



Direct Supply®
PURESCAPE™
FAR-UVC LIGHTS

Owner's Manual

Please keep and refer to this Owner's Manual.

Thank you for purchasing this Direct Supply Purescape™ Far-UVC Lights. In this owner's manual, you'll find important information that you should read before assembling and using this device. If at any time you do not understand how to use this product, or you suspect it may be damaged, DO NOT USE and immediately contact the distributor that sold this product to you. This owner's manual is compiled from the latest specifications and product information available at the time of publication. Changes may be made to this manual at any time. Contact your distributor for a current copy of this owner's manual.

Introduction

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Important Safeguards

⚠ WARNING: READ AND FOLLOW ALL SAFETY INSTRUCTIONS

Failure to follow all instructions listed may result in serious injury.

When using electrical equipment, basic safety precautions should always be followed including the following:

⚠ WARNING - risk of personal injury: Eye damage may result from directly viewing the light produced by the lamp in this equipment. Always turn off lamp before servicing.

⚠ CAUTION - risk of personal injury: This equipment is designed for use with germicidal lamps or UV sources. Strict adherence to the installation directions is necessary to prevent occupant eye and skin exposure to harmful radiation.

- A.** This equipment is designed for use with germicidal UV radiation sources and must be installed in compliance with competent technical directions to prevent risk of personal injury from UV radiation.
- B.** UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce risk of overexposure this equipment must be installed in accordance with the manufacturer's site planning recommendations. This may include instructions on the relative location of each germicidal system component, the minimum distances between UV generating devices and other objects or surfaces, and protection from line-of-site exposure to UV radiation in occupied spaces located above the equipment mounting area. (e.g. upper floor balconies, open staircases, etc)
- C.** UV and optical radiation can be reflected by surrounding surfaces such as ceilings and walls. Since the reflective properties of surfaces can vary wildly, it should be considered as part of site planning. Follow the manufacturer's recommendations for selecting appropriate ceiling and wall finishes.
- D.** It is the responsibility of the installer to ensure that persons will not be exposed to excessive UV or optical radiation during equipment operation. This will require the installer to conduct an assessment of irradiance or illuminance levels in the surrounding occupied spaces prior to occupancy. Use included Dosimeter cards to validate installation.
- E.** Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel. Never install devices lower than 7 feet height. Always follow installation guidelines to set the units to the correct installation height and duty cycle. Failure to follow directions can lead to overexposure and damage to eyes and skin.
- F.** Maintenance and servicing of this UV generating equipment shall be performed by authorized personnel. Service personnel must wear appropriate Personal Protective Equipment (PPE) if the equipment will be in operation during the maintenance or servicing work. PPE including protective eyewear should always be worn when servicing or installing UVC Lamps. Contact the equipment manufacturer for PPE recommendations and guidance.
- G.** When replacing lamps, replace them only with the lamps for which the equipment is marked and intended.
- H.** The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition. Do not use this equipment for other than intended use.

Support information for installer:

UVC Cleaning Systems, Inc.

810.358.7202

uvccleaningsystems.com

Workplace & Personal Safety

Special Precaution:

⚠ CAUTION: Placement of units at the proper mounting height is critical to ensuring that users are not overexposed to UV light. Follow all mounting instructions when installing the units.

⚠ WARNING: Procedures, which if not properly followed, create the probability of serious injury OR create a high probability of superficial injury.

⚠ WARNING: Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

Warnings:

- This product is for indoor use only to decontaminate an area using UVC light.
- Do not use device if it is damaged as this may cause injuries. Contact the distributor for repair.
- Store devices out of the reach of children and other untrained personal when not in use.
- Equipment should never be disassembled, opened or altered by the user. This could create a safety issue and will void the warranty.
- If lamps are broken or damaged, follow clean up procedures found in this document.
- Do not remove safety labels, they are there for your protection.
- Always inspect power cord before use, if power cord is damaged, do not operate, call the distributor immediately.

Direct Supply[®] Purescape[™] Far-UVC Lights Efficacy

Domain	Species	Methods ¹⁻⁷				
		222nm	254nm	70% ethanol	405nm	
Bacteria	MRSA (Methicillin-Resistant Staphylococcus aureus)	+++	+++	+++	+	
	Pseudomonas aeruginosa	+++	+++	+++	+	
	Escherichia. coli 0157	+++	+++	+++	+	
	Salmonella Typhimurium	+++	+++	+++	+	
	Campylobacter Jejuni	+++	+++	N.D.	+	
	Bacillus cereus	Vegetative cell	+++	+++	++	+
		Spore	+++	++	—	—
	Bacillus subtilis	Vegetative cell	+++	+++	N.D.	+
		Spore	+++	++	N.D.	—
Clostridium difficile	Spore	+++	++	—	—	
Molds and Yeasts	Candida albicans	+++	+++	+++	+	
	Penicillium expansum	+++	+++	N.D.	+	
	Aspergillus niger	Vegetative cell	+	+	+++	+
		Spore	+	+	N.D.	—
Virus	MS2	+++	+++	N.D.	—	
	Feline Calicivirus	+++	+++	—	—	
	Influenza A	+++	+++	N.D.	—	
	SARSC- oV2-	+++	+++	N.D.	—	

Table X, Inactivation effect of 222-nm, 254 nm UVC irradiation and 70% ethanol on the various species. Dose of UVC radiation to achieve 3-log reduction of the species is grouped as follows. <50 mJ/cm2: +++, ~100 mJ/cm2: ++, ~1000 mJ/cm2: +, >1000 mJ/cm2: -. Treatment time with 70% ethanol to achieve 3-log reduction of the species is grouped as follows. <10 sec: +++, ~20 sec: ++, ~30 sec: +, >30 sec: -. N.D. means no data. The data shown in green were studied and provided by Ushio Inc.

References

1. CM Springorum et al., Conference: XIV international congress of the International Society for Animal Hygiene, At Vechta, Volume: 2, Page 740-742, 2009
2. D Wang, T Oppenlander, MG El-Din, and JR Bolton, "Comparison of the disinfection effects of vacuum-UV (VUV) and UV light on bacillus subtilis spores in aqueous suspensions at 172,222 and 254 nm," Photochem. Photobiol., vol. 86, no. 1, pp. 176-181, 2010.
3. A. N. Edwards, S. T. Karmi, R. A. Pascual, L. M. Jowhar, S. E. Anderson, and S. M. McBride, "Chemical and stress resistances of clostridium difficile spores and vegetative cells," Front. Microbiol., vol. 7, no. OCT, pp. 1-13, 2016.
4. S. E. Beck, H. B. Wright, T. M. Hargy, T. C. Larason, and K. G. Linden, "Action spectra for validation of pathogen disinfection in medium-pressure ultraviolet (UV) systems," Water Res., vol. 70, pp. 27-37, 2015.
5. J.C. Doultree, J. D. Druce, C. J. Birch, D.S. Bowden, and J. A. Marshall, "Inactivation of feline calicivirus, a Norwalk virus surrogate," J. Hosp. Infect., vol. 41, no. 1, pp. 51-57, 1999.
6. Kitagawa, et al. (2020) DOI: <https://doi.org/10.1016/j.ajic.2020.08.022>.
7. Welch, et al., Sci. Rep. 8, 2752 (2018). Buonanno. et al., Sci. Rep.10, 10285 (2020).

Safety

UV-C Comparison Studies

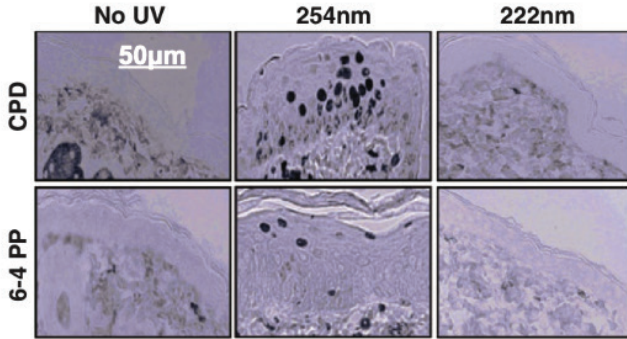


Fig. 1 Comparison of cross-sectional images of UVC-induced premutagenic skin lesions CPD (cyclobutane pyrimidine dimers) and 6-4PP (photoproducts) in the dorsal epidermis of mice. A UV dose of 157 mJ/cm² was used for both 254 and 222 nm¹.

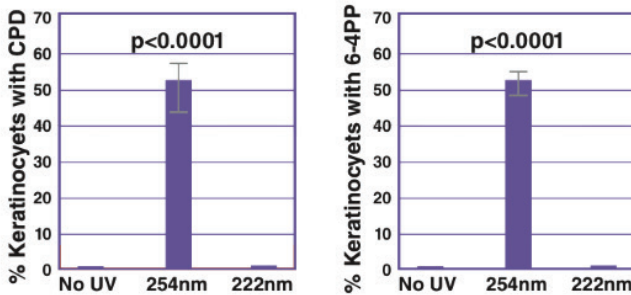


Fig. 2 & 3 Average percent of keratinocyte cells exhibiting dimers (Fig 2. - right CPD; Fig 3. - left 6-4PP) measured in UVC-induced premutagenic DNA lesions in nine randomly selected fields of view per mouse (n=3)¹.

