

Surface Disinfection

UV LED Solutions for Manufacturing Processes



High intensity UV LED technology for pathogen reduction deserves serious consideration by manufacturing entities such as food and beverage processing, food packaging, pharmaceutical packaging, cosmetics, and other processes where disinfection and decontamination is required. High irradiance, combined with appropriate wavelengths, targets specific bonds in DNA, RNA and proteins within microorganisms and biomolecules. This allows shorter inactivation times while improving overall efficacy of the disinfection. The high absolute irradiance of these new solutions enable high-throughput processes for manufacturing facilities.

Cost Savings

Reduced Consumables
Faster Processes
No Chemicals Required

Reliability

Accurate Results
Stable, Consistent Outcomes
Long Lifetime

Increased Productivity

Increased Throughput
Low or no heat on components
Tighter process control

UV LED Technology



Phoseon research has proven wavelength selection is essential to getting the most from UV LED disinfection systems. We have discovered utilizing both 275nm and 365nm wavelengths provides a synergistic effect allowing even faster, stable reactions. Both nucleotides and proteins can be modified using this light combination. Therefore, both microorganisms and biological material can be inactivated with the right dose from Phoseon SLM-based systems. Our systems are well-suited to disinfect sensitive surfaces due to their low heat emission, high intensity, precise control, and long operating life leading to consumer safety for manufacturing.

Surface Disinfection Applications

Disinfection of surfaces is essential for maintaining the cleanliness of pharmaceutical, medical, food, beverage, cosmetic or other manufacturing operations.

Microorganism	Dose (mJ/cm ²)	Inactivation (log reduction)	Exposure Time
Influenza A	240	4.25	<5 sec
Clostridium difficile	1000	>5.79	30 sec
Aspergillus brasiliensis	36000	>4.95	180 sec
Staphylococcus aureus	52	5	<5 sec



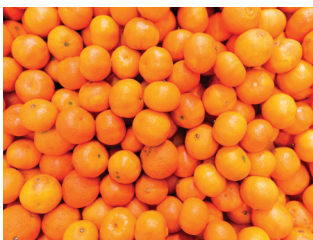
Laboratory and Medical

UVC or germicidal UV light is effective for its disinfection properties, the perfect choice for sensitive surfaces of laboratory or clinic instruments. UV LED inactivation of microorganisms assures that surfaces are disinfected without the chemicals and time-consuming rinsing.



Packaging Materials

Disinfection of surfaces is essential for maintaining the cleanliness of pharmaceutical, medical, food, beverage, cosmetic or other packaging operations. Phoseon Technology has developed a high intensity UV LED technology for surface disinfection, an ideal alternative to traditional methods.



Food and Beverage Processing

UV LED technology offers significant process improvements in food and beverage processing applications such as disinfection of the belt to inactivate pathogens after the food has passed through the conveyor. The intense UV output offers reduced maintenance, consistent reliable results, and perhaps most importantly increased manufacturing speeds.



Industrial Manufacturing

High intensity UV LED technology is ideally suited for manufacturing entities where disinfection and decontamination is required. The high absolute irradiance of these new solutions enable high-throughput processes for manufacturing facilities.