



RECTORSEAL

A CSW Industrials Company

INSTALLATION MANUAL

DUST FREE® ACTIVE GOLD

UV-C Light/Ionization Total Home Air Purification

General


This device is designed to be installed into an existing HVAC system for improved indoor air quality.

Before Installation

- Read all instructions carefully. Failure to do so could damage the equipment or cause harm to yourself or others.
- Acknowledge all warnings.
- Only qualified technicians should perform the installation.

WARNING

- **Electric Shock Hazard. Can cause injury or death.** Electrical wiring of the unit to the HVAC system should be done by a licensed HVAC technician or electrical installer.
- **UV Light Hazard. Can cause serious eye and skin damage.** Do not look at UV-C light. Wear UV-C eye and skin protection.
- **Mercury Hazard. Do Not Break.** UV-C lamp contains a small amount of Mercury. May cause redness or irritation. Manage in accordance with disposal laws - www.lamprecycle.org

 **WARNING:** This product can expose you to chemicals including mercury and mercury compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

UL Approvals



AIR DUCT MOUNTED ACCESSORY WITH RESPECT TO ELECTRIC SHOCK, FIRE AND CASUALTY HAZARDS ONLY.
E524994



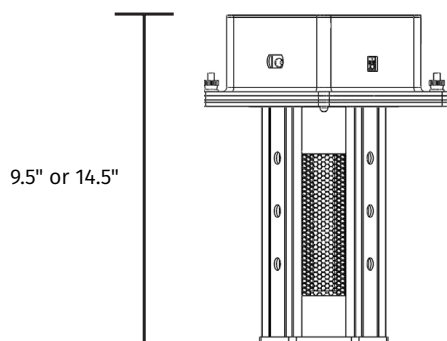
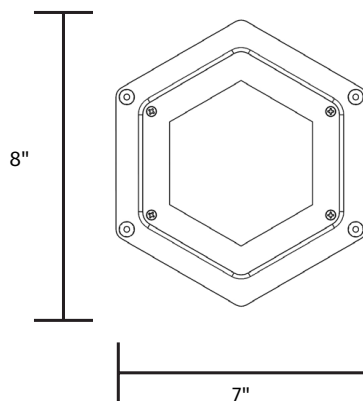
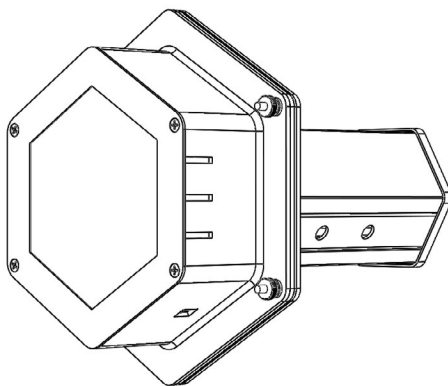
ZERO OZONE EMISSIONS - Measured ozone emissions from Dust Free Active Gold during use phase does not exceed 0.005 PPM as tested by **UL 867**. UL.com/ECV

EPA Establishment **No. 73316-TX-1**

Parts Included

- Active Power Supply/Ballast
- Ionizing Cell
- UV-C lamp
- 40VA transformer
- Mounting plate
- Mounting hardware
- Installation instructions

Note: Parts may come pre-assembled.



Specifications

| Model | Dust Free Active Gold 12" | Dust Free Active Gold 6" |
|---------------------------------------|---|--------------------------|
| Product Code | DF13071 | DF13070 |
| Power Module | 8"H X 7"W X 14.5"L | 8"H X 7"W X 9.5"L |
| Mounting Plate | 8"H x 7"W | |
| Electrical | 24V 50/60Hz. Expanded range ballast 20V-32V. 1.4A. 3000V surge protection. | |
| Weight | 3 lbs | 2.5 lbs |
| UV-C Lamp | 18,000-hour life. Water-resistant. | |
| Ozone | UL 2998 validated no ozone. Meets California ozone emissions limit: CARB certified. | |
| Replacement Ionizing cell w/UV-C Lamp | DF13075 | DF13074 |
| Replacement UV-C Lamp | DF13077 | DF13076 |
| Warranty | 7-year power module. 4-year ionizing cell. 2-year lamp. | |

