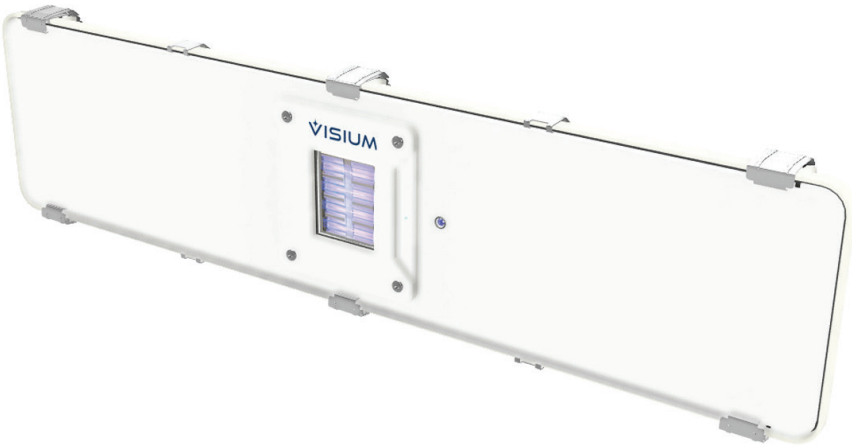


# VISIUM

## APEX INSTALLATION GUIDE



Please scan QR Code for:

- Product support
- Installation information
- Other helpful resources

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# Safety Information

## IMPORTANT SAFEGUARDS READ AND FOLLOW ALL SAFETY INSTRUCTIONS

### UV Radiation Safety

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.

UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce the 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-sight exposure to UV radiation in occupied spaces located above the equipment mounting area (e.g. upper floor balconies, open staircases, etc.).

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

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.

- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Maintenance and servicing of this UV generating equipment shall be performed by authorized personnel.
- When replacing UV light source, replace them only with the UV light source for which the equipment is marked and intended.
- 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.

### Risk Group 1 Safety

Risk Group 1 mounting of this device increases the amount of UV radiation per unit time for people in the room. UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce the risk of overexposure this equipment must be installed in accordance with the manufacturer's site planning recommendations. Risk Group 1 mounting is recommended for hallways, transition areas, and animal containment rooms, such as farrowing barns and brooder barns, with transient human use. Risk Group 1 mounting is not recommended in environments where an individual could remain directly beneath the fixture for more than 3 cumulative hours within an 8-hour exposure period without appropriate PPE.

### Electrical Safety

**WARNING** Risk of electric shock. Disconnect power at the fuse or circuit breaker before installing or servicing.

**WARNING** Risk of fire or electric shock. This product installation requires knowledge of luminaries electrical systems. Installation should be performed only by a qualified electrician in accordance with the National Electrical Code and local building codes.

**WARNING** Risk of fire or electric shock. The input voltage rating of this product is 120–277VAC. AC line voltage must meet the product input voltage rating before installation.

**WARNING** Risk of fire or electric shock. ONLY install this product in ceilings that have the construction features and dimensions shown in the product documents and/or drawings.

**WARNING** Risk of fire or electric shock. Do not make or alter any open holes in an enclosure of wiring or electrical components. Only those open holes indicated in the photographs and/or drawings may be used during installation.

**WARNING** Risk of electric shock. To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

**WARNING** Risk of electric shock. Do not use or proceed with installation when enclosure is broken.

### Installation Safety and Disclaimer

Installation and servicing of this product should be performed only by a qualified service personnel.

**DO NOT INSTALL THIS EQUIPMENT IN A DWELLING.**

**WARNING** Risk of personal injury. Never touch or clean glass surface of Far-UVC Lamp when the device is energized. Always turn off power and allow device to cool for 15 minutes before touching, cleaning, or servicing Far-UVC lamp.

**CAUTION** Do not use abrasive materials, harsh cleaning agents, chemical cleaners, or other solvents on cover plate or lens. Use of these substances may cause the damage to the product. For cleaning purpose, use a mild window cleaning agent such as Windex and a soft non-abrasive anti-static microfiber cloth to gently wipe down the glass surface.

Continued...

## Installation Safety and Disclaimer

Continued...