Comparison (254nm VS 222nm) for Spore Inactivation²

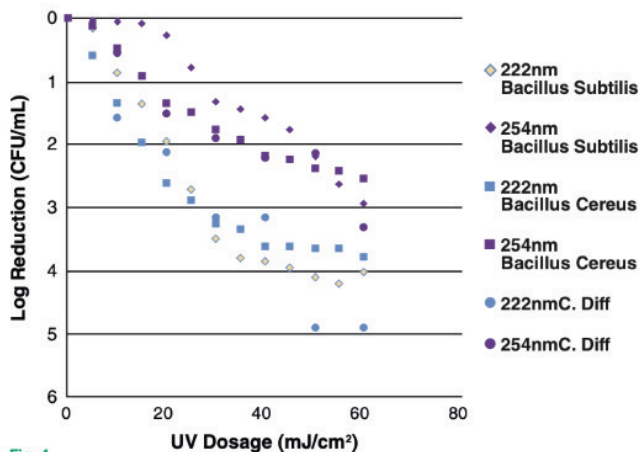
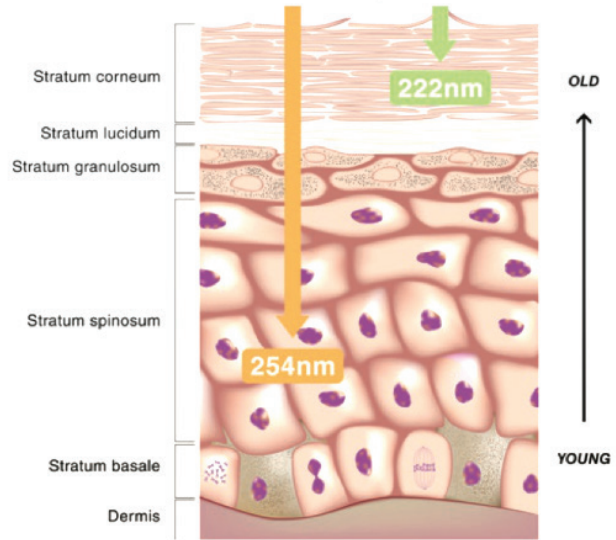


Fig. 4

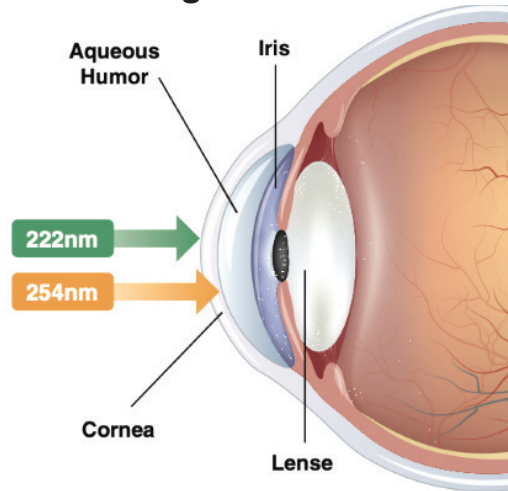
UV-C Comparison Studies

Structure of the Epidermis



Light at 222nm far UV-C is absorbed by the Stratum corneum (dead skin cells)

Damage of Cornea



Unlike conventional UV light, 222nm far UV-C is absorbed in the tear layer of the cornea and is much less likely to cause eye damage.³

All safety testing was done with Ushio's proprietary filter technology to provide only narrowband 222nm light emission.

References

- Buonanno, Manuela; Ponnaiya, Brian; Welch, David; Stanislauskas, Milda; Randers-Pehrson, Gerhard; Smilenov, Lubomir; Lowy, Franklin D.; Owens, David M.; Brenner, David J... Germicidal Efficacy and Mammalian Skin Safety of 222nm UV Light. Radiation Research. 2017 April; 187(4): 483-491.
- Ushio Inc. Internal Data
- Kolozsvari, Lajos; N6gradi, Antal; Hopp, Bela; Bor, Zsolt. UV Absorbance of the Human Cornea in the 240- to 400-nm Range. Investigative Ophthalmology & Visual Science July 2002, Vol.43, 2165-2168.

Intensity

Models:

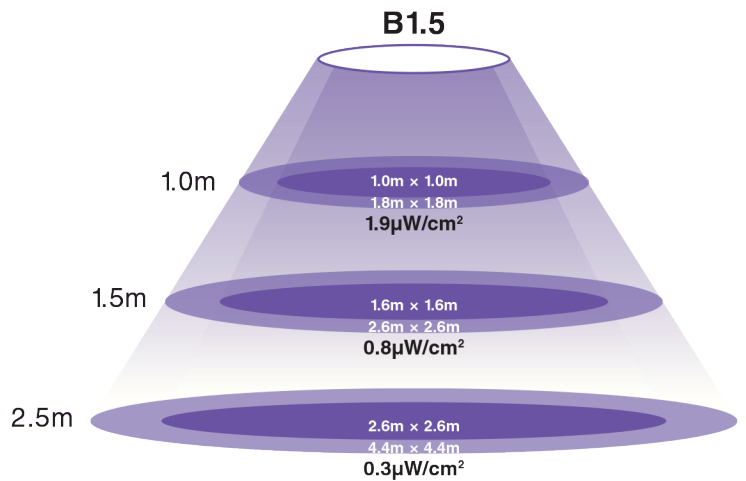
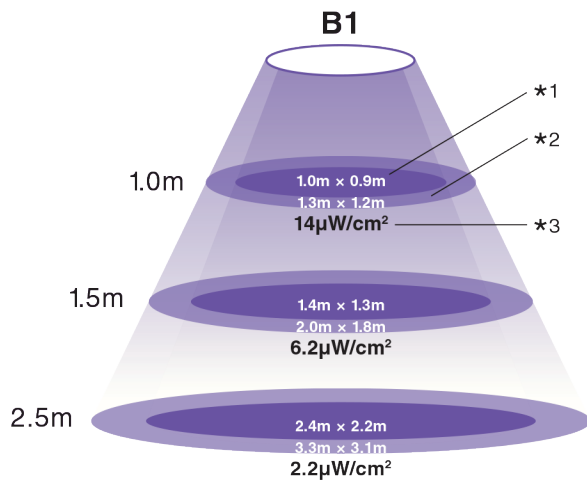
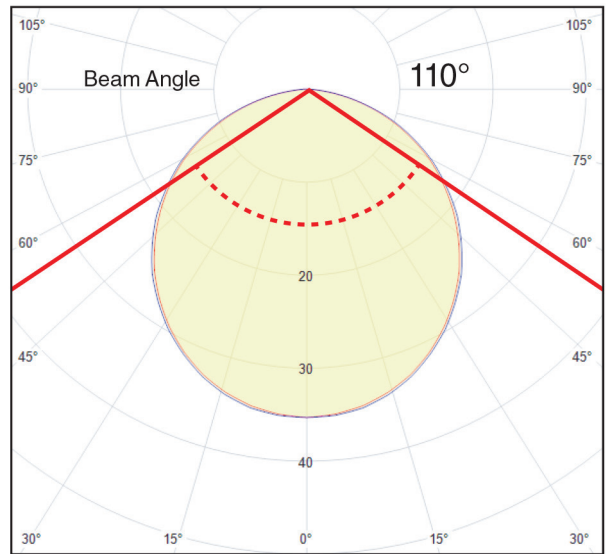
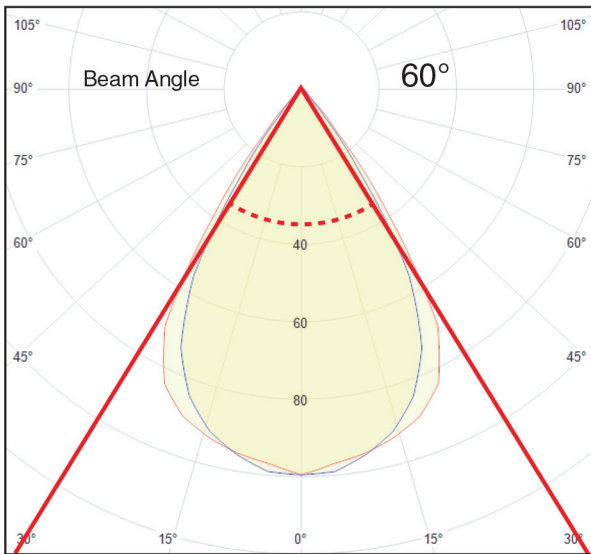
Direct Supply® Purescape™ Far-UVC Pendant Style Unit

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction

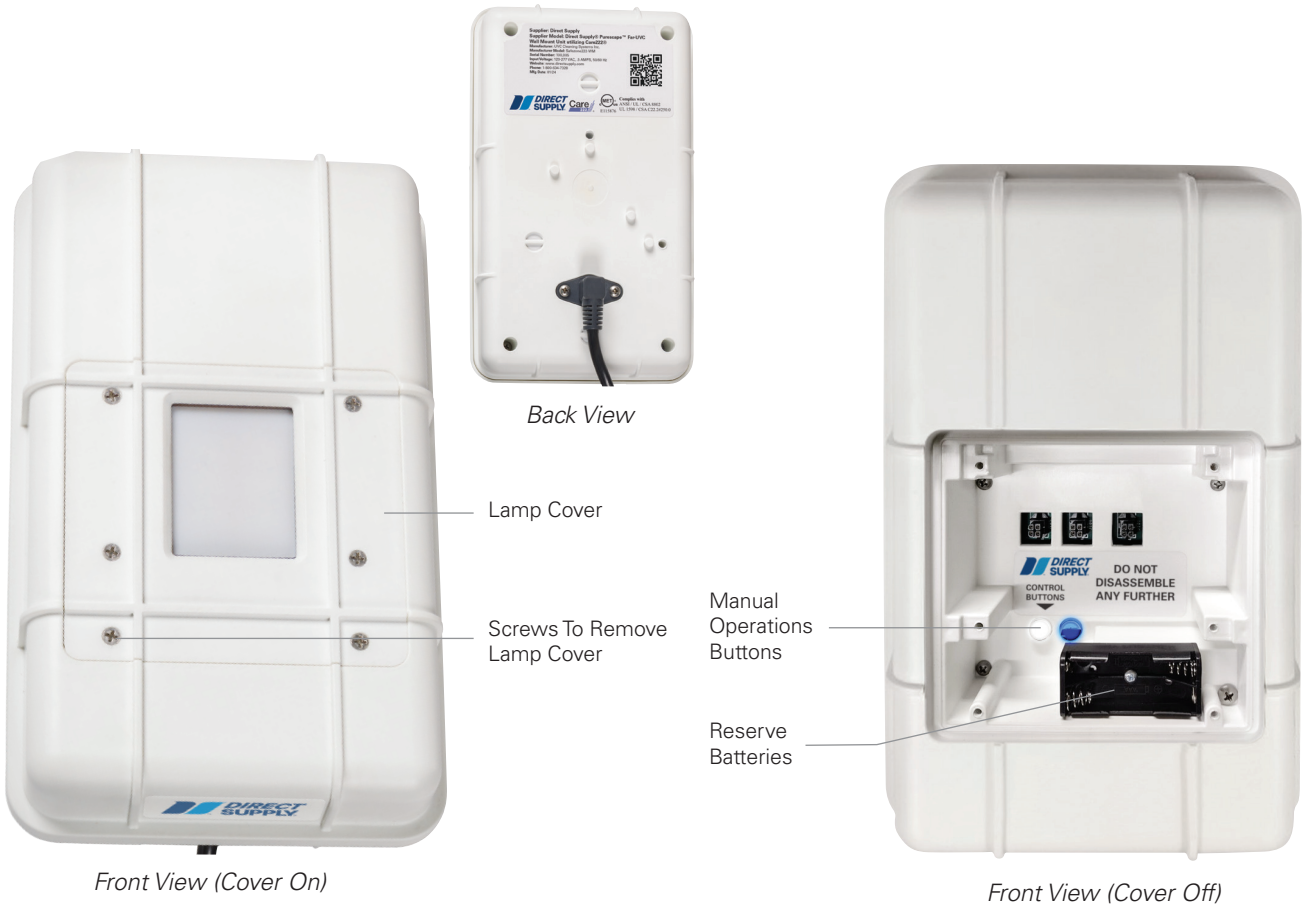
Models:

