



UVC for HVAC™

Very High Output
Portable Germicidal
Light Source



The SterilWand™ packages Steril-Aire's multi-patented UVC technology in a versatile, hand-held device designed for decontamination of surfaces infested with mold, bacteria or viruses.

The user slowly passes the device closely over the contaminated surface area, allowing the energy from the high output UVC Emitter™ to decontaminate surfaces. An aluminum safety shield prevents direct exposure to UVC energy, while also adding reflectance that increases the light's effectiveness.

The SterilWand may be used in any type of residential, commercial, industrial or institutional building to provide a fast-acting, portable method of decontaminating tabletops, walls and other surfaces.

In addition to the portable SterilWand, Steril-Aire offers a complete line of installed UVC devices to decontaminate air conditioning coils, ductwork and other HVAC components.

SterilWand applications include laboratories, hospitals, food and beverage processing areas, schools, libraries and homes. The device is suitable for a variety of specialized uses, e.g.:

- Residential and commercial mold remediation (as a supplement to other control strategies)
- Food preparation, processing, yeast rooms, etc. to reduce contamination

SterilWand™ UVC Emitter™



- DNA laboratories to prevent cross-contamination
- Surface decontamination in hospitals
- Libraries, to eradicate mold on book surfaces

- Kills or inactivates surface microorganisms that contribute to poor IAQ and/or the spread of infectious disease, including: mold and mold spores, bacteria (including *TB*, *Legionella*, *E. coli*, *Listeria*, *Salmonella* and *whooping cough*); and viruses (including *colds*, *flu* and *measles*).
- Uses patented state-of-the-art solid-state electronic power supply for enhanced reliability and performance.
- Produces no ozone or other secondary contaminants – will not harm building occupants, equipment or furnishings.
- Portable, versatile and easy – just plug in and use. No installation required.
- Proven through independent testing to provide the highest output of any UVC device on the market, for the most effective germicidal control.
- Uses the same tube and power supply as Steril-Aire's Model DE Series UVC Emitter, the industry standard in "UVC for HVAC™".
- Inexpensive to operate – uses approximately the same energy as a 75-watt light bulb.
- Long service life – typically 9000 hours between changeouts.

SterilWand™ Specifications

The UVC Emitter™ and fixture shall be factory assembled and tested. They shall consist of a housing, power source, reflector, safety shield, six-foot power cord, easy-to-grip handle, Emitter sockets and Emitter.

The housing shall be constructed of 304 stainless steel. The reflector shall be constructed of heavy gauge, specular finished aluminum alloy with approximately 85% reflectance at 254 nm wavelength. The safety shield shall be constructed with highly polished, heavy gauge aluminum to enhance the reflectance of the UVC energy. The six-foot power cord shall be UV-resistant. All components shall be in one integral assembly to maximize serviceability.

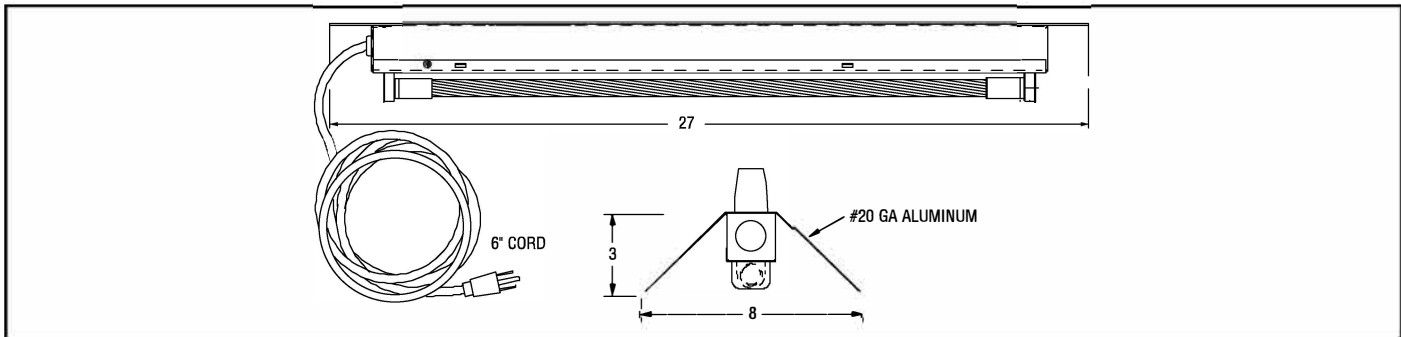
The power source shall be a Class P, electronic, rapid start type with a power factor greater than 0.95 and a power conversion of greater than 75%. The power supply design shall include RF and EMI suppression. The power supply shall be designed to maximize photon production, irradiance and reliability in cold or moving airstreams of 35-170° F, 100% RH and up to 2000 fpm velocity. The fixture shall be available in 115 Vac, 50/60 Hertz, single phase.

The Emitter sockets are medium bi-pin, double click safety, twist lock type. They shall be constructed of UVC-resistant polycarbonate.

The Emitter tube shall be a very high output, hot cathode, T5 diameter, medium bi-pin type that produces broadband UVC of 250-260 nm. Each tube shall produce the specified output at up to 2000 fpm velocity and air temperatures of 35-170° F. It shall produce no ozone or other secondary contaminants.

Independent testing: Unit shall be tested by an independent test laboratory in accordance with the general provisions of IES Lighting Handbook, 1981 Applications Volume, and shall be verified through independent testing to provide output per inch of glass of not less than 10 µW/cm² at 1 meter in a 400 fpm airstream of 45° F.

Unit shall comply with UL Standard 153 for Portable Luminary Fixtures and shall carry the “UL” and “ULC” labels.



