

UVC Manufacturing and Consulting, Inc.

founder of UVC for HVAC

Installation Instructions

Germicidal UVC Clip Mount Lamp Kits, 12 to 33 inch High Output

NOTE: It is the responsibility of the installer to insure that all applicable local and national electrical and building codes are complied with in the installation of this product.

AVOID touching “glass” portion of lamp with hands.

CAUTION: Breakable Glass Hazard - can cause personal injury. Be careful when handling lamp - wear protective gloves.

BROKEN LAMP CLEANUP:
Do NOT use household or shop vacuum. Sweep debris into plastic bag and dispose of properly.

MERCURY NOTICE:
This device contains mercury – Check with local disposal requirements. Generally UVC lamps need to be disposed of the same as florescent lamps.
DISPOSE OF PROPERLY

Caution

Hazardous Ultraviolet Light Rays. Exposure can cause damage to skin and eyes. DO NOT activate the UV Lamp until it is fully installed and all access to the lamp has been closed off. Disconnect power and allow time to cool before servicing or removing Lamp. NEVER look at light produced by lamp.

GENERAL INSTRUCTIONS:

UVC Lamp Kit includes:

- Smart Ballast Technology™.
- 12-inch, 18-inch or 33-inch Glass High Output UV “C” light emitting lamp.
- Six foot lamp cord
- Mounting hardware (mounting clips, adhesive mounting strips, self-tapping TEK screws, safety and maintenance labels.

Photo below shows the contents of a typical kit.



NOTICE

Prior to mounting any part of the Kit, check to make sure that pre-drilling any holes and full installation of screws will not protrude into any other component (Freon lines, AC coils, wiring, etc) and cause damage.

Avoid mounting lamp in areas where it can come in contact with water. If condensation or water is an issue, UVC M has Plastic Encapsulated Lamps™ for those applications.

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Always check with local, state and federal building codes for proper installation practices.

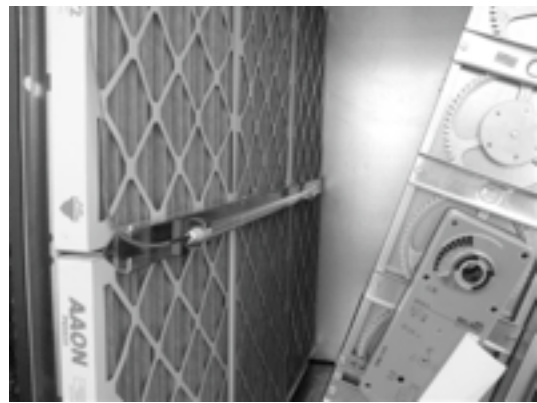
1. Identify the desired location for installation of the UV light that will result in the exposure of the largest area to be affected (duct interior, filter, evaporator coil, etc). Do not install in some types of flex duct because UV light may degrade the plastic.

CAUTION: UV Light may have an adverse affect on some non-metallic surfaces including plastics and wire insulation. Install the UV Lamp where it will not illuminate these materials. If this can't be avoided, shield the plastic and wire with aluminum tape, conduit or sheet metal.

SAMPLE INSTALLATION LOCATIONS



Return area of HVAC system before filter.



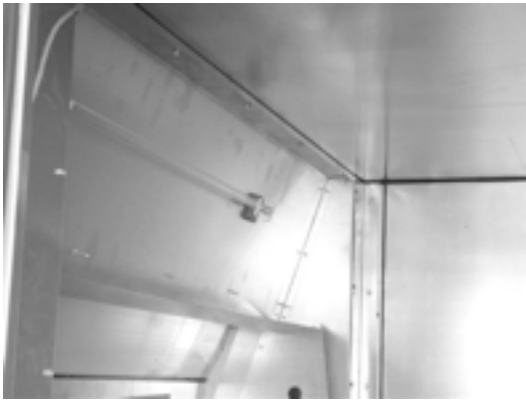
For best results, place lamp in the largest area of the system for the most exposure to the UV light.

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2. Determine wire routing and ballast location before installing lamp. Ballast is to be mounted in a safe area within reach of the supplied lamp cord. Place the ballast in approved

electrical compartments only (not in plenum) and where it will not come in contact with moisture or water.

WARNING: Mount ballast to cool metal surfaces (not to plastics, wood or combustible products or heated vents and flues).

