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202 Elk Street, PO Box 160  
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Customer Service: (605) 542-4444  
**Sales: (605) 633-9116**  
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## UV Series: Flangeless Option

### Installation Instructions

<b>AC Supply Voltage</b>	120VAC (+/- 10%)
<b>Power Consumption</b>	Maximum 460w

**Building operations personnel shall physically confirm all areas are always clear of all occupants when this UV fixture is set to activate disinfecting cycles.**



#### **Important Safeguards** **Read and Follow All Safety Instructions**

- ✓ Damp label rated for outdoor applications.
- ✓ Do not mount units where they will be exposed to direct sunlight, radiators, gas or electric heaters. Prolonged exposure to temperatures exceeding 95 degrees Fahrenheit may reduce battery life and void warranty.
- ✓ Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- ✓ Do not store or place flammable materials near lamps.
- ✓ The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- ✓ Do not use this equipment for any purpose other than for its intended use.
- ✓ Before wiring to AC service, turn off AC power at fuse or circuit breaker supplying unit.
- ✓ Qualified service personnel should perform servicing of this equipment.

**Failure to follow published installation instructions or any modifications to the product may damage the unit and will void the warranty.**



**WARNING!** To avoid fire, shock/electrocution, or injury ... **TURN OFF POWER** at circuit breaker or fuse and test to ensure that power is off before wiring. Remove and discard the packaging materials.

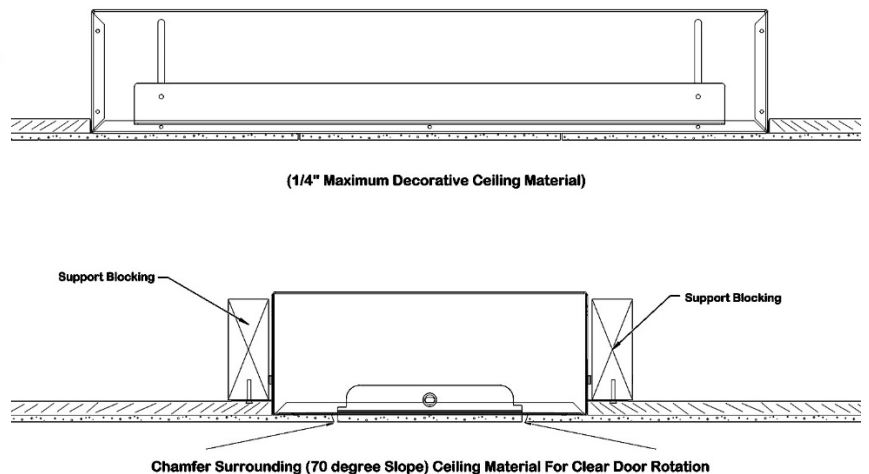
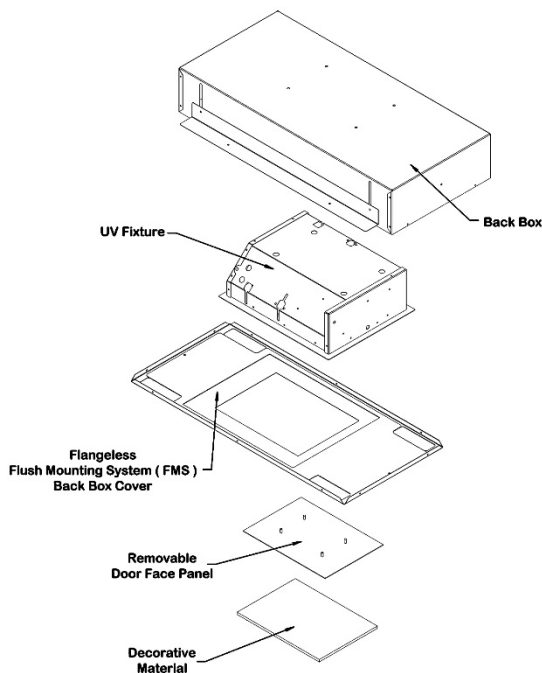
## Recessed Back Box Installation

(For mounting into Gypsum Board or Plaster sub-layer ceilings.)

### Step #1: Determine Location

1. Locate the desired location for the recessed UV light fixture unit within the recessed ceiling space with a minimum clearance of 24.75" long x 11.25" wide x 4.75" deep. The bottom side of the back box should be flush with the sub-layer ceiling material.