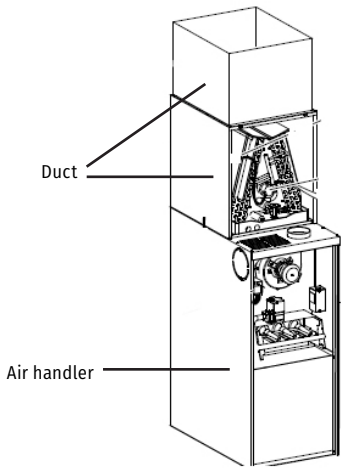


Fig. 1 HVAC system

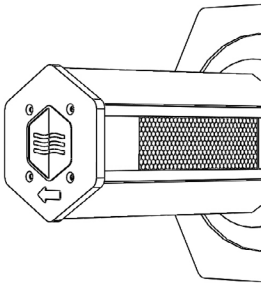


Fig. 2 Orient device in proper airflow direction as indicated

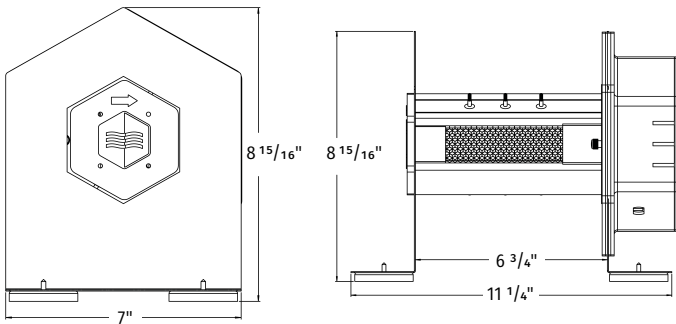


Fig. 3 Magnet mount installation

UV Installation Notes

- This device is meant only to be installed in the duct portion of the HVAC system.
- The power module must be mounted directly to a metal surface. This will help dissipate heat. Failing to mount the ballast properly will void warranty and lead to pre-mature UV bulb failure.
- The duct work around the installation area should be clean and dry to insure proper adhesion of the gasket materials and any tape used.
- An approximate 4" opening will need to be cut into the existing duct work to install the device properly.

Airflow Orientation

- Be sure to orient the device for proper airflow through the ionizing cell. Proper airflow direction is indicated by an arrow on the tip of the ionizing cell. (See Fig. 2)
- If needed for proper airflow orientation, remove cell and reinstall cell onto power module in proper orientation.

24VAC Electrical Requirements

- Connect black and white wires to a dedicated 40VA transformer. If also installing an accessory 24V product, a 75VA transformer is required.

DF Active Gold Magnet Mount Installation (See Fig. 3)

- Removed the mounting plate from the power supply module by unscrewing the four knurled nuts.
- Thread the studs from the mounting plate through the four holes in the circular cut-out mounting bracket.
- Re-attach the power supply module to the mounting plate and secure with the four knurled nuts.
- Place the device inside the plenum at the desired location and orient according to system airflow.
- If necessary, re-orient the ionizing cell to ensure proper airflow through the device.
- Place the hexagonal cut-out mounting bracket at the end of the device ionizing cell, just inside of the cap.

