

Group: **Applied Systems**

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**Ultraviolet Lights on Daikin
Vision® Air Handlers
Models CAH/CAC**



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Introduction

This manual provides general information about the Ultraviolet Light option for Daikin Vision® Indoor Air Handler, Models CAH/CAC. In addition to an overall description of the unit, it includes removal and installation procedures, maintenance instructions and parts identification.

Description

The ultraviolet light application is designed to irradiate the coil surface along with the drain pan. Germicidal protection is delivered at a wavelength of 254 nanometers in the light spectrum. Light at this wavelength is known as UV-C. Most bacteria, mold, and virus organisms are killed by exposure to UV-C light.

Ultraviolet lights are typically installed on the leaving side of the cooling coils in the unit. Each light module is mounted on a rail and is removable for convenient bulb replacement.

UV Light Power Disconnect switches are factory installed on every access panel that allows a direct line of sight to the UV lamps when opened. These switches are designed to prevent UV exposure when cabinet access panels are opened and must not be disabled.

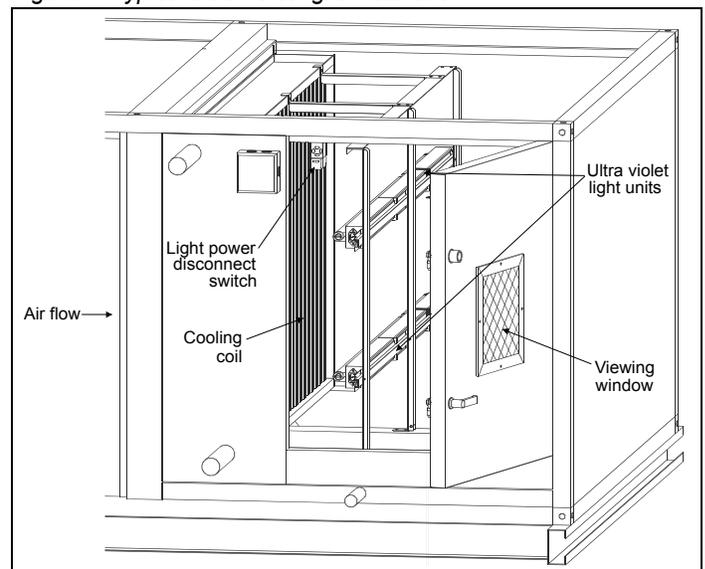
A viewing window near the UV lights allows viewing to determine if the lights are energized. The viewing windows use specially designed glass that blocks harmful UV light.

WARNING

UV-C exposure is harmful to the skin and eyes. Looking at an illuminated UV-C bulb can cause permanent blindness. UV-C skin exposure can cause cancer.

Always disconnect power to power receptacle before servicing. Do not operate if disconnect switch has been disabled.

Figure 1. Typical ultraviolet light installation



Operation

Refer to the wiring schematic on page 4. 115 VAC power for the UV lights is provided by the field. The lights operate whenever the unit is powered and all access panel power disconnect switches are closed. To turn the lights off, disconnect power to the power receptacle.

The normally open interlock switches are wired in series in a circuit that supplies 115VAC to the UV lights when all access panels are closed.

Replacing Bulbs

Replace all bulbs every 12 months regardless of condition. Refer to the manufacturer's suggested replacement interval.

NOTE: A glowing lamp indicates only that the UV light is powered, not that it is emitting the necessary UV-C wavelength for germicidal effect.



WARNING

Personal Injury Hazard. Power supply can cause electrical shock.

Always disconnect all power to unit before servicing.



WARNING

UV-C exposure is harmful to the skin and eyes. Looking at an illuminated UV-C bulb can cause permanent blindness. UV-C skin exposure can cause cancer.

Verify the UV lights are off by using the view window.



WARNING

Florescent bulbs contain mercury, which can cause personal injury if breathed or ingested.

Use appropriate protective gear to clean up broken bulbs.