**Note:** The flangeless design option allows for up to ¼ inch thick wood, stone, or other decorative finished materials, to be mounted onto the face of the door area to allow for blending into surrounding matching ceiling materials of equal thickness. Materials secured to the face of the door may require edges to be angled and sloped to clear the surrounding matching ceiling material for unobstructed door rotation. Refer to building architectural ceiling mounting details for additional information when decorative materials are applied to the face of the door.



- Securely fasten recessed back box to studs, joist or blocking material supports. Use the two (2) adjustable mounting brackets on the sides of the back box, with two (2) fasteners (not furnished), per adjustment bracket for mounting back box to two or more surrounding supports. Loosen and adjust the back box so that the bottom of the back box aligns with the desired surrounding ceiling materials. Securely re-tighten the adjustable mounting brackets so the bottom of the back box aligns with the bottom of the ceiling mounting materials. See **Figure 1**.

- Recessed Ceiling Mounting:** Mount recessed back box with opening facing downward using same method listed in *Section 2* above. See **Figure 2**.



**Figure 2**



**Figure 1**

- Remove the recessed back box cover by removing the two (2) screws already installed. Cover will be re-installed as described in **Step #9** herein.

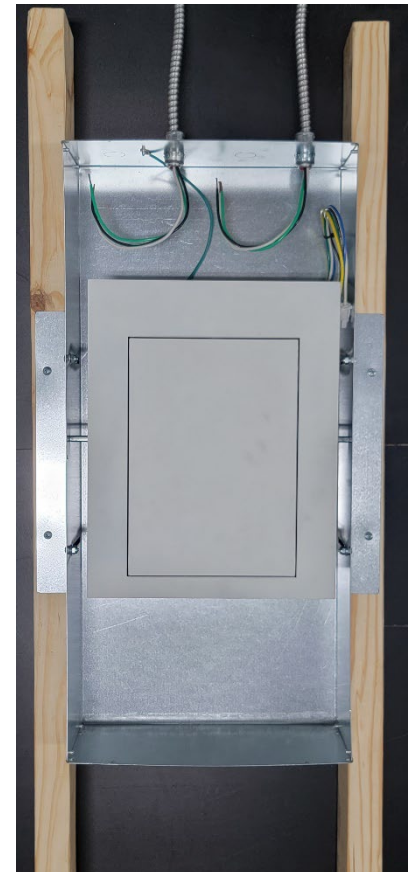
**Note:** The UV light fixture is held in place within the recessed back box by four (4) *temporary support fasteners*. The light fixture is to remain in this position until you reach **Step #10** herein. These four (4) fasteners will be removed later in the installation process.

## Step #2: Branch Circuit Input Raceway installation

1. Provide dedicated metallic raceways for all branch circuiting power input wiring. Securely terminate raceways into the enclosure by locating the K.O's provided.
2. Route remote activation (RA) circuiting in dedicated raceway. Securely terminate raceways into the enclosure by locating K.O's provided.

## Step #3: Branch Circuit Wiring Installation

1. Verify the primary input voltage of 120 VAC.
2. Provide each unit with a single un-switched supply from the 120 VAC power source. Remote activation may also be manually controlled using a switched incoming 120 VAC power source (ordering data sheet suffix "manual" when ordering). The wiring should be a permanent installation using only metal-enclosed raceway. Use only UL Listed wire termination nuts. A 13/16" diameter knockout is provided on only one side of the back box for all power input.



## Step #4: Power Supply

Provide incoming 120 VAC power branch circuit terminations to the integral power supply cradle assembly leads designated for only 120 VAC operation.

**See Wiring Diagram page 6.**



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## **Step #5: Remote Activation Control Circuit (RA Option)**

1. Provide incoming, remote-powered, two-wire control wiring from remotely located power control supply source (power control supply by others). A 24 VDC relay coil is provided integral with the UV fixture unit as part of the power supply cradle assembly to operate the door rotation to the open position and energize the UV lighting system.
2. 13/16" diameter knockouts are provided only on the power supply input side of the back box for remote activation control circuit raceway connections. Knockouts are located adjacent to the power input supply entrances.

**Note:** Upon energizing, the 24 VDC relay from the remotely located 24 VDC power source operates the door to rotate the door to the open exposed UV light fixture position and allows the UV motion detector-controlled lighting to operate when room is unoccupied.