Direct Supply® Purescape™ Far-UVC Wall Mount Unit



- *1 Area of >60% Peak Irradiance
- *2 Area of >30% Peak Irradiance
- *3 Peak Irradiance

Product Overview



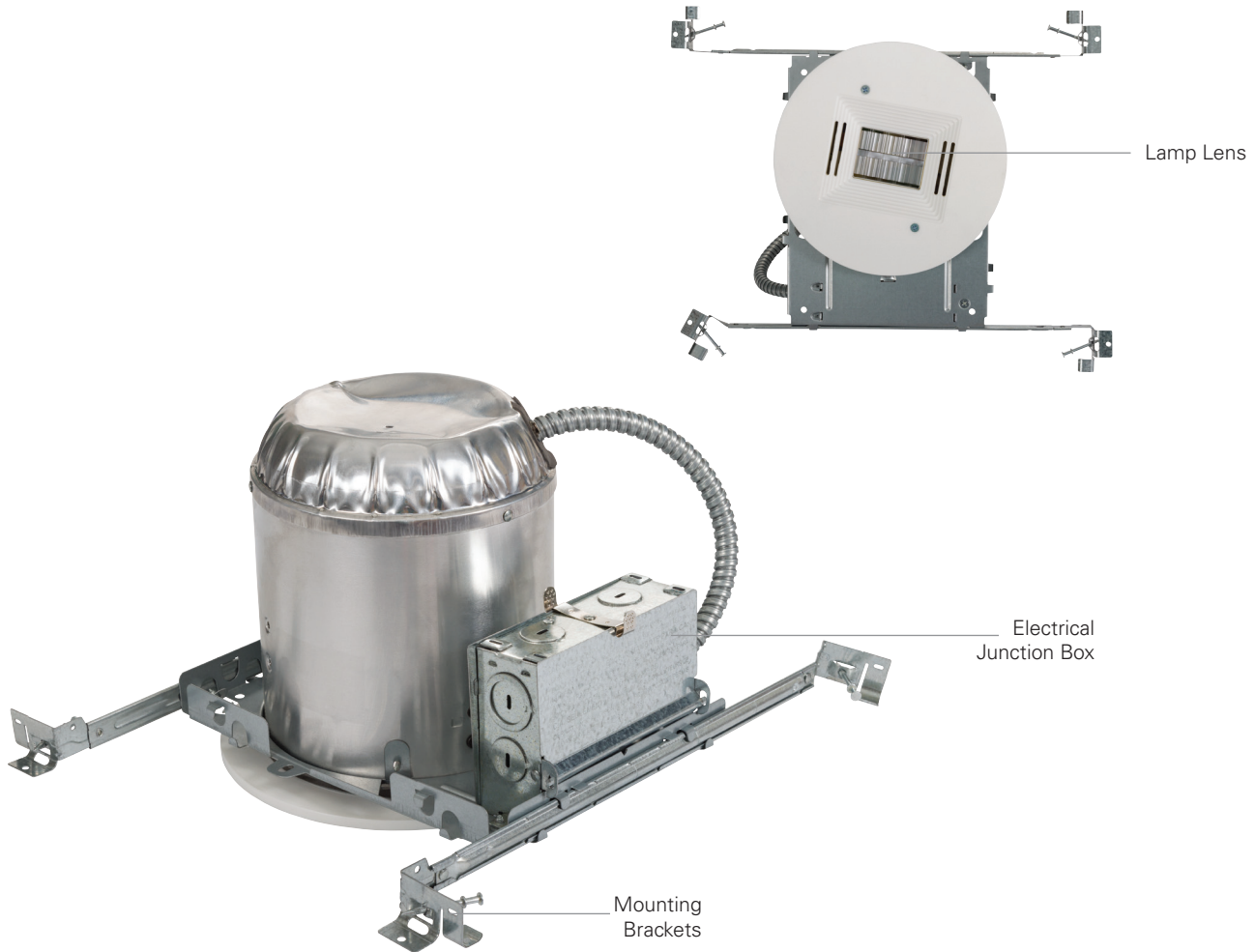
Model: Direct Supply® Purescape™ Far-UVC Wall Mount Unit	
Characteristic	Specification
Application	This mobile device is for indoor use only to help disinfect an area using 222nm UVC light
Height	10.625"
Width	6.375"
Depth (w/Mount)	5.375"
Weight	3 lbs 1 oz
Electrical rating	120 VAC and 277 VAC options
Power Cord	9 ft Power Cord



Model: Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction

Characteristic	Specification
Application	This device is for indoor use only to help disinfect an area using 222nm UVC light
Height	12.5"
Housing Width	7.75"
Aperture Width	8"
Weight	3 lbs 2 oz
Electrical rating	120 and 277 VAC options VAC / .5 Amp
Power Cord	Hard Wired

Product Overview *(cont.)*



Model: Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction	
Characteristic	Specification
Application	This device is for indoor use only to help disinfect an area using 222nm UVC light
Height	12.625"
Housing Width	7.625"
Aperture Width	7.625"
Frame Width	14.75" Expandable to 24.75"
Weight	3 lbs 13 oz
Electrical rating	120 VAC and 277 VAC options / .5 Amp
Power Cord	Hard Wired



Model: Direct Supply® Purescape™ Far-UVC Pendant Style Unit	
Characteristic	Specification
Application	This device is for indoor use only to help disinfect an area using 222nm UVC Light
Height	9"
Width	6.5"
Depth	6.5"
Weight	4 lbs 11 oz
Electrical rating	120 VAC and 277 VAC options
Power Cord	Hard Wired

Installation

Sample Site Checklist

(Review and Determine the Following Criteria)

⚠ WARNING - risk of personal injury: Eye damage may result from directly viewing the light produced by the lamp in this equipment. Always turn off lamp before servicing.

⚠ CAUTION - risk of personal injury: This equipment is designed for use with germicidal lamps or uv sources. Strict adherence to the installation directions is necessary to prevent occupant eye and skin exposure to harmful radiation.

Locations to Consider

- High traffic areas
- Locate air input and output locations
- Locate electrical plugs and junction boxes
- Room square footage (see unit floor planner)
- Room floor plan (see unit floor planner)
- Determine which Direct Supply® Purescape™ Far-UVC Light products are best suited for the application
- Determine the most efficient locations for the chosen Direct Supply® Purescape™ Far-UVC Light units (see unit floor plan)

Mounting Considerations

- New construction drywall
- Drop ceiling fixture
- Retrofit - drywall fixture
- Pendant - cathedral mount
- Wood
- New drywall
- Concrete/block
- Steel/metal
- Alternative mounting (on a platform/shelf/mounting pole/etc.)

Supply Voltage

- Electrical Permitting (per local code verification)
- 120VAC
- 277VAC

Type of Electrical Cable Needed

- Romex
- MC cable
- Conduit

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction Installation

Tools & Materials Required

Ladder, BX or NM cable, bx cable connectors (if necessary), keyhole saw, flathead screwdriver, Phillips screwdriver, hammer, insulated pliers, pencil, UL listed electrical tape.

⚠ CAUTION: Before assembling your Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction fixture, refer to the "ELECTRICAL CONNECTIONS" section. A qualified licensed electrician must install the device. Proof of a qualified electrician install is required for UVC Warranty to be active. We will ask for proof of professional electrician installation during the warranty claim. Direct Supply offers a program for qualified electricians to help aid in the installation of Direct Supply® Purescape™ units upon request (additional charges apply).



Before You Begin

1. To ensure the success of the installation, be sure to read these instructions and review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local code, ordinances.
3. **IMPORTANT:** This fixture is an IC type fixture. An IC type fixture may also be used in recessed cavities. However, it may come in direct contact with thermal insulation. Any part of the fixture may be covered by thermal insulation.
4. This fixture is a remodel type fixture. A remodel type fixture is for applications where there is an existing ceiling surface, such as drywall, and the ceiling joists are not accessible. For applications where there is no ceiling surface and the ceiling joists are accessible, such as when a home is under new construction, a new-construction type fixture should be used.
5. **NOTE:** This remodel type fixture uses special C-clips to secure itself to the ceiling material. The C-clips are designed for surfaces that are between $\frac{3}{8}$ " and $\frac{3}{4}$ " thick. These C-clips will not work on surfaces thicker than $\frac{3}{4}$ ".
6. Before starting the installation, disconnect the power by turning off the circuit breaker or by removing the appropriate fuse at the fuse box. Turning the power off by using the light switch is not sufficient to prevent electrical shock.
7. Check if the power source is suitable for the added electrical load. This device is powered with a 120-277 Volt input source and consumes 0.5 Amps of power. Power should be supplied by a 120 or 277 volt, 60 Hz single circuit. A standard 120 volt, 15 amp branch circuit is designed to carry a maximum load of 1800 watts. We recommend that the total wattage of all the lights and appliances, on that circuit, not exceed 80% or 1440 watts, of the maximum system electrical capacity.

