

MANUAL – INSTALLATION + OPERATION

UV-C High-Output Fixture/Lamp

UVC-120-240V

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PRICE[®]

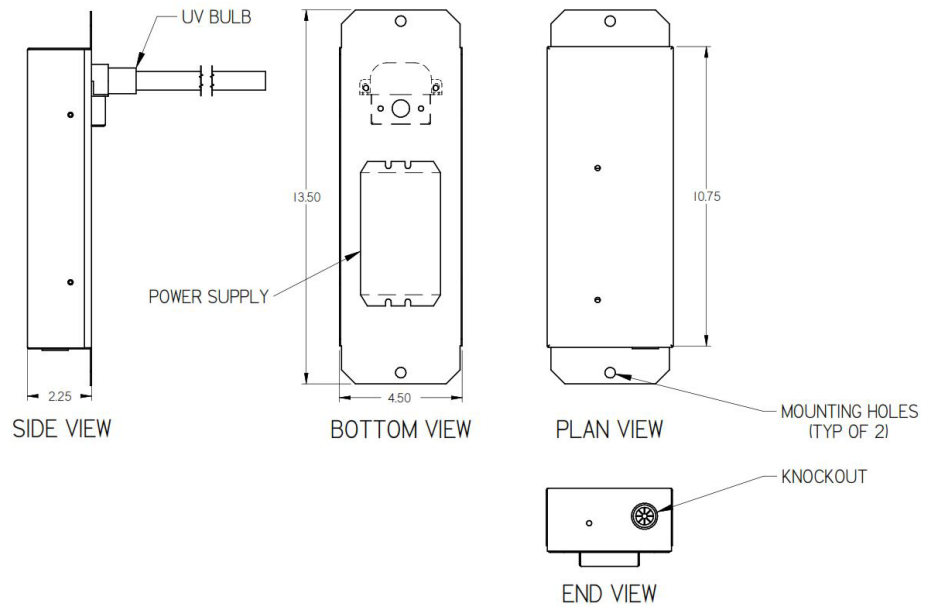
UV-C HIGH-OUTPUT FIXTURE/LAMP

INSTALLATION & MOUNTING INSTRUCTIONS

Application

The Price UVC module meets all ASHRAE guidelines and is suitable for most indoor UV-C applications. It installs from the exterior of Price Industries equipment to achieve the specified irradiance.

UV-C FIXTURE ▼



The health aspects associated with the use of this product and its ability to aid in the disinfection of environment air have not been investigated by UL. Air duct mounted accessory with respect to electric shock, fire and casualty hazards only.

UV-C HIGH-OUTPUT FIXTURE/LAMP

INSTALLATION & MOUNTING INSTRUCTIONS

General



CAUTION! Never Expose Eyes or Skin to UV-C - Read all Materials before Starting

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your supplier for information or assistance. Follow all safety codes, wear safety glasses and work gloves. Read all instructions thoroughly and follow any warnings or cautions attached to any accessed area. Consult local building codes and the National Electrical Code (NEC) for special requirements.

Understand the signal words **DANGER, WARNING or CAUTION**. These words are universally used for overall safety. **DANGER** identifies the most serious hazards, which will result in severe personal injury or death. **WARNING** signifies hazards, which could result in personal injury or death. **CAUTION** is used to identify unsafe practices, which would result in minor personal injury or product and property damage.



WARNING: Before installing or servicing this unit, turn off or disconnect all power, there may be more than one (1) switch.

CAUTION-UV Exposure Precautions:

1. There should be no openings, holes or joints that allow UV light leakage.



CAUTION-Material Exposure / degradation:

1. Any non-metallic parts exposed to UV shall be shielded.

Note: Metallic barriers, and aluminum tape are appropriate means of shielding. Non-metallic parts include, but not limited to, conductors, connectors, enclosures, housings, drain pans, support pieces, gaskets and filters.