## **Step #6: Power Supply Cradle Assembly**

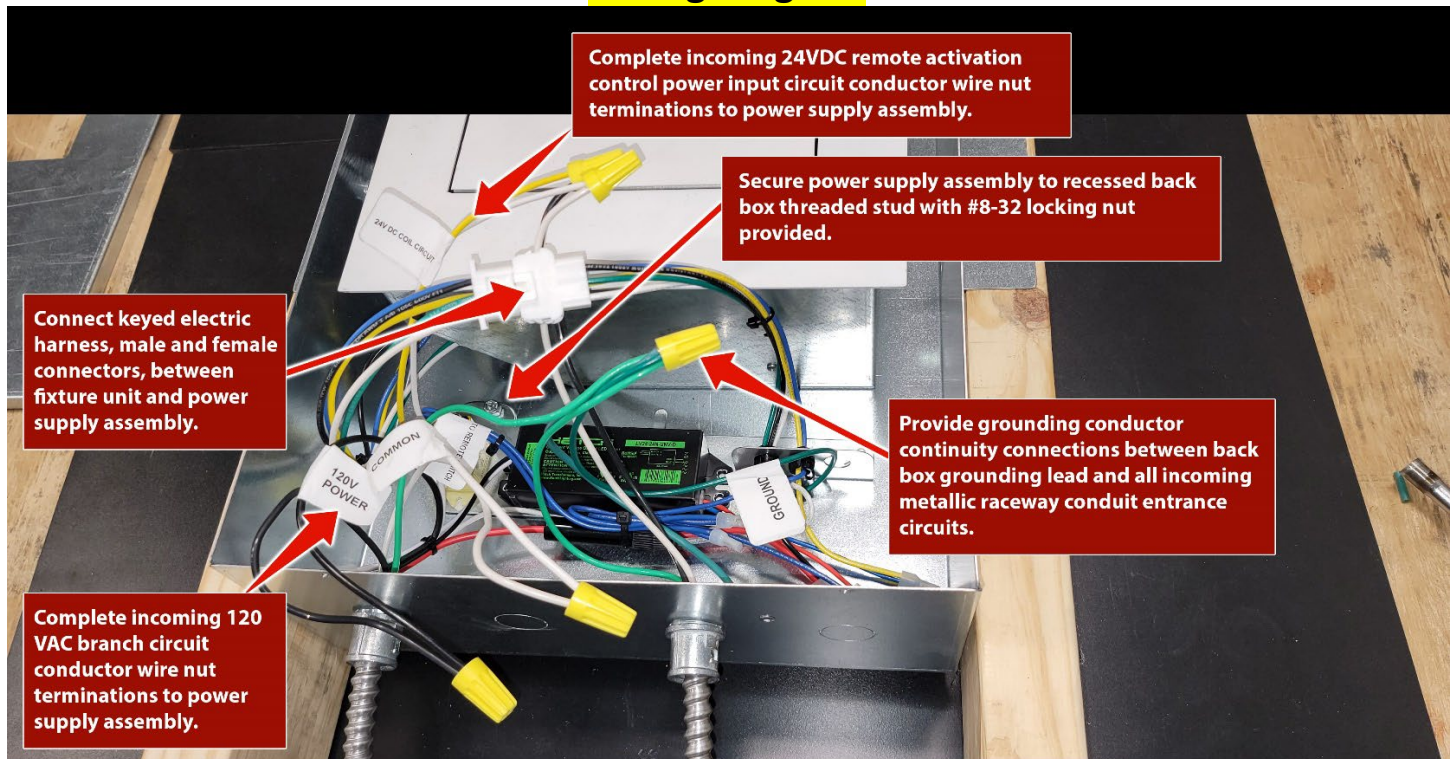
1. Upon completion of power input, and optional Remote Activation (RA) control circuits, and terminations to the power supply cradle assembly, insert cradle assembly into the power input side of the recessed back box (back box side with K.O.s).
2. Position the cradle assembly onto the threaded #8-32 threaded mounting stud on the interior top side of the recessed back box. Securely fasten into position by installing the #8-32 nylon locking nut on the cradle assembly mounting bracket.
3. Complete terminations to the 120VAC power supply, input leads, and optional 24VDC remote activation control input leads with only UL Listed termination wire nuts.

**See Wiring Diagram page 6.**

## Step #7: Grounding

Provide grounding wire terminations between the recessed back box, all incoming power supply branch circuits, remote control, and monitoring system input metallic raceways. Provide grounding termination to the back box grounding termination wire lead provided.