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction Installation *(cont.)*

Unpack the Fixture

Check the contents of the box. You should receive:

- Welcome card
- Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction unit
- 6⅞ inch template
- Product manual
- Two (2) 222nm dosimeter cards

Preparing and Mounting the Fixture

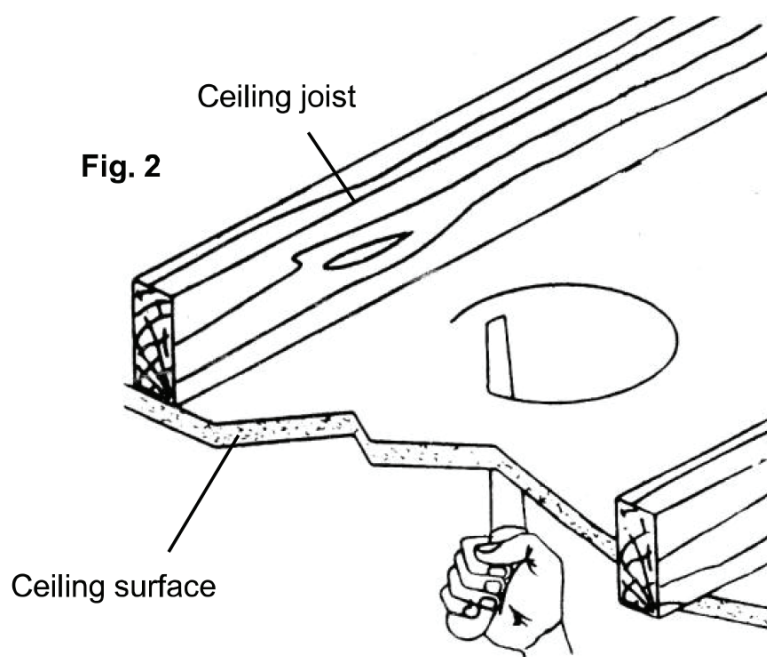
NOTE: First turn off electricity at the circuit breaker or the fuse box. Turning the power off by using a wall switch is not sufficient to prevent electrical shock.

Remove the lamp cover screws (x2) using a Phillips #2 screwdriver to expose the (3) C-clips used to mount the unit.

Set the lamp cover and screws aside for future reinstallation.

Ceiling Installation

1. Choose the location for the fixture, taking into consideration the 6" depth clearance, the location of ceiling joists and the accessibility for the electrical supply. Be sure to reference your facility site plan and site survey for placement.
2. Using a keyhole saw make the hole in the ceiling surface. (Fig. 2) (**NOTE:** Be sure not to make the hole any larger than specified by the template. An oversized hole may not allow for proper installation.)



3. Proceed to the "ELECTRICAL CONNECTIONS" section to connect the housing to the home / building electrical supply.
4. Attach the provided C-clips onto the inside surface of the can by inserting the ends into the provided T-slots, as shown. Feed the junction box through the ceiling hole, followed by the can. Allow the C-clips to hang on the inside surface of the can until the can is completely inserted into the ceiling. (Fig. 3)

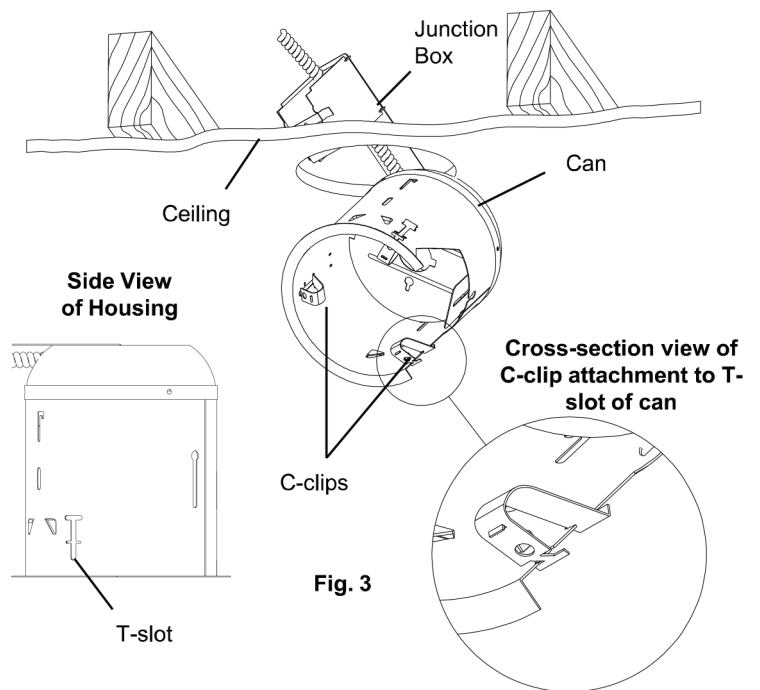


Fig. 3

Note: The T-shaped end of the C-clip should be inserted into the bottom part of the T-slot

5. Push the can complete into the ceiling until the lip of the can is flush against the ceiling. Make sure the C-clips are still hanging on the inside of the can. (Fig. 4)

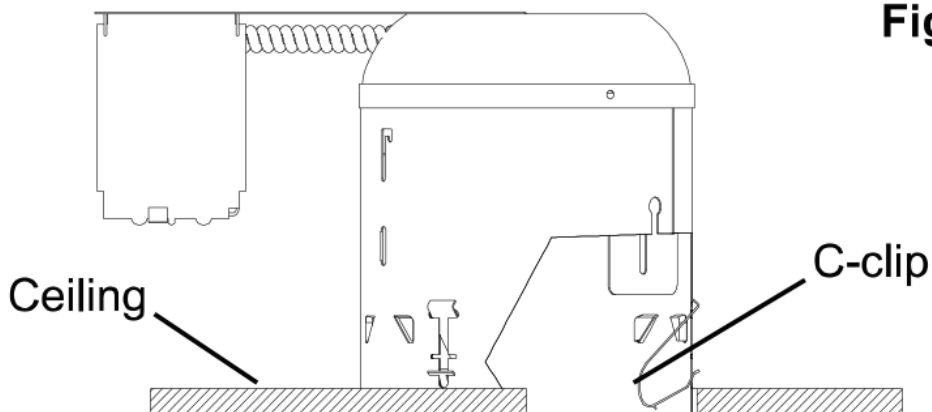
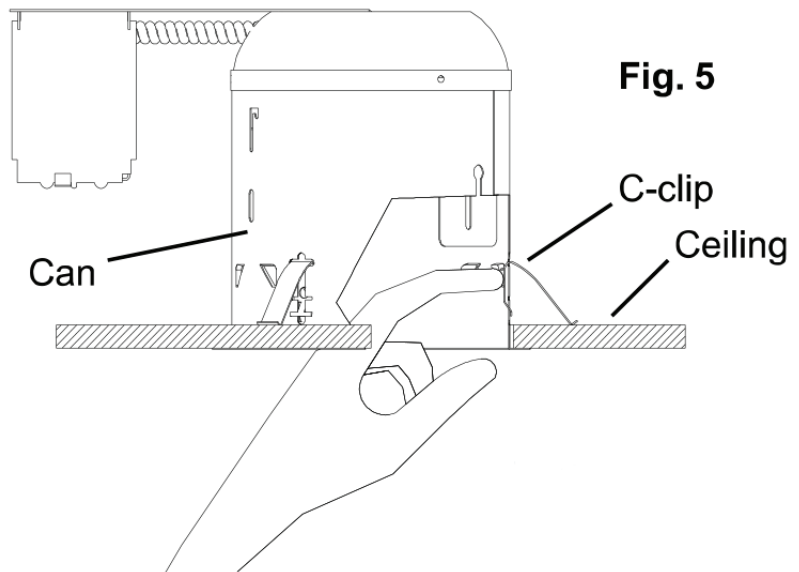


Fig. 4

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction Installation *(cont.)*

6. Push all three ceiling clips through the T-slots until they are outside of the can. Continue to push the clips until they snap into place. (Fig. 5)



Electrical Connections

1. Using flexible conduit or NM (Romex) cable, run the house/building electrical wiring to recessed fixture locations.
2. Open the junction box's door by pulling on its metal tab.
 - A. FOR ELECTRICAL FLEXIBLE CONDUIT - Break off the appropriate sized round knockout using a screwdriver. Feed the conduit through the knockout hole, using an appropriately sized connector to lock the conduit into the junction box. Remove 3" of the conduit metal sheath and remove the plastic or paper over-wrap. (Fig. 7)
 - B. FOR NM (Romex) CABLE - Bend up a rectangular tab locate on the top of the junction box using a screwdriver. Insert the NM-B cable into the slot until 6" of length enters the junction box. Strip 3" of the cable's plastic sheath and remove the paper over-wrap. (See inset of Fig. 7)
3. Strip approximately $\frac{3}{8}$ " of insulation from the ends of all supply wires. Make the following wire connections within the junction box:

WHITE fixture wire TO WHITE (NEUTRAL) supply wire
BLACK fixture wire TO BLACK (HOT) supply wire
GREEN fixture wire TO GREEN OR BARE (GROUND) supply wire

Be sure to use UL Listed wire connectors suitable for the size, type, and number of conductors. Be sure that there are not any loose strands or loose wire. Secure wire connectors with UL Listed electrical tape.

⚠ WARNING - Use supply wires rated 90°C. UL Connections are provided inside the junction box.

