

# Ultraviolet Disinfection

## **For Fan Coil, PTAC, Heat Pump For Mold, Bacteria, Viral and Odor Control Product and Performance Specification**

### **Model: Stinger**

**Fixturing** - shall consist of a Mounting Base and Gasket, Lamp Socket, 24V Power Supply, Twist-On Power Socket, 18W Quad UV-C Lamp and optional High Spectral Reflector.

**Mounting Base** – shall be constructed of reinforced, high performance polycarbonate for structural integrity and long life. It shall incorporate a safety “twist-lock” screw-on system to mount and secure the Power Supply. The base shall incorporate a rubber gasket to facilitate leak proof installs while maintaining safety and serviceability. Its design shall make possible mounting the Power Supply and Lamp from outside the plenum while allowing the lamp to protrude into air stream. The Mounting Base shall incorporate an integral “water dam” to prevent water incursion into, or past the fixture when mounted vertically.

**Lamp Socket** – shall be a G24-Q4, sure-grip, snap-in type for quick yet secure lamp mounting and change-out.

**Power Supply** shall be a 24V, high power factor, Class P, Sound Rated A, Type 1 Outdoor type with inherent thermal and end of lamp life protection. Its design shall maximize lamp output and performance over its life, in air of from 1–70° C, 100% RH and/or any velocity. It shall incorporate a safety “twist-lock” screw-on system to mount and secure the Power Supply to the Mounting Base and a sliding pin lock to preclude the removal of the Lamp without first de-energizing the system to prevent accidental UV exposure. It shall include a light-pipe lamp on indicator.

**Lamp** – shall be a high output, hot cathode, G24 base, 18W UV-C quad lamp that produces broadband 250–260nm UV without the production of ozone. It shall produce the specified output at any air velocity, and at temperatures of from 1–70°C.

**High Spectral Reflector** – if used shall be constructed of high spectral aluminum and designed to block radiated UV-C energy from any user selected orientation and/or reflect UV-C energy in a desired direction.

**Irradiation** – shall be provided in such a manner to provide an equal, user selected distribution of the available UV-C energy. When installed, the UV-C energy produced shall be of the lowest possible reflected and shadowed losses and shall be distributed in a 360 degree, or user selected pattern within the cavity, to provide the highest UV-C energy absorption by all surface and airborne microbial products, using the High Spectral Reflector.

**Intensity** – The minimal UV-C energy striking a surface shall be sufficient to continuously destroy a mono-layer of mold and/or bacteria in less than one hour while operating in air temperatures of 1-70° C.

**Safety** – To protect personnel, all access panels and doors to any UV-C assembly and/or within view of any UV-C assembly must include mechanical interlock switch to ensure that all UV-C assemblies will be de-energized when any of these accesses are opened.