Note: Magnetic Mount Install Kit Product Code: **DF13078**

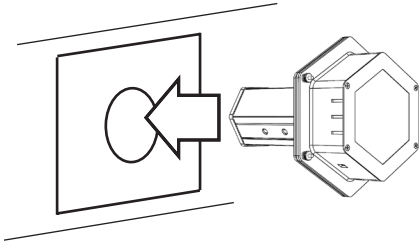


Fig. 4 Cut opening in duct, attach mounting plate, and install device

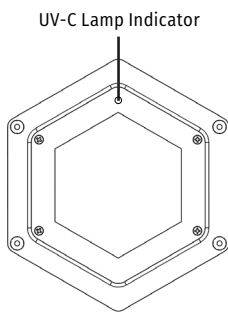


Fig. 5 UV-C lamp indicator

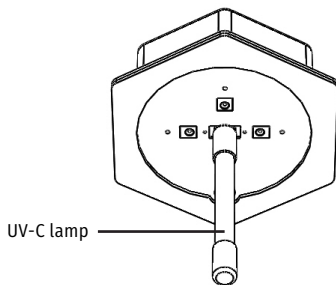


Fig. 6 Replace UV-C lamp every 2 years

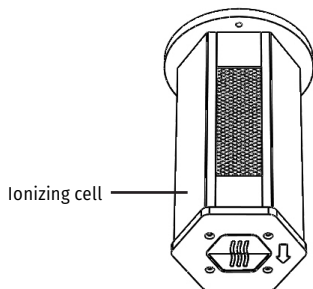


Fig. 7 Replace ionizing cell every 4 years

Metal Ductwork Installation

- Locate a suitable area of the duct for installation. Minimum 8" area.
- If needed, cut away insulation to expose metal duct.
- Mark location for 4" opening using the included mounting plate as a template.
- Cut opening for the device. (See Fig. 4)
- Remove the backing from the mounting plate gasket, center mounting plate over opening, and press onto the duct. The adhesive gasket will hold the mounting plate in place.
- Secure the mounting plate using self-tapping screws.
- Insert device into opening and secure with knurled nuts.
Note: Be sure airflow will pass in the proper direction as indicated by the arrow on the top of the ionizing cell. (See Fig. 2)
- Connect to proper power and test operation. The green operation indicator light on the face of the device should be on.

Fiberglass Ductwork Note

- For fiberglass ductwork installations use 3" toggle bolts to attach mounting plate.

Maintenance/UV-C Lamp Indicator

- For optimal performance, replace the device ionizing cell every 4 years and UV-C lamp every 2 years, even if the UV-C lamp appears to be operating normally. (See Fig. 5)
Note: The replacement ionizing cell comes with a UV-C lamp.
- The green operation indicator on the face of the device is for UV-C Lamp operation only. **If the unit has power and the indicator does not glow, follow the troubleshooting guide on the last page of this document.** (page 6)

Changing the Ionizing cell and/or UV-C Lamp

- Disconnect the device from power.
- Removed the knurled nuts securing the device and remove the device from the duct work.
- Remove the screws securing the ionizing cell.
- Remove the ionizing cell from the power supply/ballast and dispose of properly. **Note: If only changing the UV-C lamp, detach lamp from device and dispose of the lamp properly.** (See Fig. 6)
- Secure the new ionizing cell and/or new UV-C lamp to the device.
- Reverse the previous steps to return the device to operation.

Disposal of Ionizing cell and/or UV-C Lamp (See Fig. 7)

Dispose of spent ionizing cell and/or UV-C lamp at your local recycling center.

Installation of Dust Free Lightstick Gold

IMPORTANT: When installing the Active Gold with remote accessory lamp do not use 40VA transformer provided with the Active Gold unit. You must use the 75VA transformer referenced in Table 2.

WARNING

PERSONAL INJURY OR UNIT DAMAGE HAZARD

- Failure to follow this caution could result in damage to unit or personal injury.
- Perform visual inspection of potential mounting location by removing unit/cabinet door prior to cutting or drilling. Be careful not to cut, drill or drive screws into coil, refrigerant lines or other objects inside the HVAC unit.

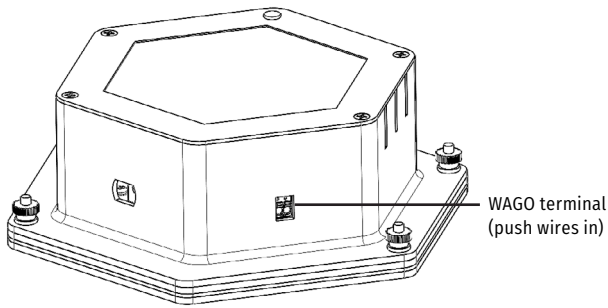


Fig. 8 WAGO Terminals

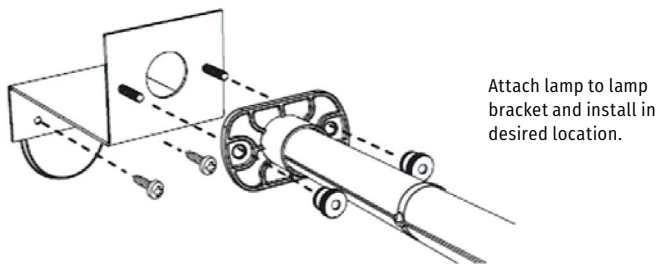


Fig. 9 W-coil / Above A-coil Install (Remote Lamp)