**CAUTION** RISK OF PERSONAL INJURY. THIS EQUIPMENT IS DESIGNED FOR USE WITH GERMICIDAL LAMPS OR UV SOURCES AND MUST BE INSTALLED IN COMPLIANCE WITH COMPETENT TECHNICAL DIRECTIONS TO PREVENT THE USER'S EYE AND BARE SKIN FROM OVEREXPOSURE TO HARMFUL UV OR OPTICAL RADIATION.

This equipment emits UV radiation at wavelengths less than 250 nm which can generate ozone. Take precautions to ensure that the concentration of ozone in the installation is limited to a value that is within applicable permissible exposure limits.

Verify acceptable ozone concentrations in the installation taking into account the number of products in a given volume of space, the characteristics of the ventilation system, access, and other factors. Permissible exposure limits vary based on the place of ozone application, the length of exposure, and other factors and are publicly available.

When replacing equipment, replace only with the lamps for which the equipment is marked and intended. USE ONLY Part Number: VISIUM UVC222 Module B1 CO for Apex with Clear Optics

The equipment is an EPA regulated pesticide device intended to reduce bioburden in air and on surfaces. Bioburden reduction is a function various factors (including device run time, distance to the Far-UVC light, airflow, room size, and/or other factors) and the level of reduction can and will vary within a specific space.

FDA DISCLAIMER – FOOD AND DRUG ADMINISTRATION STATEMENT: The statements made within this manual have not been evaluated by the U.S. Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

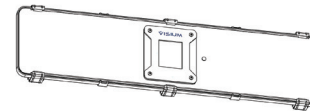
Apex fixtures are NOT for sale or distribution in California, Colorado, Hawaii, Indiana, New Mexico, Oklahoma, Washington D.C., West Virginia, and Wyoming.

***\*Save These Instructions***

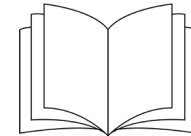
# Package Contents



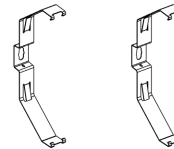
## 1 Visium Apex



## 2 Installation Manual



## 3 Mounting Brackets



## 4 Housing Endcaps



# Preinstallation & General Guidelines

## Preinstallation Notes

- Please properly plan the placement of your Apex before drilling or cutting any holes.
- Installation should be performed by a licensed electrician.
- All electrical connections must be in accordance with local electrical codes, ordinances, or comply with National Electrical Code (NEC).
- Make sure POWER is turned off at the main circuit breaker box to the location that you are installing the device.
- Refer to the proper section of the guide that corresponds to the mounting option.
- Consult with Customer Service with any questions.
- Refer to device mounting guideline diagram to ensure proper safety and regulatory compliance.
- Installation of Apex Far-UVC device is a way to enhance air safety in well-ventilated spaces. It is not intended to be a replacement for number of air changes per hour (ACH), proper air ventilation, or proper air flow.
- Apex are intended to be used in spaces with greater than 2 air changes per hour (>2 ACH).
- Installers should note and record each device's serial number and its corresponding location prior to installation.

## Visium with Clear Optics

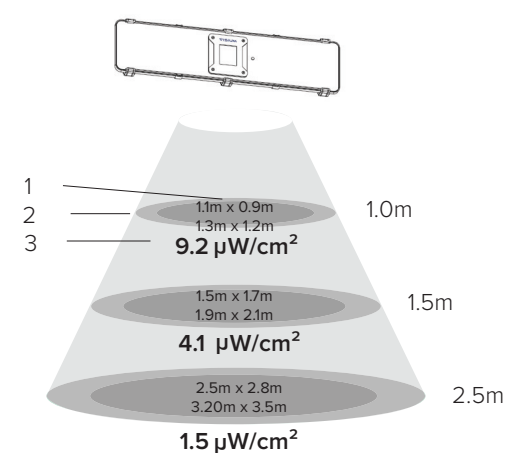
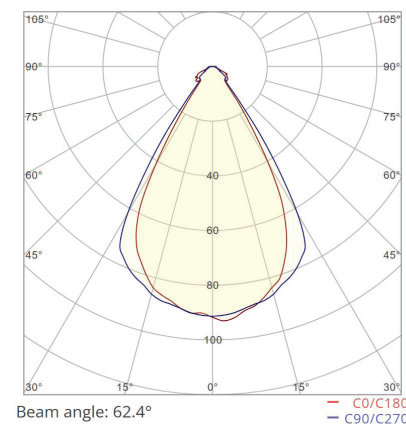
**Mounting Height:** Illuminating surface must always be installed at least 9ft 0in above finished floor for Risk Group 0 and at least 7ft 9in above finished floor for Risk Group 1 (Veterinary and Animal Farming Only).