### Wiring Diagram



## Step #8: Fixture Head Unit Installation

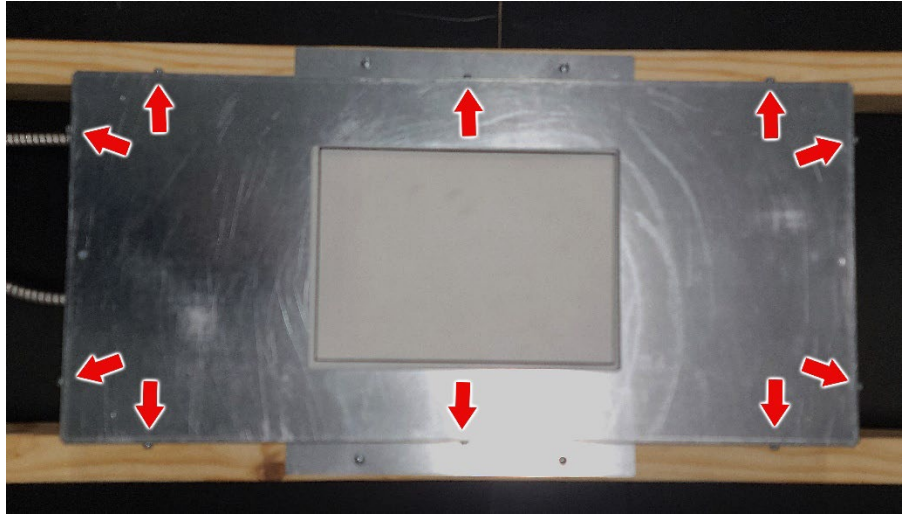
1. Locate the UV fixture head within the recessed back box location.
2. Fully and firmly connect the keyed locking male/female connector harnesses between the power supply cradle assembly and the fixture head unit.

**Note:** Confirm that all male and female connectors are firmly and fully seated into position.

**Caution:** Do not support the fixture head unit using the keyed plug-in harness lead connections.

## Step #9: Recessed Back Box Bottom Cover

1. Place the recessed back box cover onto the bottom exposed portion of the recessed back box.
2. Secure the cover to the recessed back box, in each spot depicted with arrows as shown in the figure here, with the ten (10) #6-32 screws provided; do not overtighten.