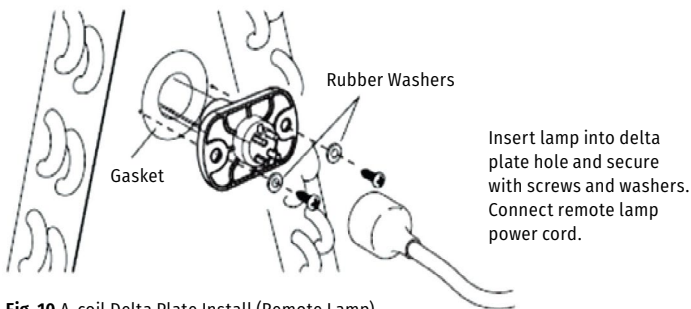


Fig. 10 A-coil Delta Plate Install (Remote Lamp)

Remote Accessory Lamp Installation (with Main Unit)

1. Light stick connection will receive power from WAGO connection located on the Active Gold unit (See Fig. 8).
2. Push two wires from light stick power supply into WAGO connection.
3. Insure tight connection in WAGO terminal and test operation.

IMPORTANT: When installing UV light stick in combination with Active Gold unit do not use the 40VA transformer included with the Active Gold unit. A 75VA transformer must be field supplied and installed (page 7).

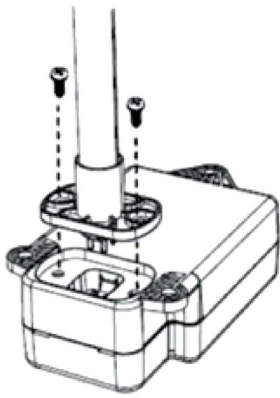
W-coil / Above A-coil (Remote Lamp)

1. (See Fig. 9) Disconnect power to the air handler and open access panels.
2. Standard Bracket Installation – Install the lamp bracket at the desired location with two self-drilling screws (included).
3. Secure the lamp to the lamp bracket with the provided knurled nuts.
4. Connect remote mount lamp power cord.

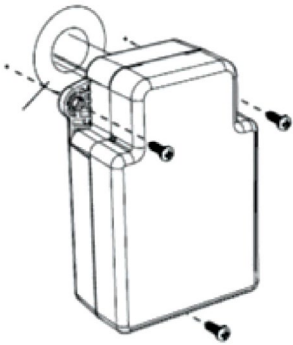
A-coil Delta Plate (Remote Lamp)

1. (See Fig. 10) Drill a 7/8" hole into the delta plate and place gasket (included) around hole.
2. Insert lamp directly into hole and secure the lamp to the delta plate with two self-drilling screws (screws and rubber washers included).
3. Connect remote mount lamp power cord.

Note: A-coil delta plate installation does not use lamp bracket.

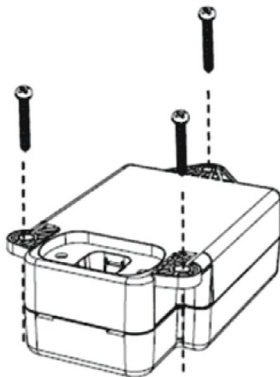


Insert lamp into power module and secure with screws.



Insert assembly into delta plate hole and secure with screws.

Fig. 11 Through Door or Sidewall Install



Flip power module over and secure with long screws. Do not overtighten.

Fig. 12 Power Module Install (Remote Lamp)

Through Door or Sidewall

1. (See Fig. 11) Drill a 7/8" hole in the outer sheet metal where the lamp will be centered on the return side of the coil.
2. Place gasket (included) around hole.
3. Insert lamp into power module and secure with self-drilling screws (included).
4. Insert lamp/power module assembly directly into hole and secure with self-drilling screws (included).