4. Close the junction box's door making sure that all wiring and wire connectors are contained within the box. (Fig. 7)

When using the "quick-connect" wire connectors, be sure that there are no loose/exposed wire strands. Wrap each wire connection using UL Listed electrical tape.

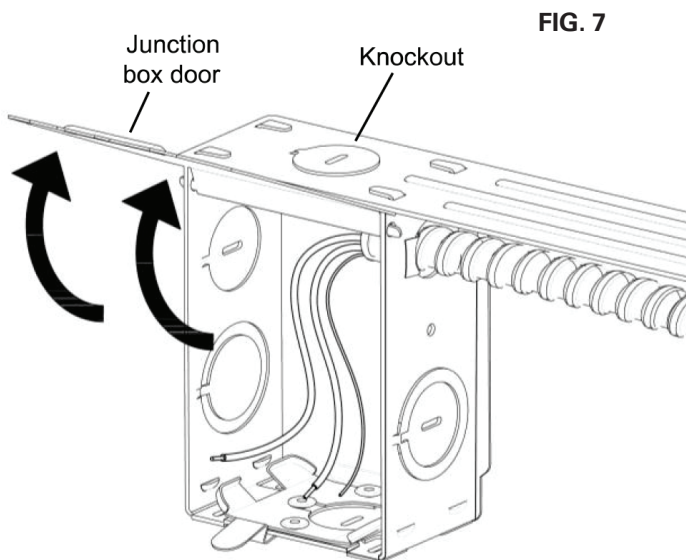
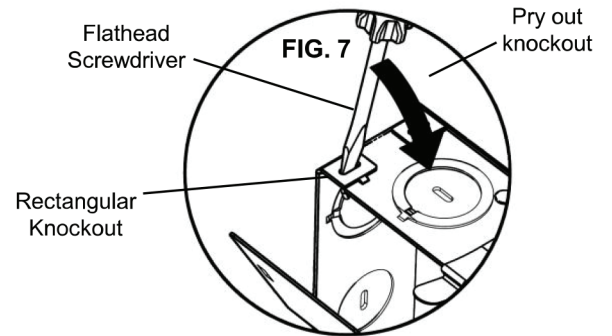
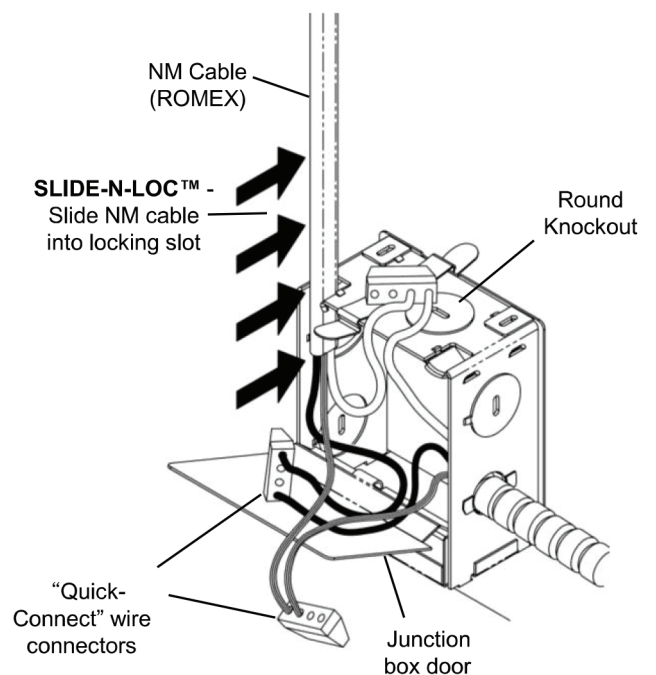


FIG. 7



NOTE: Additional lighting fixtures may be connected to the fixture's junction box. Several knockouts are provided on the junction box to accommodate additional BX or NM cables intended to connect to other fixtures. A marking on the junction box door specifies the maximum number of wires and the maximum wire gauge that can be inserted into the junction box.

5. Close the junction box door until the metal latch snaps, making sure that all wiring and wire connectors are contained within the box.



Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for retrofit construction Installation *(cont.)*

Trim Installation

NOTE: First turn off electricity at the circuit breaker or the fuse box. Turning the power off by using a wall switch is not sufficient to prevent electrical shock.

NOTE: If setting up your device using manual setup, now is the time to program your unit to the appropriate run time. If using the Apple iOS application to set up the device, continue with lens cover replacement.

1. After installing the unit by securing it using the (3) c-clips, finish the ceiling surface. Then reinstall the lamp cover using the (2) phillips screws that were removed during preparation.
2. Replace the lamp cover screws (x2) using a phillips #2 screwdriver.

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction Installation

Tools & Materials Required

Ladder, BX or NM cable, bx cable connectors (if necessary), keyhole saw, flathead screwdriver, phillips screwdriver, hammer, insulated pliers, pencil, UL listed electrical tape.

⚠ CAUTION: Before assembling your Direct Supply® Purescape™ -NC fixture, refer to the “ELECTRICAL CONNECTIONS” section. A qualified licensed electrician must install the device. Proof of a qualified electrician install is required for UVC Warranty to be active. We will ask for proof of professional electrician installation during the warranty claim.

Direct Supply, Inc. and its partners offer a certification program for qualified electricians to help aid in the installation of Direct Supply® Purescape™ units.



Before You Begin

1. To ensure the success of the installation, be sure to read these instructions and review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local code, ordinances.
3. Before starting the installation, disconnect electricity at the circuit breaker or the fuse box. Disconnecting power by using the wall switch is not sufficient to prevent electrical shock.
4. This product has a SLIDE-N-LOC™ feature, which is used to secure NM (Romex) cable to the junction box, in lieu of a cable connector. This feature will not work with BX (armored) cable. For BX cable, cable connectors need to be purchased separately. See the “ELECTRICAL CONNECTIONS” section.
5. This is a new-construction fixture. This new-construction fixture can be installed in applications where the ceiling surface has yet to be installed and the ceiling joists are exposed, such as when a home is under new construction. If a ceiling surface already exists and there is no access above the ceiling surface, do not use this fixture. A remodel fixture is recommended, instead. This fixture may also be installed onto a drop ceiling, where there is a standard T-bar grid in place.
6. Check if the power source is suitable for the added electrical load. This device is powered with a 120-277 Volt input source and consumes 0.5 Amps of power. Power should be supplied by a 120 or 277 volt, 60 Hz single circuit. A standard 120 volt, 15 amp branch circuit is designed to carry a maximum load of 1800 watts. We recommend that the total wattage of all the lights and appliances, on that circuit, not exceed 80% or 1440 watts, of the maximum system electrical capacity.

Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction Installation *(cont.)*

Unpack the Fixture

Check the contents of the box. You should receive:

- Welcome card
- Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction unit
- 6 inch template
- Product manual
- Two (2) 222nm dosimeter cards

Preparing and Mounting the Fixture

NOTE: First turn off electricity at the circuit breaker or the fuse box. Turning the power off by using a wall switch is not sufficient to prevent electrical shock. (FIG 1)

Remove the lamp cover screws (x2) using a phillips #2 screwdriver.

Set the lamp cover and screws aside for future reinstallation.

NOTE: Insulation may completely cover fixture.

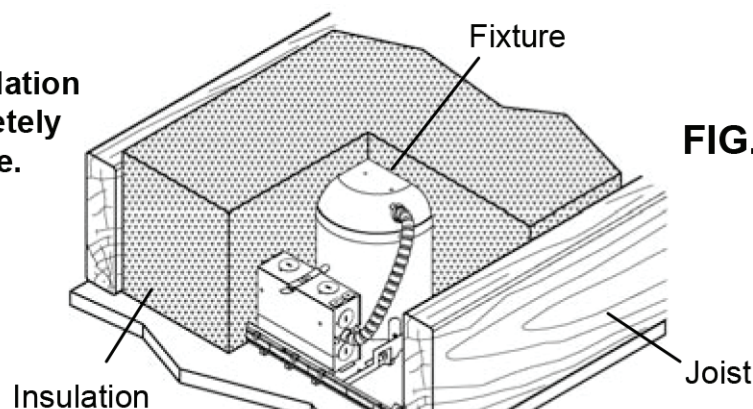


FIG. 1

Hanger Bar Preparation

The hanger bars are designed for joists that are spaced 16" to 26" (center to center) apart. If the joists are less than 16" apart, the hanger bars must be shortened to accommodate the narrower space. To shorten them:

1. Remove the hanger bars from the plaster frame. This may require opening the guides of the plaster frame using pliers.
2. Spread the bars as wide as possible. (FIG. 2)

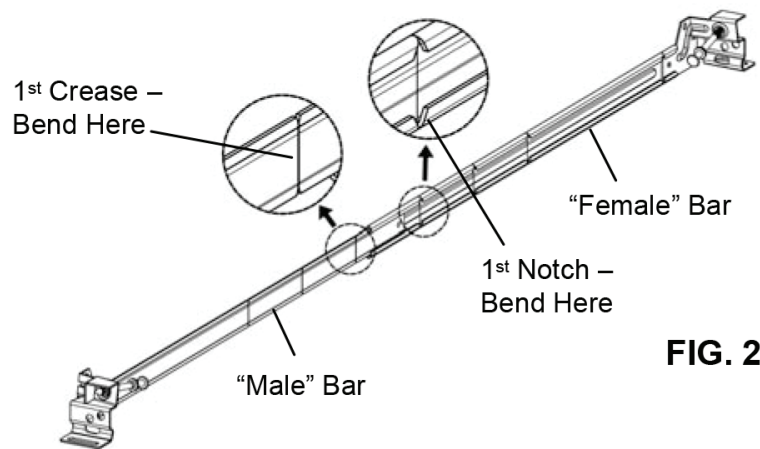
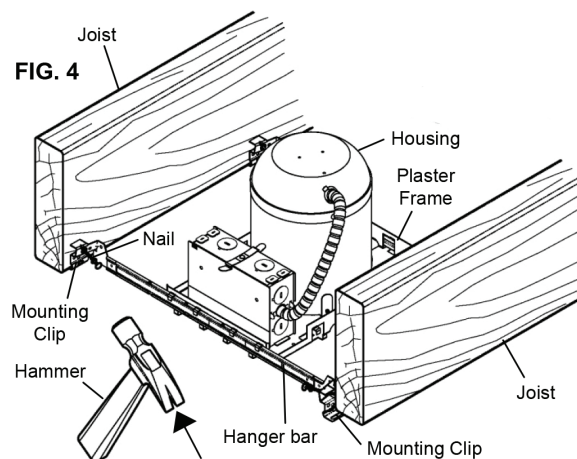
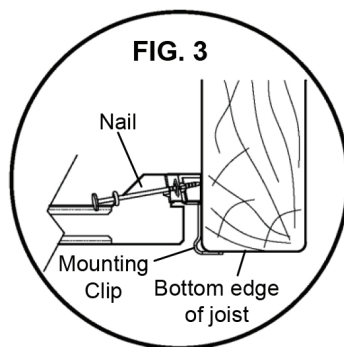