This product may be covered by one or more of the following patents, others pending: 5,334,347/ 5,866,076/ 5,817,276/ 6,372,186/ 6,313,470/ 6,245,293/ 6,267,924/ 6,280,686/ 6,423,882

Ordering Information

Model No.	Part No.	Description	Length	Electrical	Weight
SterilWand	19000200	Double-Ended Fixture	24"	115 V: 70-85 watts	5 lb.
GTD 22 VO	20000200	Replacement Emitter SterilWand	22"	N/A	0.15 lb.
GTD 22 VO	20000201	Sleeved Replacement Emitter SterilWand	22"	N/A	0.15 lb.



Complies with current U.S. and Canadian UL Standards.

Represented By:

Corporate Office:

908 S. 8th Street

Louisville, KY 40203

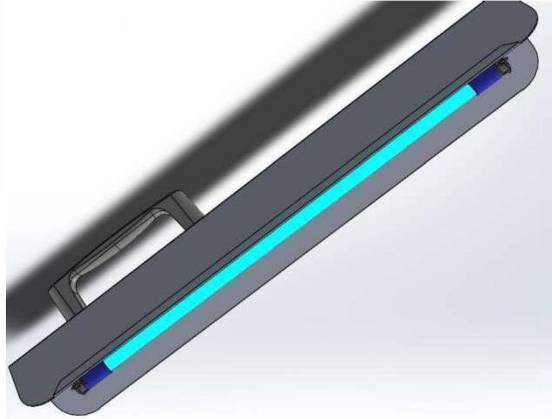
Telephone: 888-675-4519

Website:

lifesafetyservices.com

hughesenv.com

Email: info@lifesafetyservices.com



Using the Steril-Wand for Decontamination



Using the Steril-Wand for Decontamination

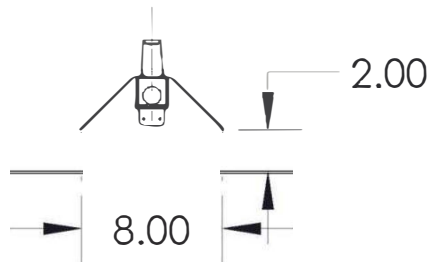
Method of Decontamination and Dose involved:

You will get an Average UVC Dose of $20,000 \mu\text{J}/\text{cm}^2$ under the applied circumstances:

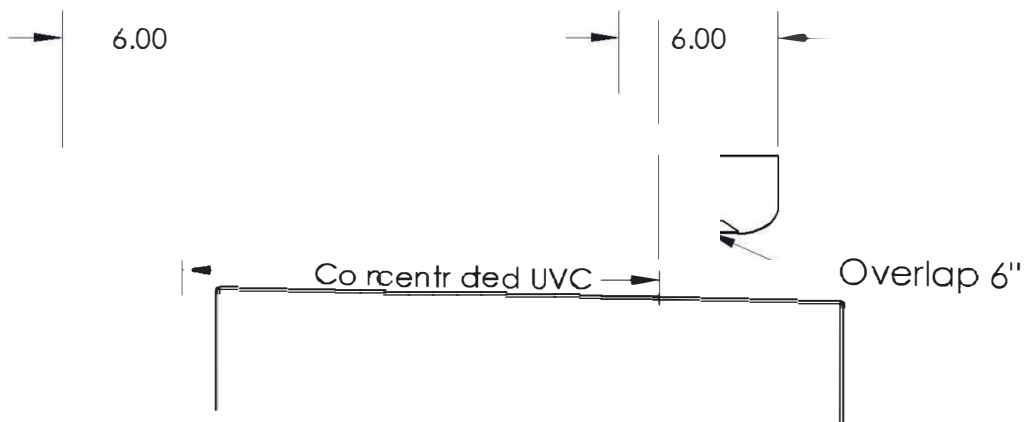
Distance of wand to surface: 2 inches

Speed of Travel: 2 inches per second or 4 seconds to travel the 8 inch width of the wand.

Suggested Overlap: The maximum UVC is discharged from 18" in the center of the wand. In order to get complete coverage, overlap the wand at least 6" between passes.



In order to decontaminate with an average dose of $20,000 \mu\text{J}/\text{cm}^2$ run the Steril-Wand 2" or less from the object to be decontaminated at a speed of 2 inches/second. Two inches per second would be 4 seconds of travel for the 8" width of wand. If starting your sweep of the object without making a complete pass hold for an additional 4 seconds before attempting to make a pass. In order to get complete coverage, overlap at least 6" between passes. If doses greater than $20,000 \mu\text{J}/\text{cm}^2$ is required use multiple passes or slower speeds.





INSTRUCTIONS FOR USE OF THE STERILWAND P/N 19000200

CAUTION! AVOID EXPOSING EYES OR SKIN TO UVC LIGHT FROM ANY SOURCE, WEAR GLOVES, AND USE PRECAUTIONS TO COVER ALL EXPOSED SKIN. DO NOT TOUCH EMITTER™ GLASS WITHOUT GLOVES.

General:

This emitter may be used to decontaminate items and areas contaminated with mold, bacteria and viruses. The Emitter's effectiveness is best stated as a time – dose relationship. Therefore, the closer the emitter is to the object and the longer it is in direct line of sight of the contamination, the more quickly the area will be decontaminated.

Procedure:

Turn on the Emitter and allow approximately 2 minutes to warm up to achieve maximum UVC output. Hold the fixture by the handle taking care not to expose bare skin or unshielded eyes to the UVC. Effectiveness of the decontamination may be determined by the use of contact plates filled with the appropriate medium, applied to the object before and after wand use. Petri dishes may need to be incubated for as much as 1 week for the growth of mold and as little as 48 hours in the case of bacteria.