Note: A-coil delta plate installation does not use lamp bracket.

Power Module (Remote Lamp)

Note: Do **not** over-tighten screws.

1. (See Fig. 12) With the lamp cordage facing away from the mounting surface, use the long mounting screws and install the power module in a suitable location inside the control panel of the air handler using two self-drilling screws (included).
2. Connect the power module to constant 24VAC power.
3. Connect input 24VAC power cord. Align markers on power module with power cord connector.

Power Module

1. (See Fig. 12) With the lamp directly connected to the power module, connect the power module to the mounting surface using the short, self-drilling screws (included).
2. Connect the power module to constant 24VAC power.
3. Connect input 24VAC power cord. Align markers on power module with power cord connector.

Note: The device must be installed in compliance with all national and local electrical and mechanical codes. Failure to do so will void the warranty.

Limited Warranty



For more information on our product limited warranty, visit RectorSeal.com

Manufactured by

RectorSeal, LLC

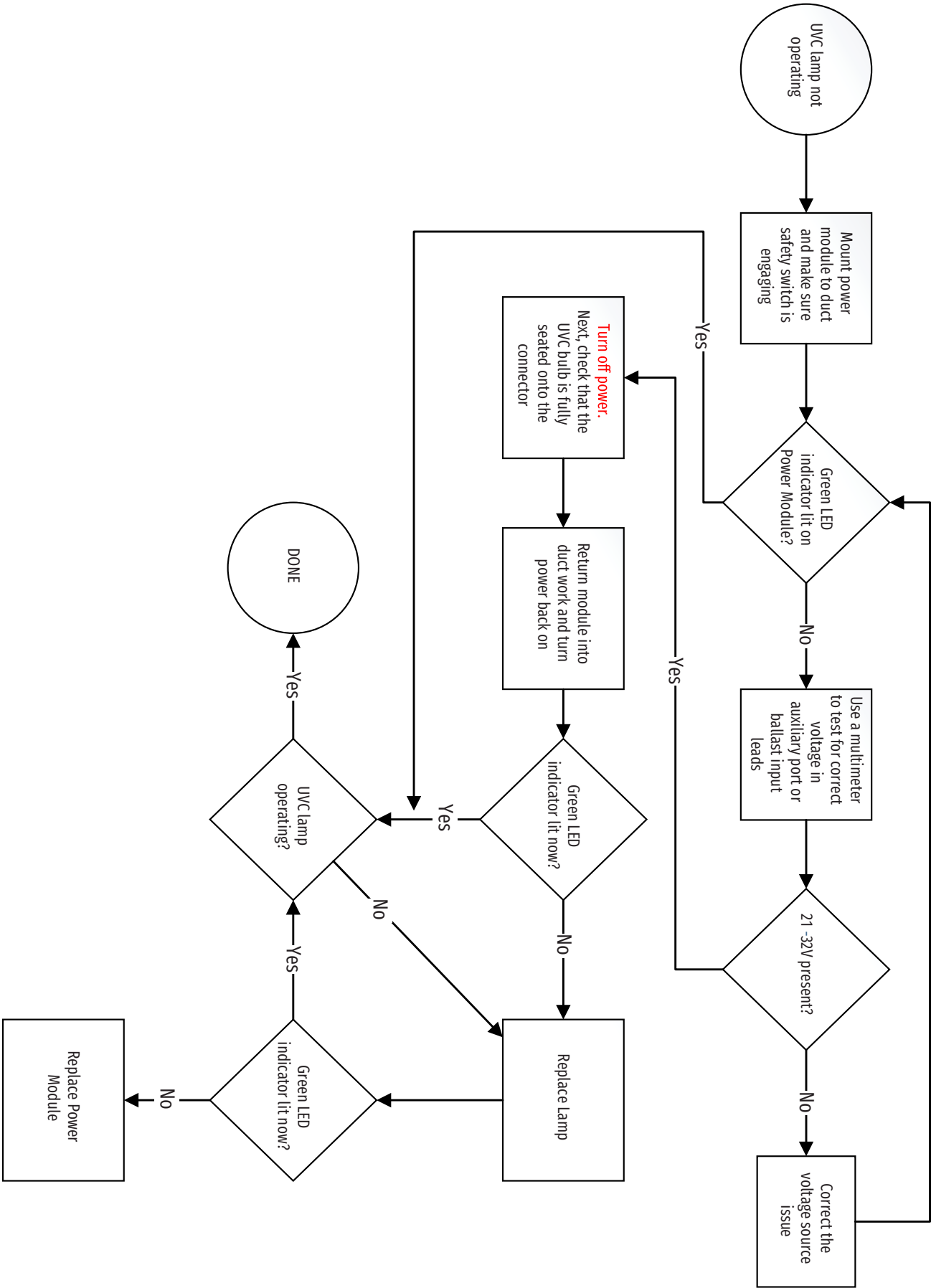
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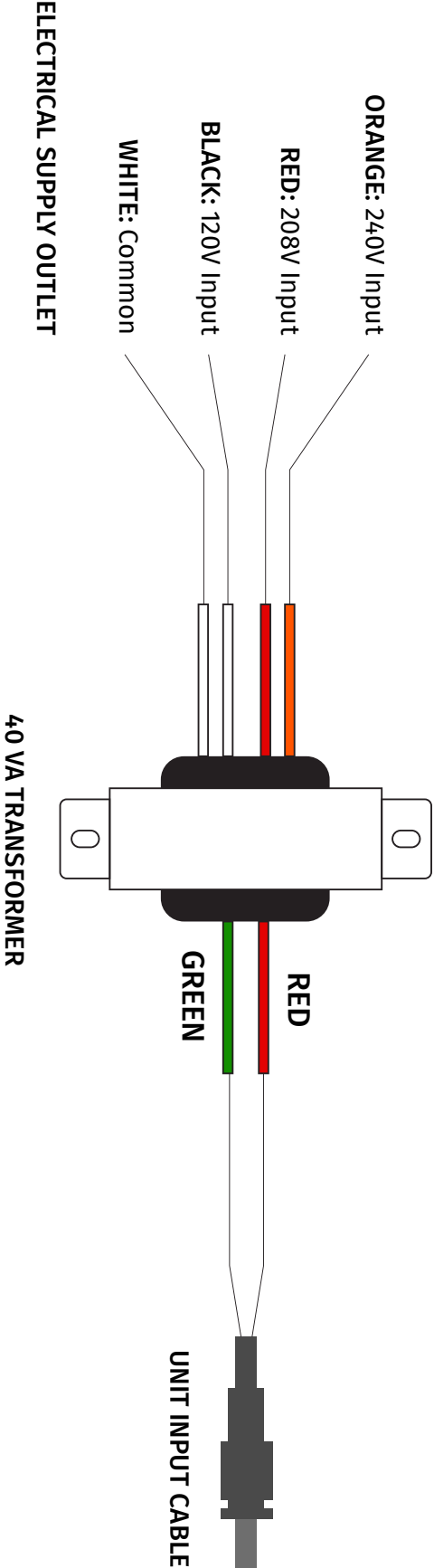
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UV-C Lamp Troubleshooting Guide



40 VA Transformer Wiring Instructions



Connect the **common (WHITE)** wire to the **neutral line** and the **live** wire that corresponds to your electrical supply outlet voltage (**ORANGE: 240V**, **RED: 208V**, or **BLACK: 120V**) to the **hot line**. Isolate and terminate the other two unused wires **separately**. **DO NOT WIRE NUT UNUSED WIRES TOGETHER.**

Connect the **RED** and **GREEN** secondary wires from the **TRANSFORMER** to the **BLACK** wires on the **UNIT INPUT CABLE**. There is no polarity in these two wires.

| MANUFACTURER | PART NUMBER | PRIMARY VOLTAGE | SECONDARY VOLTAGE | OUTPUT VA |
|--------------|-------------|--------------------|-------------------|-----------|
| PACKARD | PF42440 | 120V / 208V / 240V | 24 VAC | 40 VA |