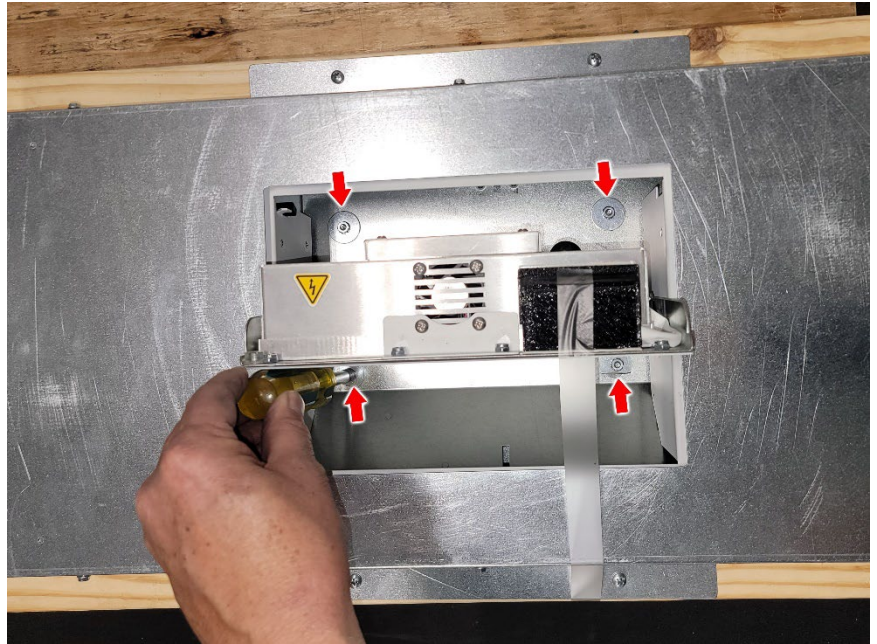


## Step #10: Positioning UV Light Fixture Unit

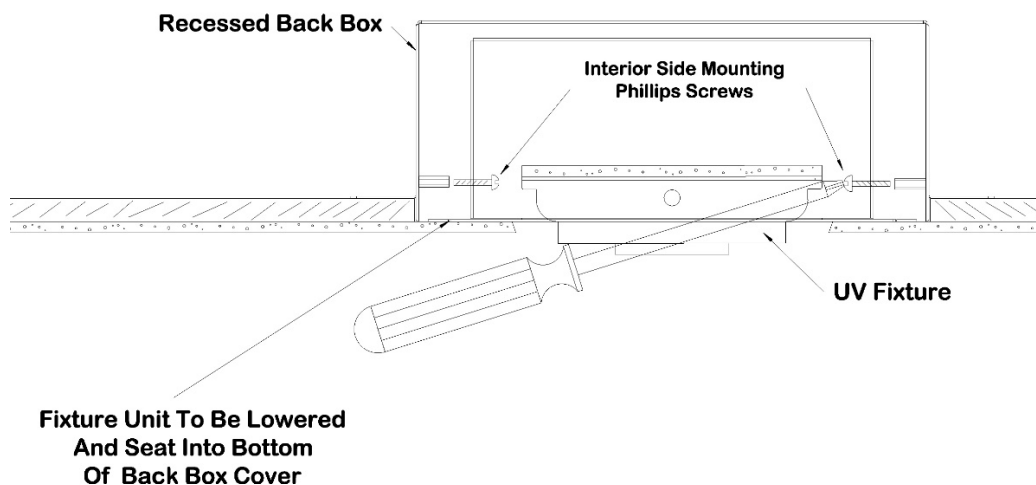
**Note:** The UV light fixture unit is designed to seat into the door frame pattern on top of the bottom cover.

1. While holding the UV fixture head in place, carefully and slowly open the concealed door by rotating the door into the halfway, partially open position. This will allow access for the complete removal of the four (4) temporary #8-32 mounting support fasteners from the interior portion of the UV fixture unit.

2. Remove and discard the four (4) temporary #8-32 mounting nuts and washers (as shown by the arrows in the figure to the right). Allow the fixture head unit to lower down onto the top of the recessed back box cover door frame. The fixture head unit is to be positioned within the recessed rectangular shape that matches the dimensions of the UV fixture unit door frame.



3. Verify that the UV fixture unit is located and centered into the back box cover recessed rectangular area. Upon confirmation that the fixture unit is seated properly, secure the fixture unit within the recessed back box by securely fastening the two (2) #8-32 horizontally positioned mounting screws between the interior sides of the fixture unit and the sides of the recessed back box.





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## Step #11: Applying UV Fixture Unit Door Face Decorative Materials

1. The applying of the door face decorative materials shall be by accomplished by a professionals skilled in this work. Consult architectural building project personnel for instructions in the safe and secure mounting of decorative door materials to the fixture unit door.
2. The UV fixture unit door metal face panel may be removed to aid in the attachment of the decorative door face materials, if desired. Remove the metal door face by removing the four (4) #6-32 nylon locking nuts located on the interior side of the rotating door assembly.
3. Re-attach the decorative door metal face, upon completion of the added decorative door face materials, to the rotating door assembly, by using all four (4) of the provided #6-32 nylon locking nuts. Securely tighten the nylon locking nuts. The nylon locking nuts ***must be used***.

**Note:** Once installation is complete the unit may be energized for use.

## Step #12: Testing the UV Fixture Unit

1. Prior to installing surround sub-layer ceiling materials, and surrounding finished matching decorative ceiling materials, test and confirm the complete successful operating sequences of the UV fixture unit.
2. Assure the proper clearances of the finished decorative materials on the door and the surrounding ceiling areas so that there is no obstruction to the free movement of the powered door rotating operation.



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## Troubleshooting

### Symptom:

Door does not automatically rotate when energized/called upon by remote building automation system.

### Possible corrective measure(s):

1. Verify AC power is energized to the unit.
2. Verify that internal cable connectors are securely connected.
3. Confirm the connections of remote activation (RA) control system with automated building control system personnel.

## Taking a Unit Out of Service

If there is a chance a unit may need to be removed from service, later, to be used on a different VAC power input circuit, tag the unit's current primary input lead conductors as 120 VAC.

## Warranty

All Concealite fixtures are tested and are guaranteed to be free from defective materials and workmanship for a period of three years (3) from date of shipment, under normal operations and proper use. Correction of all defects shall be by replacement or repair (at our discretion) and shall constitute fulfillment of all manufacturer's obligations. We will not allow any charge for labor, materials, etc. that does not have our written approval before the work has begun. Damage incurred in handling or in transit are not covered. Any other warranty, expressed or implied, is hereby void. Modifications to the product or failure to follow these installation instructions will void the warranty.

## Save These Instructions