

DISINFECTANT LIGHTING TECHNOLOGY



Lighting Technology for Reducing the Spread of Germs

Steiner now provides disinfectant lighting technology from industry-leading lighting manufacturers that developed products to supplement the disinfection of commonly used spaces inactivating viruses and pathogenic bacteria*.

Introducing Disinfectant Lighting Technology... solutions designed to safely and efficiently suppress a wide range of bacterial, mold, yeast and fungal pathogens. Dependent on the wavelength and other factors, light can eliminate up to 99.9% of the bacteria and viruses in a space when correctly applied according to each manufacturer's directions (**Puro Lighting, Hubbell Lighting, Kenall, Acuity Brands**).

It is critical to understand the key differences between the lighting spectrums used in these technologies to

apply them safely in hospitals, nursing homes, schools, fitness centers, restaurants, grocers, retail, hotels, office buildings, public restrooms, mass transit and any place people gather. Some technologies require the space to be vacant for disinfection while others can be safely used to significantly reduce pathogens on surfaces throughout the day while people are present.

Application of these technologies necessitates an understanding of your environment along with other factors. Your Steiner Lighting Technology Specialists are ready to assist you with guidance on choosing the correct disinfectant technology.

[REQUEST MORE INFORMATION](#)

*STEINER MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING THE BENEFITS OR PERFORMANCE OF THESE PRODUCTS. FOR MORE INFORMATION REGARDING THESE PRODUCTS, THEIR APPLICATIONS, DIRECTIONS FOR USE AND OTHER PRODUCT INFORMATION, PLEASE REFER TO EACH MANUFACTURER'S WEBSITE. WHETHER A TECHNOLOGY IS EFFECTIVE AGAINST SARS-COV-2 WHICH CAUSES COVID-19, PLEASE REFER TO EACH MANUFACTURER'S WEBSITE FOR FURTHER INFORMATION. • [PURO LIGHTING](#) • [HUBBELL LIGHTING](#) • [KENALL](#) • [ACUITY BRANDS](#)

Featured Disinfectant Lighting Technology

UV

Puro™ Lighting's Halo and Sentry UV disinfection lighting products, powered by Violet Defense™ technology, use proven broad-spectrum UV light, including germicidal UV-C, UV-B and anti-bacterial UV-A to optimize germ-killing efficiency and rapidly disinfect spaces.

PURO Lighting has independent clinical testing confirming disinfection of viruses, bacteria, and fungal pathogens. PURO UV disinfection lights have been proven to rapidly kill up to 99.9%† of Norovirus, *C. diff*, *E. coli*, Salmonella, MRSA, and *C. auris*. Per the EPA emerging pathogen guidelines from 2016 and based on clinical testing completed, PURO UV lights will have efficacy against Class 2 and 3 viruses, including coronaviruses, SARS, Influenza and Ebola.

Helo™ Series - UV Protection from Above

The first known high intensity, full spectrum UV disinfection fixture to be installed in the ceiling, Helo fixtures provide unparalleled whole-room clinical level cleaning in any size space, along with the ability to disinfect on demand in one cycle.



†These fixtures kill up to 99.9% of bacteria and viruses and can significantly reduce the growth of fungi such as yeasts and molds when used at the recommended spacing and runtimes according to the manufacturer's directions.

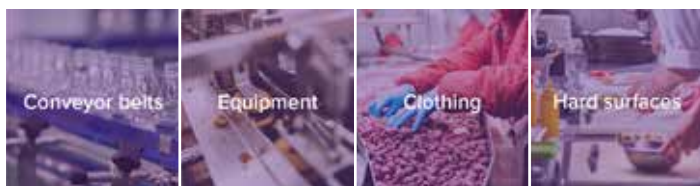
Sentry™ Series - Portable UV Protection

The Sentry Mobile series provides incredibly easy mobility to help stop the spread of harmful viruses anywhere. Sentry Mobile products are designed for easy positioning and simple control, emitting powerful, broad-spectrum UV light to eliminate up to 99.9% of the bacteria and viruses in the space¹, and limit the growth of fungi².

1. Study Report August 2017, "Antimicrobial Effectiveness of Puro Device", using modified ASTM International Standard Test Method E1153.
2. Research Journal of Microbiology, 2 (1), 42-49, 2007; Mycological Research, Vol. 92, Issue 3, 1989



405 Nanometer



Hubbell Lighting's SpectraClean™ antimicrobial lighting luminaires provide continuous environmental disinfection as part of the lighting system. It automatically treats harmful microorganisms suspended in air, trapped on objects and residing on surfaces.