**Device Spacing:** When installing multiple devices, they must be installed with minimum of 48in on center spacing.

To ensure compliance with regulatory and UVC exposure threshold limit values (TLV) set forth by the American Conference of Governmental Industrial Hygienists (ACGIH) and recommended by OSHA, do not install below the minimum height specified in these installation instructions. Please see diagram for reference on p. 10.

Keep at least 3ft of distance between lamp emitting surface to any object or structure in the space, which includes walls, cabinets, columns, or any objects hanging from the ceiling.

## Irradiance Profile



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

*\*Irradiance and other technical information are for reference only and are subject to change. This is not a formal specification and does not indicate any warranted values. Please refer to the UVC lamp's formal specification sheet for complete details and specification.*

# Application

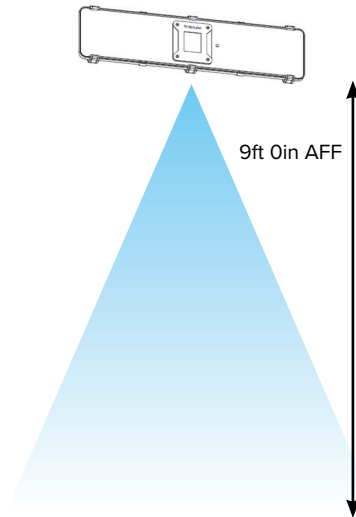
## Mounting Guide

### 9ft Plane

For compliance with UL safety standards and UL Risk Group 0 requirements, the illuminating surface of the Apex with Clear Optics is required to be mounted 9 ft 0 in or higher above the floor.

UL 8802 Certification for the Visium Apex device is based on a minimum mounting height of 9 ft for Risk Group 0 (exempt) devices only.

A minimum installation height of 7ft 9in for Risk Group 1 is available for use in Veterinary and Animal Farming applications. This specialized configuration is not covered under the UL 8802 certification. Please refer to the Risk Group 1 Safety section of the manual to determine if a Risk Group 1 installation is applicable to your room design.



# Technical Specifications



## FAR-UVC LIGHT SOURCE

Peak Wavelength	222nm
Lamp Type	Ushio Care222 KrCl Excimer Lamp Module
UVC Lifetime	> 10,000 Hours
Band-Pass Filter	Yes
UVC Emission Angle	Clear Optics: 62.5°
Device Coverage	Up to 200 sq. ft.
Visible Lumen Output	Clear Optics 1.35 lumens

## ELECTRICAL

Input Voltage / Freq.	120-277V, 50-60 Hz
Power Consumption	14W
Device Control	Standalone (ON/OFF switch), Bluetooth Only, or Connected (WiFi)

## MECHANICAL

Housing	Fiberglass housing / aluminum cover / fused silica lens
Finish	White powdercoat, fiberglass
Dimensions	277" L x 6.8" W x 2.4" H
Weight	6.7lb
Operating Temperature	0 to 40°C (32 to 104°F)
Installation	Surface Mount
Mounting Height	Minimum 9ft 0in Above Finished Floor (Risk Group 0); Minimum 7ft 9in Above Finished Floor (Risk Group 1) (Veterinary and Animal Farming Only)
Device Spacing	Minimum of 48in on center spacing required between all devices
Serviceability	Yes, Far-UVC lamp is field replaceable
Indication	Multi-Color Configurable LED Indicator

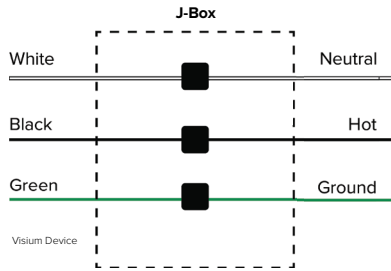
## WARRANTY & REGULATORY

Warranty	1 Year Limited on Visium Device
Compliance	Certified to UL 8802 - Standard for Ultraviolet (UV) Germicidal Equipment Classified as Risk Exempt – Risk Group 0 (UL8802) if installed above 9ft 0in AFF Complies with ACGIH Threshold Limit Values (TLV) for UV exposure Manufactured at an EPA registered facility; EPA Facility Number: 102522-FL-1
Environment	Suitable for Wet Locations

All data shown is nominal.