FIG. 2

3. For each hanger bar, bend the "male" bar, back and forth at the 1st crease from the center until it splits. Bend the "female" bar, back and forth, at the 1st notch from the center until it splits. (FIG. 2)
4. Slide the "male" and "female" bars together and determine if the hanger bar has been shortened enough. If not, separate the "male" and "female" bars and break off additional material at the next crease and notch. Continue to break off material until proper length is achieved. Do not break off any more material than necessary.
5. Once proper length is achieved, separate the "male" and "female" bars. Slide the "female" bars into the guides of the plaster frame. Slide the "male" bars into the "female" bars.

Ceiling Joist Installation

1. Choose the location for the fixture, taking into consideration the required 7" clearance and the accessibility to the electrical supply.
2. Raise the housing/hanger bar assembly to the desired location between the two ceiling joists. Adjust the width of both hanger bars to the distance between the joists. Position the assembly so that the mounting clips of the hanger bars cup underneath the bottom edges of the joists. Hammer down the nails of the hanger bars into the joists to secure the assembly into place. (FIG. 3 and FIG. 4)



3. Slide the plaster frame along the hanger bars to the desired position. Using pliers squeeze the guides of the plaster frame tightly around the hanger bars to lock the position of the plaster frame.
4. Proceed to the "ELECTRICAL CONNECTIONS" section.
5. Install the insulation around the housing, if desired. Install the ceiling material, such as drywall, over the housing. A template is provided to assist in making the holes in the ceiling material. (**NOTE:** Blown-in Insulation may also be installed after the ceiling material has been installed.)
6. Proceed to the "TRIM INSTALLATION" section.

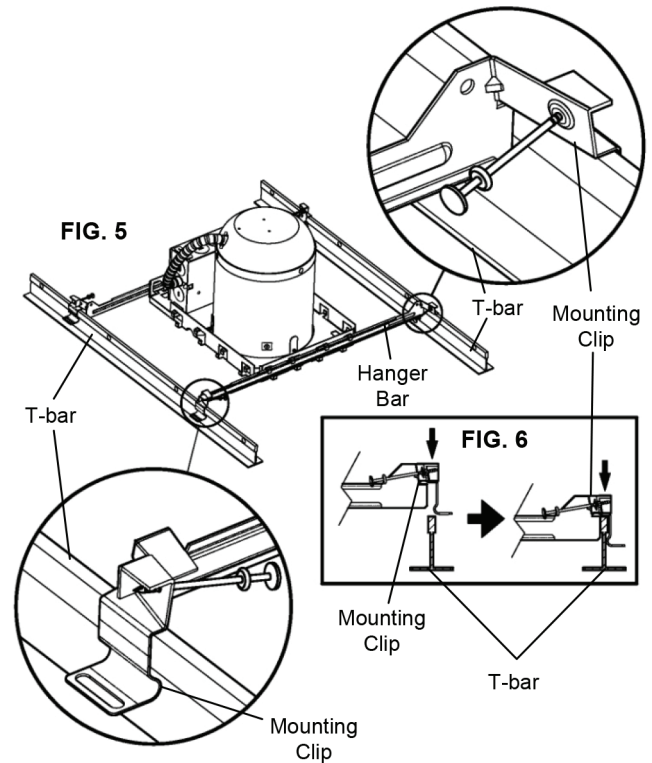
Direct Supply® Purescape™ Far-UVC Ceiling Mount Unit for new construction Installation (cont.)

Drop Ceiling Installation

1. Choose the location for the fixture, taking into consideration the required 7" clearance and the accessibility to the electrical supply.
2. Install a ceiling tile onto the T-bar grid at the installation location. Using the provided template and a keyhole saw make a hole at the desired location in the ceiling tile.
3. Place the housing/hanger bar assembly onto the ceiling tile into the newly created hole. Adjust the width of both hanger bars to the distance between the two T-bars, aligning each mounting clip with the top of its corresponding T-bar. Press down on all mounting clips until they snap onto the T-bar. (FIG. 5 and FIG. 6) NOTE: Holes are provided on the mounting clips that can be used to secure the hanger bars to the T-bar.

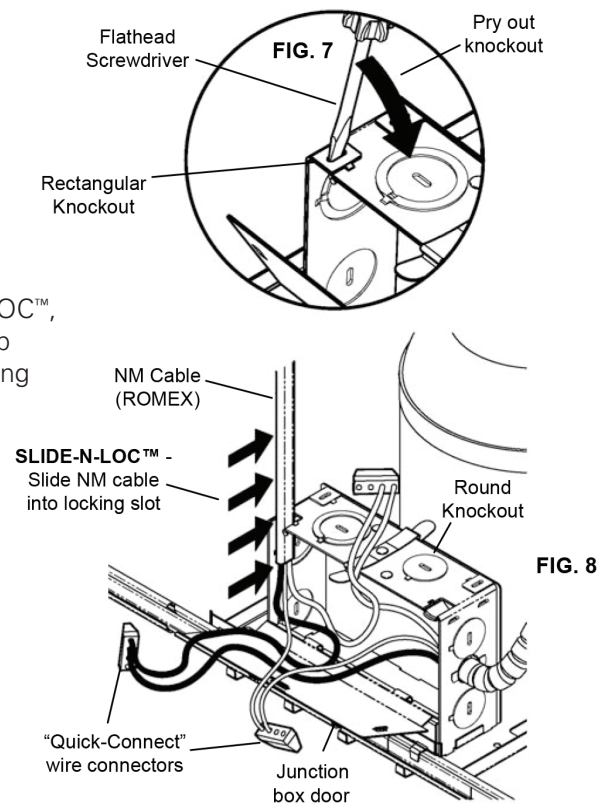
Parts (i.e. screws, hex nuts) can be purchased separately for this purpose.

4. Proceed to the "ELECTRICAL CONNECTIONS" section.
5. Proceed to the "TRIM INSTALLATION" section.



Electrical Connections

1. After installing the unit by securing it using the SLIDE-N-LOC™, install and finish the ceiling surface. Then reinstall the lamp cover using the (2) phillips screws that were removed during preparation.



2. Remove at least 3" of the cable's outer sheath and remove the plastic or paper over-wrap. Strip approximately $\frac{3}{8}$ " of insulation from the ends of all supply wires. Using the provided "quick-connect" wire connectors, make the following wire connections within the junction box:

WHITE Fixture Wire to WHITE (NEUTRAL) Supply Wire

BLACK Fixture Wire to BLACK (HOT) Supply Wire

GREEN Fixture Wire to GREEN / BARE (GROUND) Supply Wire

Trim Installation

NOTE: First turn off electricity at the circuit breaker or the fuse box. Turning the power off by using a wall switch is not sufficient to prevent electrical shock.

NOTE: If setting up your device using manual setup, now is the time to program your unit to the appropriate run time. If using the Apple iOS application to set up the device, continue with lens cover replacement.

Replace the lamp cover screws (x2) using a phillips #2 screwdriver.

Direct Supply® Purescape™ Far-UVC Pendant Style Unit Installation

Tools & Materials Required

Ladder, BX or NM cable, BX cable connectors (if necessary), keyhole saw, flathead screwdriver, phillips screwdriver, hammer, insulated pliers, pencil, UL listed electrical tape.

⚠ CAUTION: Before assembling your Direct Supply® Purescape™ Far-UVC Pendant Style Unit fixture, refer to the “ELECTRICAL CONNECTIONS” section. A qualified licensed electrician must install the device. Proof of a qualified electrician install is required for UVC Warranty to be active. We will ask for proof of professional electrician installation during the warranty claim.

Direct Supply, Inc. and its partners offer a certification program for qualified electricians to help aid in the installation of Direct Supply® Purescape™ units.



Before You Begin

1. To ensure the success of the installation, be sure to read these instructions and review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local code, ordinances.
3. Before starting the installation, disconnect electricity at the circuit breaker or the fuse box. Disconnecting power by using the wall switch is not sufficient to prevent electrical shock.
4. Check if the power source is suitable for the added electrical load. This device is powered with a 120-277 Volt input source and consumes 0.5 Amps of power. Power should be supplied by a 120 or 277 volt, 60 Hz single circuit. A standard 120 volt, 15 amp branch circuit is designed to carry a maximum load of 1800 watts. We recommend that the total wattage of all the lights and appliances, on that circuit, not exceed 80% or 1440 watts, of the maximum electrical capacity.
5. This product uses a cathedral canopy surface mount feature, which is used to secure your Direct Supply® Purescape™ Far-UVC Pendant Style Unit unit to the surface of your ceiling.
6. Power wires will need to be run from above the ceiling or through surface mounted conduit if no above ceiling space is available in accordance with local electrical specifications. A standard 120 volt, 15 amp branch circuit is designed to carry a maximum load of 1800 watts. We recommend that the total wattage of all the lights and appliances, on that circuit, not exceed 80% or 1440 watts, of the maximum system electrical capacity.

