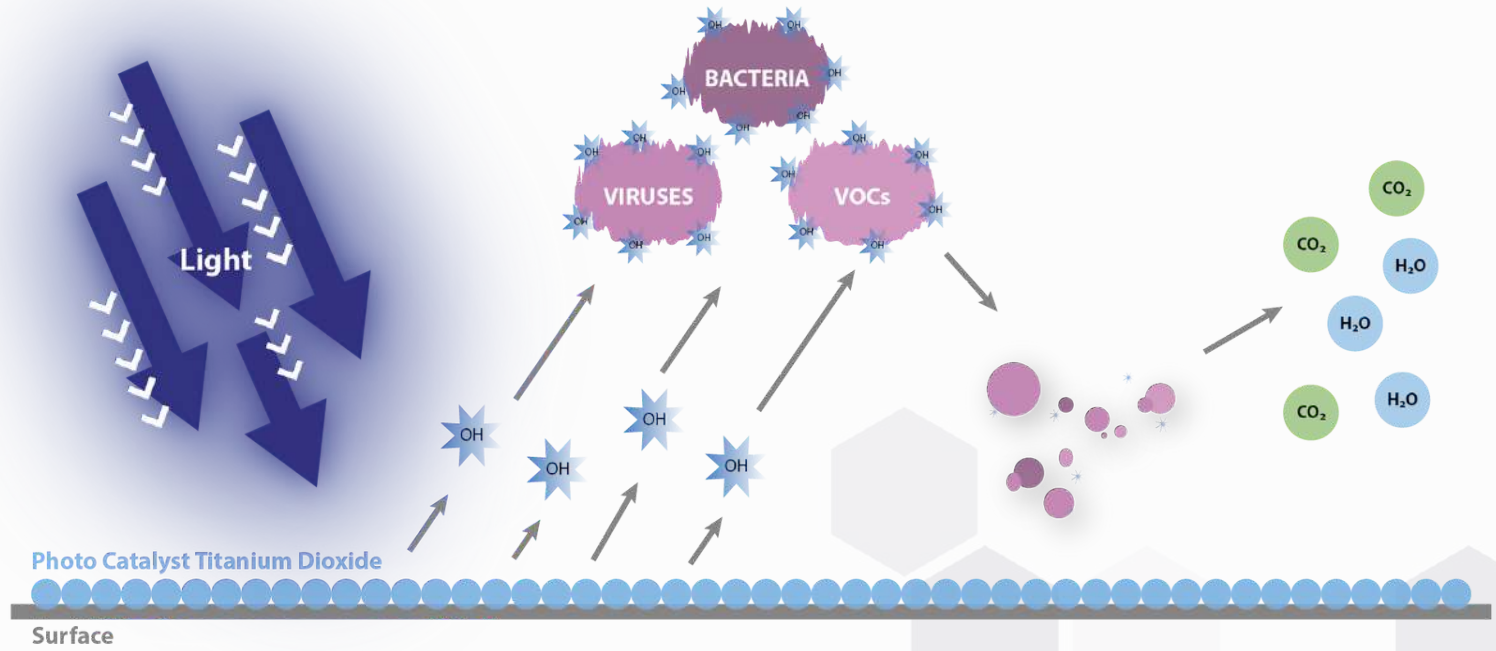
Tested and proven to reduce the amounts of particles on air

Completely non-ionizing (Report by Finnish Radiation and Nuclear Safety Authority)

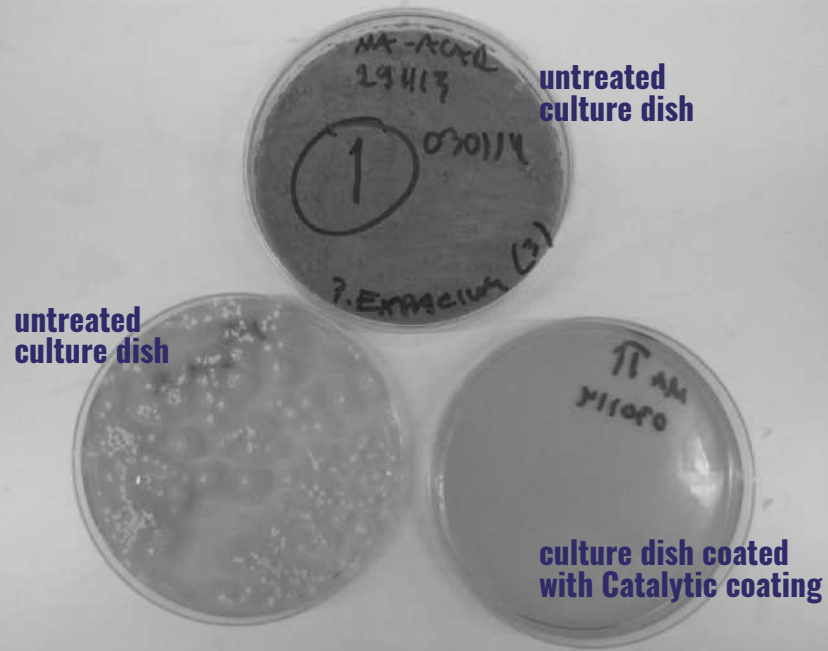
Inactivates bacteria, mold and yeasts

CATALYTIS COATING

Boosts the effect of lights



Disinfection of air and surfaces is performed automatically with high accuracy every time.



Penicillium Expansum mold has been applied to three culture dishes. No growth on the dish coated with Catalytic coating. Source: University of Turku laboratory tests 2015.

computer keyboard



key



computer mouse



dishcloth



WiSDOM DISINFECTION

UVC surface disinfection box



Fast and most effective

Completely non-ionizing (Report by Finnish Radiation and Nuclear Safety Authority)

265 nm LED-technology

Inactivates bacteria, mold and viruses