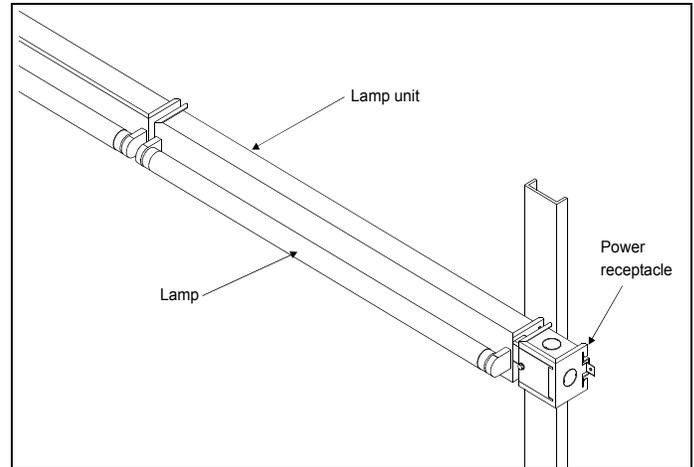
1. Disconnect power to the power receptacle before servicing. Verify the power is disconnected.
2. Before opening the access panels, use the viewing window to make sure the UV lights are off.
3. Before handling, allow bulbs to cool for 5 minutes.
4. Grasp body of bulb firmly at each end.
5. Rotate bulb 90 degrees in either direction.
6. Remove bulb.
7. Reverse process to install replacement bulb.
8. Wipe bulb with clean cloth and alcohol. Avoid touching bulb; fingerprints can degrade performance.
9. Dispose removed bulbs in accordance with local environmental regulations.

Removing Lamp Units

NOTE: Do not open modular UV lamp units. There are no user serviceable components inside.

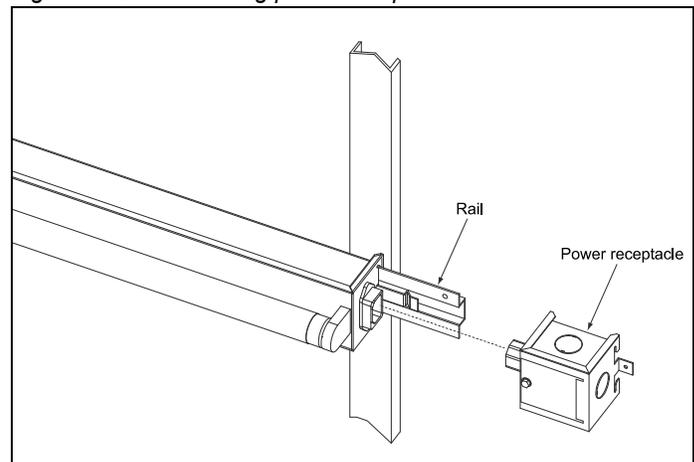
1. Before handling, allow lamps to cool for 5 minutes. See Figure 2 below for lamp unit parts.

Figure 2. Lamp unit parts



2. Unplug the power receptacle from the row of lamps by pulling it apart from the lamp unit. Then slide the receptacle off the rail. See Figure 3.

Figure 3. Disconnecting power receptacle



- Carefully slide one end of the lamp unit to the notches in the rail and pull it out and away from the rail.
- Slide the other end to the notches and pull it out and away from the rail.
- Place the lamp unit on a flat surface.

Replacement Parts List

McQuay PN	Description
205485001	Power Disconnect Switch
205485101	Actuator Key for Disconnect
205484001	18 in. Lamp Holder
205484101	24 in. Lamp Holder
205484201	36 in. Lamp Holder
205485501	Hard Wire Module
205484501	18 in. Lamp
205484601	24 in. Lamp
205484701	36 in. Lamp