2. Protective materials can include barriers (referenced above), conduit, aluminum tape, etc. Please reference ASHRAE® 2016-Systems and Equipment handbook for additional information¹.
3. Inorganic materials such as glass, glass fibers, and metal are not affected by UV-C exposure¹²³.
4. Shield all organic material components within 5 ft (1.5 m) of the UV lamp¹.

Power Ratings:

The UCV-120-240V is rated for 120-240Vac 50-60Hz, single phase. NOTE: Grounding should be neutral-to-ground.

¹ASHRAE-2016. UV-C Photodegradation of Materials. Systems and Equipment Handbook. 17.5-17.6

²Kaufman, R.E. 2017. Study the HVAC System Photodegradation Caused by the Low Level UVC Light Irradiance Used for Coil Maintenance and Air Stream Disinfection. ASHRAE Research Project 1724, Final Report

³Kauffman, R. 2011. Study the degradation of typical HVAC materials, filters and components irradiated by UVC energy. ASHRAE Research Project RP-1509, Final Report

UV-C HIGH-OUTPUT FIXTURE/LAMP

INSTALLATION & MOUNTING INSTRUCTIONS

*****Note: Use only 4-pin single ended (4PSE) lamps – sizes 16” with this product*****

Compliance:



Underwriter Laboratories (UL) ABQK, Accessories, Air Duct Mounted. Tested in accordance with ANSI/UL 1995, ANSI/UL 153, ANSI/UL 1598 and ANSI/UL 867. The health aspects associated with the use of this product and its ability to aid in disinfection of environmental air have not been investigated by UL Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA Establishment No. 92627.

- WARNING:** Eye damage may result from directly viewing the light produced by these lamps. To reduce the risk of exposure to UV radiation, take UV-radiation protective measures for personnel during servicing.
- WARNING:** This fixture is designed for use with germicidal UV-C lamps and must be installed in compliance with competent technical directions so that user's eyes and bare skin will not be subjected to injurious rays.
- WARNING:** There shall not be any openings in the duct that would emit light.
- WARNING:** UV Light Hazard. To prevent exposure to ultraviolet light, be sure the ultraviolet air treatment system is disconnected before servicing any part of the equipment.
- CAUTION:** Personal Injury Hazard. Power supply can cause electrical shock. Disconnect power supply before servicing or beginning installation.
- CAUTION:** Risk of exposure to excessive ultraviolet (UV) radiation - Do not operate without complete lamp enclosure in place or if sight lens is damaged.

Power Consumption

BULB LENGTH	Lamp Watts
16"	36W

***To calculate amps, divide watts by supplied voltage**

What's included:

- UCV-120-240V NEMA 4X Fixture
- UCV-120-240V installation Kit:
 - Installation Operation Manual (IOM)
 - Door Warning Label
 - Self-Drilling Mounting Screws (x2)
 - Performance Specification Label



Installation (designed for metal plenums only):

Consult all applicable codes before installing. Check fixture label(s) for the correct power requirements and supply the correct voltage from a suitable, protected (fused or breaker), and grounded power source.

UV-C HIGH-OUTPUT FIXTURE/LAMP

INSTALLATION & MOUNTING INSTRUCTIONS

Installing Lamps

The UCV-120-240V is rated for 120-240Vac 50-60Hz, single phase.

NOTE: Grounding should be neutral-to-ground.

1. Remove the (2) mounting screws on the left and right of the UV enclosure (Figure 1).
2. Gently pull out the UV enclosure from unit. The blub is externally attached to the enclosure. Remove with caution.
3. Disconnect UV bulb from ballast by holding the base and rotating counter-clockwise (Figure 2). One side should pop out before the other.
4. When mounting the new bulb, insert lamp pins into the lamp holder with lamp angled away from the fixture.
5. Engage locking notch on the lamp base onto the hook on the mounting plate (Figure 3 and 4).
6. While supporting the lamp base with one hand, rotate the lamp towards the fixture with the other hand and snap the lamp base into the mounting plate.
7. Slide UV bulb and enclosure back into unit and replace the mounting screws.

NOTE: Removing the (4) hex screws on the top and bottom of the enclosure is not required for changing the blub.