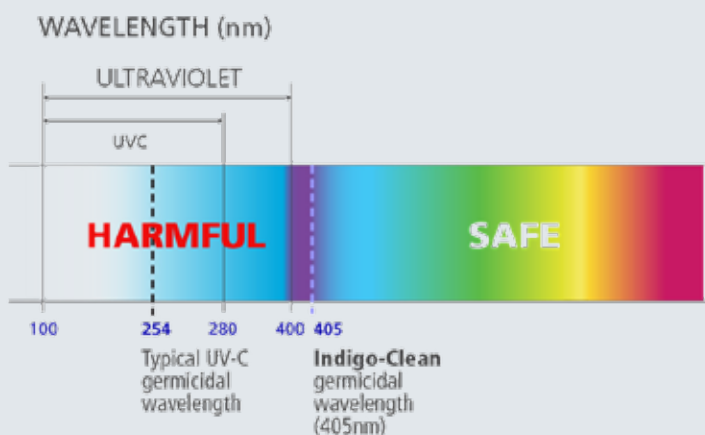
SpectraClean™ luminaires leverage developments in the disciplines of lighting science and microbiology to combine white and narrowband 405 nanometer visible light. This

innovation meets ambient and task lighting requirements while providing a continuous, unobtrusive disinfection option for commercial applications. The germicidal effects of narrowband visible light suppress a wide range of bacteria, molds, fungi and yeast. SpectraClean's antimicrobial light induces the production of damaging reactive oxygen species in harmful microorganisms to accelerate cell inactivation.

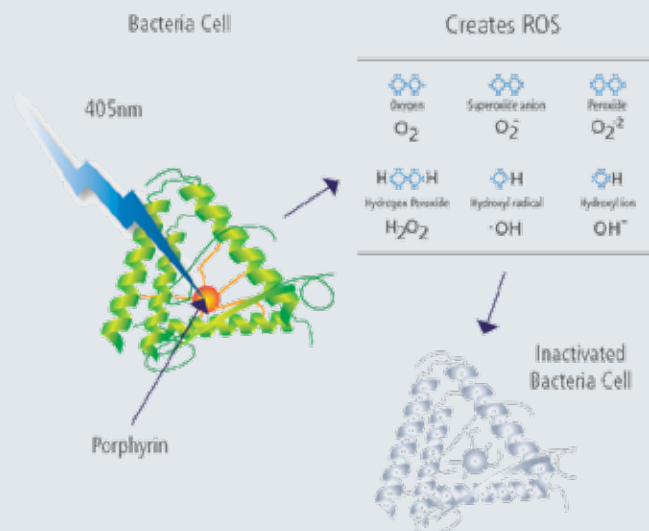
SpectraClean™ luminaires offered in Contemporary Architectural Troffer, Lensed Troffer, Strilight and Linear Vaportite are available in four application modes, allowing customization for the needs of the specific application. When coupled with occupancy sensors and room controllers, SpectraClean luminaires can be controlled based on usage or with pre-programmed schedules.

Kenall's Indigo-Clean®, a continuous disinfection technology, is patented and clinically proven to reduce surgical site infections by killing the harmful bacteria linked to HAIs and also reducing their real-time, intraoperative transmission. Using a combination of 405nm Indigo and White LEDs, Indigo-Clean emits narrow spectrum light that kills bacteria while providing ambient illumination for the space. Unlike UV light, Indigo-Clean uses safe, visible light to automatically and continuously kill harmful bacteria in the air, and on hard and soft surfaces.

Visible light spectrum showing the active element in Indigo-Clean



Inactivation of bacteria via visible light absorption





Indigo-Clean Dual Mode

Continuous Environmental Disinfection System that employs both blended—white + 405nm indigo—light, and full 405nm indigo light via a lighting control system to disinfect the space. This dual mode system delivers blended white light when the room is occupied, and full 405nm indigo light when it is not. Both modes contain NO UV and are safe for room occupants.

Indigo-Clean Single Mode (formerly Indigo-Clean Technology or ICT)

Continuous Environmental Disinfection System that employs blended white + 405nm visible light, exclusively, to disinfect the space. When the light is on, disinfection is active. 24x7 use is recommended for optimal disinfection. The single mode contains NO UV and is safe for room occupants.



222 Nanometer

Acuity Brands' far-UVC light disinfection commercial luminaires (available in late 2020) will use Care222® technology from Ushio America, Inc. providing a new method to inactivate viruses and bacteria...significantly reducing pathogens on surfaces throughout the day**.

This new method meets today's American Conference of Governmental Industrial Hygienists (ACGIH®) safety guidelines for exposure to a 222nm far-UVC light source when used within appropriate parameters. Results from laboratory testing and clinical studies suggest that 222nm

far-UVC light is capable of inactivating viruses and bacteria in short time periods at energy levels that do not harm eyes and skin, allowing it to be used in occupied rooms.

Designed to provide general illumination for spaces while incorporating independently modulated pulses of filtered 222nm far-UVC light to reduce pathogens on surfaces, Care222 far-UVC light disinfection modules are seamlessly integrated into luminaires that can be used in spaces both when occupied and unoccupied without the need of specially trained technicians for operation.

**Acuity Brands' Care222®. All references to "disinfection" are referring generally to the reduction of pathogenic bioburden and are not intended to refer to any specific definition of the term as may be used for other purposes by the U.S. Food and Drug Administration or the U.S. Environmental Protection Agency. The disinfection technology as incorporated in Acuity Brands products is not for use as or for medical devices.

For more information on Disinfectant Lighting Technology call 1-800-STEINER (783-4637) to speak with a Steiner Lighting Technology Specialist.