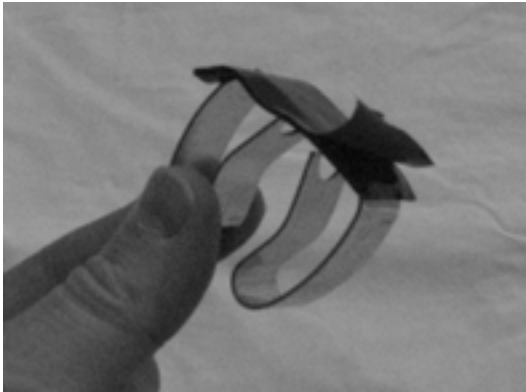
3. Install lamp mounting clips spaced so that they will clip onto the ceramic portions of each end of the lamp. Clips can be mounted with the double sided adhesive tape* provided and/or one TEK screw each for additional security. Cut mounting tape to proper length. (*See "Surface Preparation for **3M Tape Applications** on page 6.)
4. **Clean back surface of clip and mounting surface. Make sure all the dirt is removed from the mounting surface(s) or the lamp will fall off and break. Use alcohol and a Scotch bright pad to remove ALL oil, dust and dirt before installing tape for good adhesion. And avoid damage**

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5. Clean lamp with alcohol – Do not touch lamp with bare fingers once cleaned.



6. Connect lamp cord to lamp and then clip lamp into place.



7. Use 2 screws (provided) to mount the ballast in the selected location.



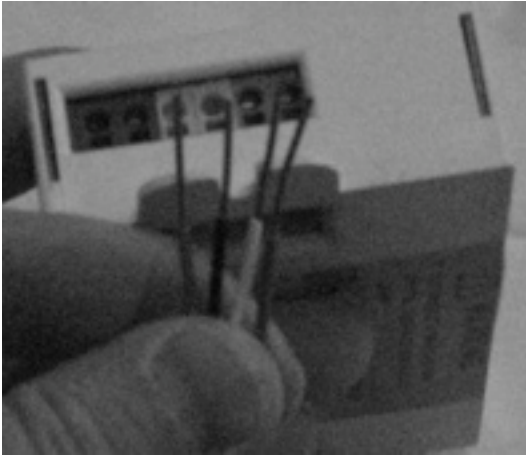
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8. Route lamp cable to ballast and secure along path as needed.
9. Connect the lamp cable to the ballast as shown in the following table.



LAMP CABLE	BALLAST TERMINAL
WHITE & GREEN	BLUE
NO CONNECTION	YELLOW
RED & BLACK	RED
AC LINE	BLACK
AC LINE	WHITE
GROUND	GREEN

10. Complete ac input wiring according to applicable codes. This universal input ballast is designed to

operate from 110 to 277 volts ac.

11. Replace all access covers. Do not energize ballast until all covers and accesses panels are in place to avoid UV exposure to persons.
12. Install safety labels next to each access cover and note date of installation and lamp replacements. Inform all maintenance workers of the use of Germicidal lamps in the system.



13. Apply power to lamp system. Check the power source and wiring if the lamp does not light.

DO NOT ENERGIZE UNIT UNTIL ALL POWER CONNECTIONS ARE MADE, UV UNIT IS INSTALLED AND ALL ACCESS DOORS ARE CLOSED SO NO UV EXPOSURE TO INDIVIDUALS CAN OCCUR.

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WARNING: NEVER EXPOSE EYES OR SKIN TO UV RAYS.

The UVC lamp will glow blue when the lamp is energized. The lamp has no field serviceable parts.

UVC lamps should be changed once per year if operated 24/7 to maintain effectiveness. Glowing blue does not indicate the germicidal component of the lamp is working. UV lamps can glow blue for 2 or 3 years without producing a germicidal effect.

DO NOT INSPECT LAMP WITH POWER CONNECTED

UV LAMP REPLACEMENT GUIDE

This is general information as to when UV lamps should be replaced for 90 % kill of influenza A and some colds caused by virus

Schools - 2 years

Offices - yearly

Homes – yearly

UVC INC tm 1209 rev3

(applies to instructions on page 3)

Surface Preparation for 3M™ Tape Applications

Summary Most substrates are best prepared by cleaning with isopropyl alcohol (IPA) prior to applying 3M™ Tapes. Exceptions to this general procedure that may require additional surface preparation include:

- **Heavy Oils:** A degreaser or solvent-based cleaner may be required to remove heavy oil or grease from a surface and should be followed by cleaning with IPA.
- **Abrasion:** Abrading a surface, followed by cleaning with IPA, can remove heavy dirt or oxidation and can increase surface area to improve adhesion.

General Procedure

- To obtain optimum adhesion, the bonding surfaces must be well unified, clean and dry. Typical surface cleaning solvents are IPA (rubbing alcohol)
- Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact and helps improve bond strength. Generally, this means that the tape should experience at least 15 psi in roll down or platen pressure.
- After application, the bond strength will increase as the adhesive flows onto the surface. At room temperature, approximately 50% of the ultimate strength will be achieved after 20 minutes, 90% after 24 hours and 100% after 72 hours