Figure 4. Removing lamp units from rail

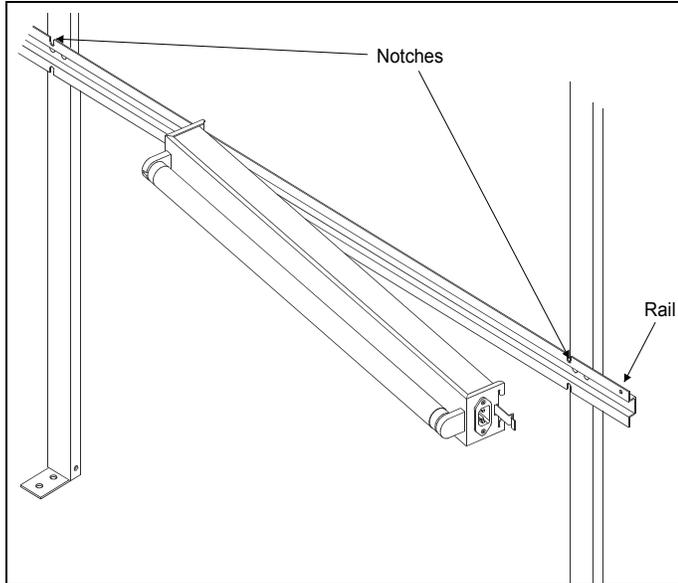
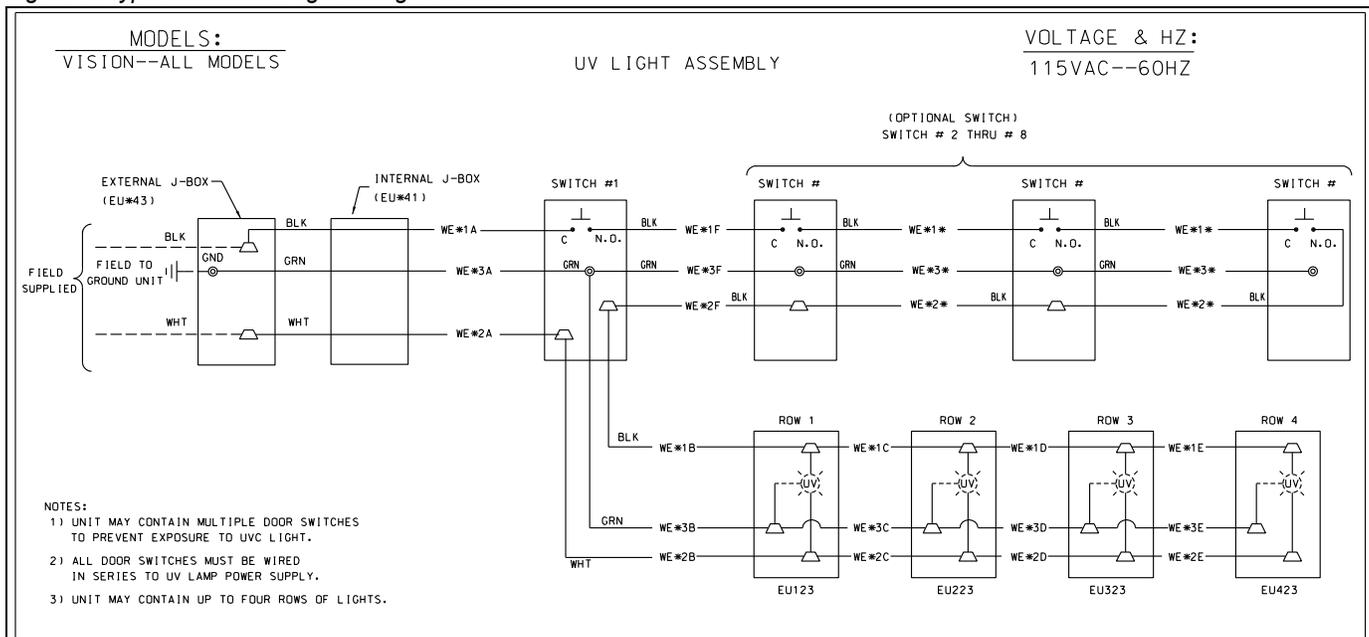


Figure 5. Typical ultraviolet light wiring schematic



NOTE TO FIELD:

Switches are shown with the access panels in the open position.
Lights are on when the access panels are closed and off when the access panels are open.

This document contains the most current product information as of this printing. For the most up-to-date product information, please go to www.DaikinApplied.com.

