

365DisInFx™ Technology FAQs

What is UV light?

We are exposed to the ultraviolet (UV) light spectrum every time we step outside into the sunlight. Ultraviolet light is a form of electromagnetic radiation that can also be emitted from man-made sources, like tanning lights.

There are three types of UV radiation—UVA, UVB and UVC—that are classified according to wavelength (from 100 nm to 400 nm). Shorter wavelength sources emit higher energy, and longer wavelength sources emit less energy.

UVA (315–400 nm) emits the least energy of UV rays. UVC (200–280 nm) emits the most energy of UV rays. And UVB (280–315 nm) is in between.

How does UVC fight germs?

Certain UVC wavelengths offer germicidal benefits by degrading the genetic structure (i.e., DNA) of viruses to the point they cannot replicate. UVC disinfection has been used in hospitals for years and increasingly in public spaces as emerging data supports UVC applications at doses below exposure levels defined by the International Electrotechnical Commission (IEC) and American Conference of Governmental Industrial Hygienists (ACGIH®).

Is UV safe for people?

Just like the sun, UV radiation from man-made sources can pose a risk of personal injury as overexposure can result in damage to eyes and bare skin. To reduce risk of overexposure, equipment must be installed in accordance with the manufacturer's site planning and application recommendations. Today, LED products that more effectively deliver low UV doses (compared to traditional light sources like mercury lamps) are making UV disinfection more practical in occupied spaces.

Is your new product safe for people?

365DisInFx™ LPU Series devices from GE Current, a Daintree company, when installed and used as directed, operate under the limits specified by [IEC 62471 Photobiological Safety for Lamps and Lamp Systems](#) standard and [ACGIH® TLVs®](#) guidelines for continuous 24-hour exposure in occupied spaces.

Both the IEC 62471 standard and the ACGIH TLVs guidelines have been extensively researched and are based on human and laboratory studies. [CIE Technical Report 187:2010 "UV-C Photocarcinogenesis Risks from Germicidal Lamps"](#) provides additional information and calculations based on these and other studies, including quantification of risk. These reports and guidelines informed design decisions on the wavelengths, emission levels, durations, and applications of UVC in GE Current's solution.



Is it effective against seasonal viruses and SARS-CoV-2, the virus that is known to cause COVID-19?

GE Current has completed in-situation testing of its 365DisInFx™ UVC disinfection technology LPU Series devices utilizing the aerosolized virus, bacteriophage MS2.

This benchmark testing with the bacteriophage MS2 resulted in 88% inactivation of the aerosolized virus in a 10-by-10-by-8-foot room within 4 hours. Applying the test results to 24-hour continuous operation of the 365DisInFx™ LPU would result in 44% inactivation of bacteriophage MS2 in 2 hours.

Bacteriophage MS2 is a nonenveloped virus that is commonly used as a surrogate for viruses that are pathogenic to humans. It is particularly useful as a surrogate because published scientific testing and literature supports that bacteriophage MS2 is more resistant to UVC than certain enveloped viruses such as coronaviruses and influenza.

Based on photobiological science and mathematical modeling, GE Current anticipates equivalent or better results for seasonal coronaviruses and SARS-CoV-2. When properly installed and configured for the space, continuous operation of the 365DisInFx™ LPU should provide 50% inactivation in the first hour of exposure, 90% inactivation (1 log) in 3 hours or less of exposure, and 99% inactivation (2 log) in 6 hours or less of exposure. GE Current continues to conduct additional confirmatory testing.

- **What is a log reduction?**

Log reduction is a 10-fold measure of the reduction of the number of living (“active”) pathogens in a space. Microbiologists use the logarithmic scale to make large numbers smaller and easier to work with.

To understand a 1-log reduction, imagine a room having 1,000 active virion—using UVC disinfection, this number would be reduced to 100 over the specified time interval (or 100 reduced to 10, and so forth).

Can I stop using masks and wipes?

No. 365DisInFx™ LPU devices provide a supplemental tool for helping to reduce airborne pathogens and should be used in conjunction with proper PPE, cleaning/sanitation protocols and HVAC filtration as part of an indoor disinfection strategy that includes regular handwashing, mask wearing and social distancing.

Where is your technology intended for use?

We envision continuous disinfection solutions for public spaces such as hospitals, schools, fitness centers, offices, stores, senior living facilities, food processing plants—any place where every precaution counts. Our focus is on shared spaces and high-traffic areas such as elevators, cafeterias, restrooms, gyms, changing rooms and meeting rooms where 365DisInFx™ LPU devices can be additive to other disinfection practices.

Our products are not intended for use as a stand-alone solution or for use as medical devices and have not been approved for such uses under any applicable laws.



Can 365DisInFx™ UVA and UVC solutions be combined to target both surface bacteria and airborne viruses in the same space at the same time?

Yes. However, when combining two or more UV solutions, whether from GE Current, a Daintree company and/or other manufacturers, please consult a trained product application representative to ensure the total irradiance (UV dose) does not exceed recommended human exposure limits. To the extent UV solutions are combined, it may impact inactivation rates.

About 365DisInFx™ LPU Series:

Can anyone install your product?

No. Installation of 365DisInFx™ LPU devices should be performed only by qualified professionals as detailed in GE Current's installation guide.

Does it require lighting controls?

Our LPU does not require lighting controls.

What is the life of your product?

Assuming correct professional installation and 24-hour operation, LPU should provide continuous air disinfection for approximately one year.

Will I eventually need to purchase a new unit?

Yes. The LPU is designed with a detachable UV-LED module that can be easily replaced.

What coverage area does it provide?

A single unit provides a coverage area of approximately 50 square feet. On a typical 10-foot ceiling in a commercial building, a likely spacing would be a 6-foot-by-6-foot grid.

Is mounting height important?

Yes, the intensity of the device is preprogrammed at our factory to provide the proper and intended irradiance levels for specific mounting heights (8.5-foot min. ceiling height; 11-foot max). Consult our LPU application guide for more detail.

Does your product emit light?

LPU emits UVC light which is invisible to the human eye. We have designed our product with LED indicator lights to communicate device status, including when it is emitting UVC light.

Can I use it at home?

Our UV solutions are not recommended for dwellings or home use.

Are there replacement components?

Yes, the LED needs to be replaced every 12 months. With HealthFirst we automatically send the replacement component based on manufacturers prior to expiration of the current LED. Customers can track their replacement components on our proprietary software OnTraq™.