Replacing the Bulbs

Ultraviolet bulbs should be replaced annually if operated continuously (recommended) or after 9,000 hours of use if operated intermittently. Replacement bulbs must be the specific size and wattage as originally supplied from the factory. Note: Although the lights may continue to generate a characteristic blue glow beyond 9,000 operating hours, the ultraviolet radiation emitted by the bulbs degrades over time and will no longer provide the intended benefit.

Maintenance

The intensity of the ultraviolet energy emitted from the UV lamps is dependent on the cleanliness and lamp age. The surface of the lamp should be kept as clean as possible for optimum intensity. Depending on the filtration level of the HVAC system and the general hygiene of the building, periodic cleaning may be necessary. Before attempting any maintenance procedures, always follow all warnings and cautions as detailed in this maintenance section.

FIGURE 1 ▼

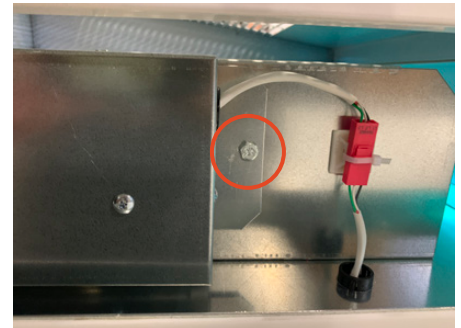


FIGURE 2 ▼



FIGURE 3 ▼

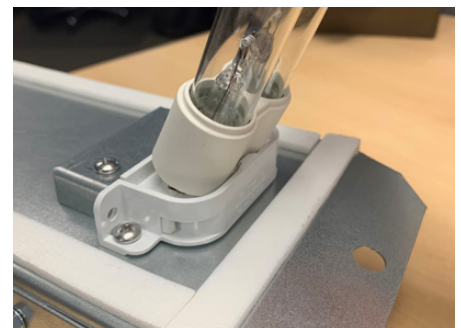
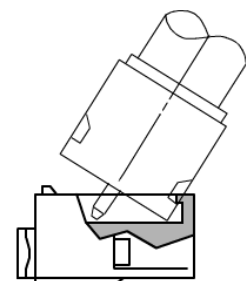


FIGURE 4 ▼



UV-C HIGH-OUTPUT FIXTURE/LAMP

INSTALLATION & MOUNTING INSTRUCTIONS

Cleaning Lamps

NOTE: If lamps are found to be broken, see the proper warning and cautions below regarding broken lamps and hazardous vapors.

1. Disconnect all electrical power to the unit and the UV lamps.
2. Wearing soft cloth gloves and safety glasses remove lamp from UCV-120-240V.
3. Wipe down each lamp with a clean cloth and isopropyl alcohol. Avoid touching lamp glass with hands as skin oils can accelerate lamp degradation. (If lamps are coated with Teflon they can be touched with bare hands).

Replacing the Lamps

Ultraviolet lamps should be replaced annually if operated continuously or after 9,000 hours of use if operated intermittently. Replacement lamps must be the specific size and wattage as originally supplied from the factory.

Note: Although the lamps may continue to generate a characteristic blue glow beyond 9,000 operating hours, the ultraviolet energy emitted by the bulbs degrades over time and will no longer provide the intended benefit.

Lamp Disposal

UV lamps should be treated the same as other mercury-containing devices, such as fluorescent bulbs, according to local regulations. Most lamps must be treated as hazardous waste and cannot be discarded with regular waste. Low-mercury bulbs often can be discarded as regular waste; however, some states and local jurisdictions classify these lamps as hazardous waste. The U.S. EPA's universal waste regulations allow users to treat mercury lamps as regular waste for the purpose of transporting to a recycling facility. The National Electrical Manufacturers Association (NEMA) maintains a list of companies claiming to recycle or handle used mercury lamps at www.lamprecycle.org

Contact

If experiencing further issues with unit, contact Price Industries help at:

By Email: airmoving@priceindustries.com

By Phone: (204) 654-5613 ext. 2