Unpack the Fixture

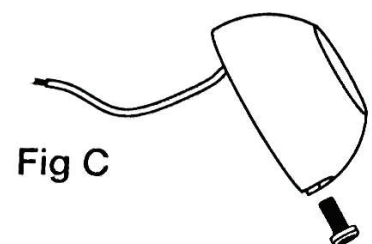
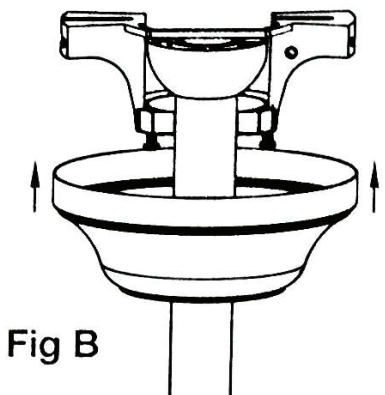
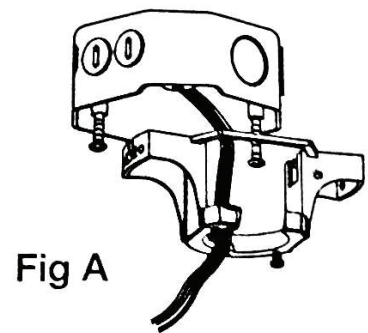
Check the contents of the box. You should receive:

- Welcome card
- Direct Supply® Purescape™ Far-UVC Pendant Style unit
- ¼ in. x 2 in. zinc-plated round head wire lock pin
- Product manual
- Two (2) 222nm dosimeter cards

Preparing and Mounting the Fixture

Canopy Mount

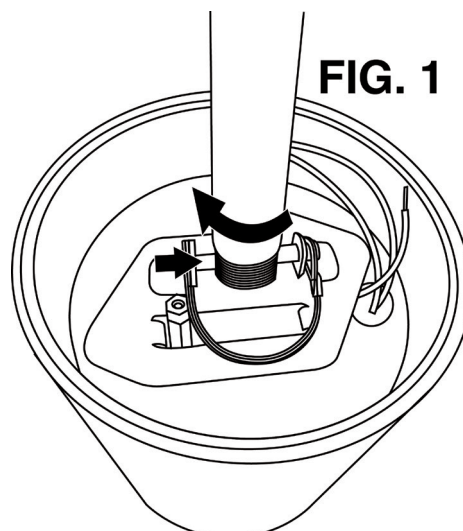
1. Turn off power supply before installation.
2. Loosen the two outlet screws in the outlet box (Fig A).
3. Pass the supply wires through the center hole in the mounting bracket (Fig B).
4. Slide the mounting bracket onto the outlet box 3/16 in -24 x 25 mm machine screws and center the mounting bracket in relation to the outlet box. If necessary, use leveling washers between the slide on the mounting bracket and the outlet box. The flat side of the slide on the mounting bracket should face toward the outlet box, as shown (Fig A).
5. Slide the ¾" downrod through the bottom of the hanger ball and insert the retaining pin through the downrod. Lock pin into hanger ball slots and secure with #8-32 x 10 mm set screw (Fig c).
9. Connect green grounding wire from the hanger ball and mounting bracket to the grounding conductor in the outlet box.
10. Secure the canopy to the mounting bracket with two 5/32 in-32 x 10 mm mounting screws with white head (Fig B).
11. Firmly tighten the two screws to secure the canopy.



Direct Supply® Purescape™ Far-UVC Pendant Style Unit Installation (cont.)

Fixture Installation

1. Remove the metal cover plate on the top of the of the unit using a #2 phillips screwdriver. A single #6 screw is used to secure the cover plate to the fixture. Set aside for future use
2. Select the length of the $\frac{3}{4}$ in canopy pole (not included) that you would like to install your fixture with. Connect the canopy pole to the canopy mount on the ceiling and run your 3 wires (black-hot, white- natural,and green-ground) through the pole.
 - a. Sample acceptable canopy pole
Home Depot/Lowes sourceable Commercial Electric Canopy Pole
Part Number: 521957 (1 foot pole example)
3. Measure 6 inches of wire out the end and cut wires to length.
4. Strip each wire to $\frac{3}{8}$ inch to expose bare wire.
5. Slide the metal cover plate onto the $\frac{3}{4}$ inch canopy pole.
6. Thread the Direct Supply® Purescape™ Far-UVC Pendant Style Unit onto the pole (if applicable). *Some styles of canopy pole may not include threading and may attach using only the cotter pin.* (Figure 1)
7. Secure the pole to the Direct Supply® Purescape™ Far-UVC Pendant Style Unit using the included locking cotter pin.
 - a. **⚠ CAUTION: DO NOT LET GO OF THE PENDANT UNIT UNTIL THE LOCKING COTTER PIN IS SECURED.** (Figure 1)
8. After the unit is secured, then connect the wires using the provided Wago quick connect clip.
 - a. black to black
 - b. white to white
 - c. green to green
9. Secure the connected wires into the unit housing and slide metal cover plate down to cover electrical wires.
10. Screw the metal cover down using the provided #6 screw used to remove it. Ensure that it is secure.



ELECTRICAL CONNECTIONS

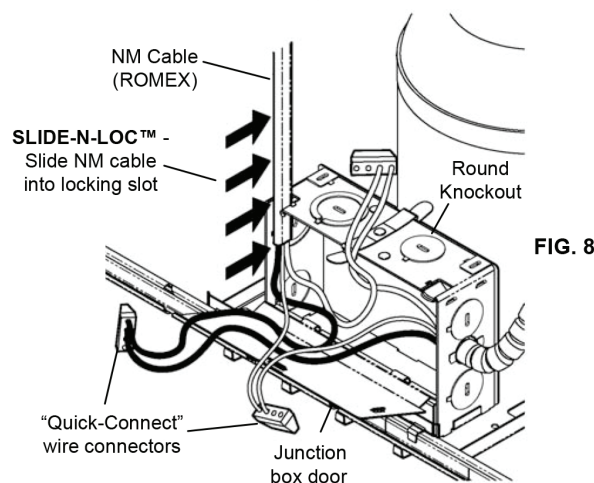
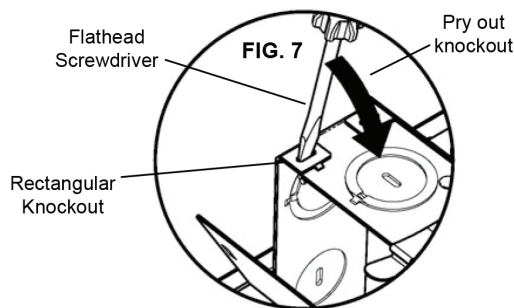
⚠ WARNING: First disconnect electricity at the circuit breaker or the fuse box. Disconnecting power by using the wall switch is not sufficient to prevent electrical shock.

1. Using BX (armored) or NM (Romex) cable, run the supply wiring from the power supply source to the fixture location. **WARNING** - Use supply wires rated 90°C or higher.
2. Open the hinged junction box's door by lifting the metal latch.
 - A.** FOR BX (ARMORED) CABLE - Break off one of the round knockouts (FIG. 8) using a screwdriver. Secure an appropriately sized BX cable connector to the knockout opening. Feed the BX cable through the connector, providing 6" of slack inside the junction box. Tighten the connector to secure the cable in place.
 - B.** FOR NM (ROMEX) CABLE – Break off one of the rectangular knockouts located on the top of the junction box using a screwdriver, creating a slot. (FIG. 7) Slide the NM cable into the slot, as shown, making sure there is 6" of slack inside the junction box. (FIG. 8)
3. Remove at least 3" of the cable's outer sheath and remove the plastic or paper over-wrap. Strip approximately $\frac{3}{8}$ " of insulation from the ends of all supply wires. Using the provided "quick-connect" wire connectors, make the following wire connections within the junction box:

WHITE Fixture Wire to WHITE (NEUTRAL) Supply Wire

BLACK Fixture Wire to BLACK (HOT) Supply Wire

GREEN Fixture Wire to GREEN / BARE (GROUND) Supply Wire



Direct Supply® Purescape™ Far-UVC Wall Mount Unit Installation

Tools & Materials Required

Ladder, flathead screwdriver, #1, #2 & #3 phillips screwdrivers, hammer or impact drill, 1/2" standard drill bit (drywall), 5/32" masonry drill bit (concrete, brick, block), 1/4" socket or socket bit, pencil.

⚠ CAUTION: Before assembling your Direct Supply® Purescape™ Wall Mount Unit fixture, refer to the "ELECTRICAL CONNECTIONS" section. A qualified licensed electrician must install the device. Proof of a qualified electrician install is required for UVC Warranty to be active. We will ask for proof of professional electrician installation during the warranty claim.

Direct Supply, Inc. and its partners offer a certification program for qualified electricians to help aid in the installation of Direct Supply® Purescape™ units.



Before You Begin

1. To ensure the success of the installation, be sure to read these instructions and review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local code, ordinances.
3. Before starting the installation, disconnect electricity at the circuit breaker or the fuse box. Disconnecting power by using the wall switch is not sufficient to prevent electrical shock.
4. Check if the power source is suitable for the added electrical load. Power should be supplied by a 120 volt or 277, 60 Hz single circuit. A standard 120 volt, 15 amp branch circuit is designed to carry a maximum load of 1800 watts. We recommend that the total wattage of all the lights and appliances on that circuit, not exceed 80% or 1440 watts, of the maximum system electrical capacity.
5. This product uses a Ball Mount Fixture which is used to secure your Direct Supply® Purescape™ Wall Mount unit to the wall surface. (Concrete, Block, Brick, Drywall, wood)
6. Make sure there is a standard 15 amp wall plug no more than 8 feet from the Direct Supply® Purescape™ Wall Mount unit.

Installation Height		
Mounting Height	On/Off	Actual Run Time
7 feet	1s / 3s	15s / 45s
8 feet	2s / 2s	30s / 30s
9 feet	3s / 1s	45s / 15s
10 feet	Always On	Always On

Unpack the Fixture

Check the contents of the box. You should receive:

- Welcome Card
- Direct Supply® Purescape™ Wall Mount Unit unit
- Ball mount fixture wall mount
- Mounting hardware, tapcon screws (masonry and wall stud applications)
- Mounting hardware, toggle bolts (hollow wall applications)
- Mounting hardware, ¼" screw (mounting ball mount to unit back)
- Product manual
- Two (2) 222nm dosimeter cards

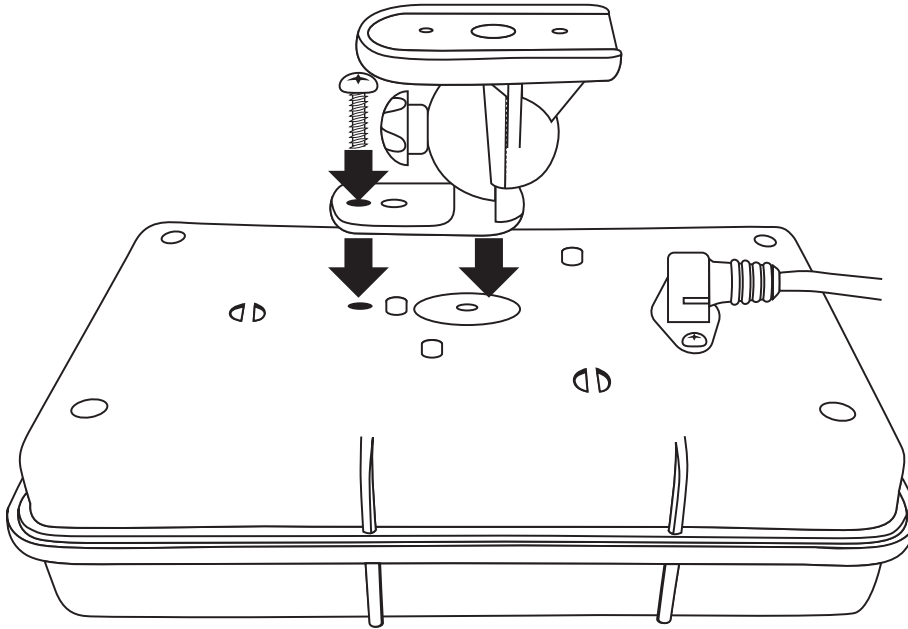
Preparing and Mounting the Fixture

Hollow Wall Installation

1. Locate the set screw on the wall mount that secures the ball unit to the metal wall mounting bracket. Using a #1 Phillips screwdriver, remove the set screw and separate the mounting bracket from the ball mount of the mounting bracket.
2. Using the mounting bracket mark 2 holes on the wall where you are going to position the Direct Supply® Purescape™ Wall Mount and using a ½" drill bit, drill the two holes you will insert the toggle bolts through.
3. Thread screws through the metal mounting plate and secure the toggles to the screws.
4. Fold toggles over bolts and insert them through the ½" holes you drilled through hollow wall.
5. Tighten the two screws while holding the toggles tight to the backside of the drywall/hollow wall so the toggles don't just spin. Alternate screws a few turns at a time until the mounting plate is snug to the wall.
6. Choose one of the two wall mount mounting points on the back of the light unit, Vertical mount, Horizontal mount. After choosing your mounting solution attach the wall mount ball mount to the light unit using the supplied ¼" screw.
7. After the mounting bracket is installed to the wall and the ball mount is attached to the Unit back, slide the ball mount onto the mounting bracket and reinstall the set screw.
8. Plug the Direct Supply® Purescape™ Wall Mount into the 15 amp wall socket located no more than 8 feet from the unit.

See diagram on next page

Direct Supply® Purescape™ Far-UVC Wall Mount Unit Installation *(cont.)*



Masonry or Wall Stud Installation

- 9.** Locate the set screw on the wall mount that secures the ball unit to the metal wall mounting bracket. Using a #1 Phillips screwdriver, remove the set screw and separate the mounting bracket from the ball mount of the mounting bracket.
- 10.** Using the mounting bracket, mark 2 holes on the wall where you are going to position the Direct Supply® Purescape™ Wall Mount. Using a $\frac{5}{32}$ " masonry drill bit, drill the two holes you will screw the 2 supplied Tapcon screws into. If mounting to a stud in a standard wall use a standard $\frac{5}{32}$ " drill bit.
- 11.** Thread the 2 supplied Tapcon™ screws through the mounting bracket and using a hammer or impact drill with a $\frac{1}{4}$ " socket driver, secure the mounting bracket to the wall.
- 12.** Choose one of the two wall mount mounting points on the back of the light unit, Vertical mount, Horizontal mount. After choosing your mounting solution attach the wall mount ball mount to the light unit using the supplied $\frac{1}{4}$ " screw.
- 13.** After the mounting bracket is installed to the wall and the ball mount is attached to the Unit back, slide the ball mount onto the mounting bracket and reinstall the set screw.
- 14.** Plug the Direct Supply® Purescape™ Wall Mount into the 15 amp wall socket located no more than 8 feet from the unit.

Operations

⚠ WARNING: UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce risk of overexposure this equipment must be installed in accordance with the manufacturer's site planning recommendations. This may include instructions on the relative location of each germicidal system component, the minimum distances between UV generating devices and other objects or surfaces, and protection from line-of-site exposure to UV radiation in occupied spaces located above the equipment mounting area (e.g. upper floor balconies, open staircases, etc)

⚠ WARNING: UV and optical radiation can be reflected by surrounding surfaces such as ceilings and walls. Since the reflective properties of surfaces can vary wildly, it should be considered as part of site planning. Follow the manufacturer's recommendations for selecting appropriate ceiling and wall finishes.

⚠ WARNING: It is the responsibility of the installer to ensure that persons will not be exposed to excessive UV or optical radiation during equipment operation. This will require the installer to conduct an assessment of irradiance or illuminance levels in the surrounding occupied spaces prior to occupancy.

Set Up

This device requires programming in order to ensure adherence to UV dosage standards. Dosage-limiting pulsing schedules can be programmed via a free mobile app or manually via the setup instructions below.

To download the setup app, search "far UVC" in the Apple App Store and download the app named "Far UVC". Select the skin option "Direct Supply" when prompted.

To utilize the app, site data and administrator user data must be pre-configured. If you need to set up location or user data or make an update to your data, contact your Direct Supply Account Manager or project coordinator.

Programming and setup via the mobile app is highly recommended to ensure proper dosages and safe use. In the event that a device must be configured manually, use the instructions below.

- 1.** Unplug unit from power source, put on safety glasses.
- 2.** Remove the lens cover by removing phillips screws.
 - a.** 2x screws for can/pendant
 - b.** 6x screws for wall unit
- 3.** Remove UVC Lamp from the housing.
 - a.** Can Pendant: Remove 2 screws securing lamp first, then lamp.
 - b.** Wall: Remove rubber gasket then pull on lamp to remove from housing.
- 4.** Plug the unit into a power source.

Operations *(cont.)*

- a.** The unit will be running a preprogrammed cycle based on previous conditions.
- 5.** Hold both the white and blue manual operation buttons for 5 seconds continuously to enter manual operation set up.
 - a.** When you enter this mode the buzzer will beep for 3 seconds then shut off.
 - b.** The blue LED will be flashing 1 seconds on and 3 seconds off indicating state 1.
- 6.** Hold the white button for 2 seconds to cycle between the different states.
- 7.** Press and hold the white button for 5 seconds to save the state you have selected.
 - a.** A buzzer will sound for 3 seconds then turn off.
 - b.** The lamp will start to run for the desired amount of run time.
 - c.** Secure lamp into housing, then gasket, lens cover using the screws set aside in step 2.

Button Lights		
Mounting Height	On/Off	Actual Run Time
7 feet	1s / 3s	15s / 45s
8 feet	2s / 2s	30s / 30s
9 feet	3s / 1s	45s / 15s
10 feet	Always On	Always On



Product Description

UVC Cleaning Systems devices are Germicidal Ultraviolet C (UVC) decontamination products that are designed to be mobile. The product is shipped fully assembled and provides an easy to use and repeatable process ensuring that your environment is completely treated with germicidal UVC light. The compact and lightweight design was developed with safety, durability and efficiency in mind.

Limited Warranty

We, Direct Supply Manufacturing, Inc. offer to you, as the original purchaser, a warranty for the Direct Supply® Purescape™ Far-UVC Lights. Our warranty applies for the limited warranty period stated below. If any product or product part listed below is defective in material or workmanship during the applicable limited warranty period, we will repair or replace it at our cost. Please note that the decision to repair or replace a product or product part will be at our discretion.

Our warranty applies only if the product is properly maintained by the original purchaser for normal, indoor use and does not cover normal wear and tear, modification of the product, or damage caused by abuse, improper use, failure to maintain, use which exceeds the published product limitations, or the combination of any product with another product. In addition, our warranty does not cover fading, colorfastness, stains, spills or exposure to chemicals, odors, heat or light. In certain cases, we may provide you repair or adjustment instructions and/or replacement parts, and ask you to perform a repair or adjustment or replace a defective part.

Our warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Please note that our limited warranty period begins when we ship the product to you. The limited warranty period and our obligations under the warranty end once you transfer the product to someone else or at the end of the applicable limited warranty period identified below, whichever is earlier.

Product	Limited Warranty
Device warranty against manufacturer defects:	1 Year
Bulb life: 10,000 hours of usage	

Anticipated Usable Product Life is based on normal use with proper maintenance, cleaning and storage. You should still inspect, monitor and care for the product as described in this guide, as the product may need to be replaced sooner than anticipated in particular situations.

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Customer Service

Our promise to you is that you will have a convenient and easy ordering experience, receive a quality far-uvc light and enjoy outrageous customer service. If you have any questions about the far-uvc light you have purchased or would like to request warranty service, please contact the distributor from whom you purchased this far-uvc light.

Support information for installer:

UVC Cleaning Systems, Inc.

810.358.7202

uvccleaningsystems.com



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