# Installation Guide

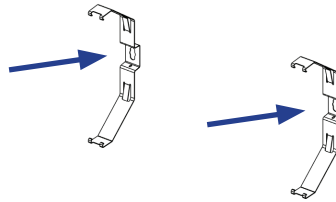
## SURFACE MOUNT WIRING:



## SURFACE INSTALLATION STEPS:

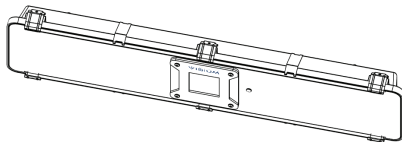
### 1 Install Mounting Brackets

Secure the two mounting brackets to the ceiling using appropriate fasteners through the center mounting hole of each bracket. Position the brackets in-line and spaced approximately 12 in (0.3 m) apart, based on the fixture mounting points.



### 2 Mount Fixture to Brackets

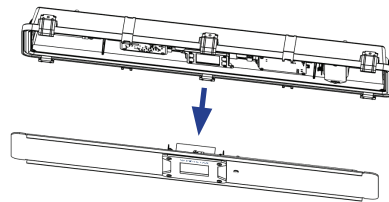
Once the mounting brackets are securely installed, lift the fixture housing and snap it into the mounting brackets until fully seated.



### 3 Remove Front Cover

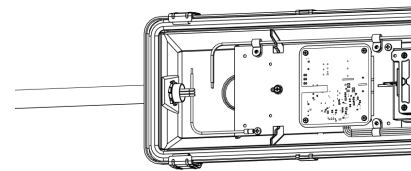
While supporting the front cover, release the six (6) external retaining clips to remove the cover. The front cover will remain supported by two safety lanyards.

*Note: Some external clips may include retaining screws to prevent accidental release. Remove these screws before unclipping.*



### 4 Supply Power Connections

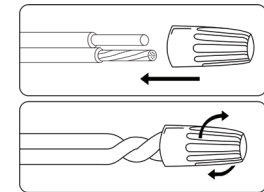
Supply power shall be connected through either 1/2 in. NPT conduit entry located at each end of the fixture. To maintain the fixture's water ingress rating, connections shall be made using either a listed sealed conduit fitting or a listed cord grip rated for the application.



### 5 Make Electrical Connections

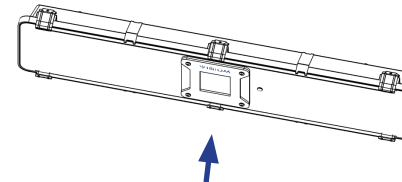
Line (hot), neutral, and equipment grounding conductors are provided at each end of the fixture for connection to the supply circuit. Make all electrical connections in accordance with the National Electrical Code (NEC) and all applicable local codes.

*Note: The fixture is equipped with pass-through wiring to allow continuous wiring to the opposite end of the fixture, if required.*



### 6 Reinstall Front Cover

Align the front cover with the housing and re-engage the six (6) external retaining clips to secure the front cover. Note: Retaining screws may be installed in the clips to prevent accidental release.



### 7 Proceed to Device Setup

After hardware installation is complete, restore power to the unit. Proceed to device setup using the Lit Thinking Connect App, available for download from the Apple App Store or Google Play Store.



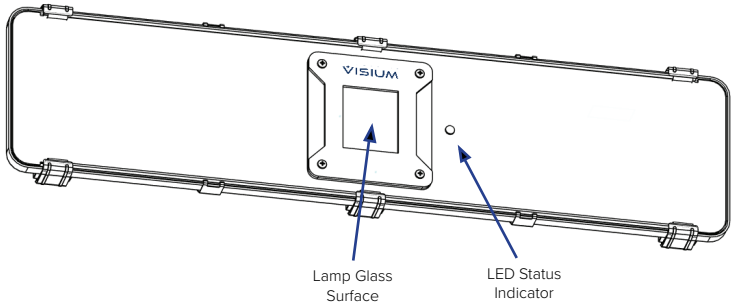
# Service & Maintenance

## Cleaning

Routine cleaning is highly recommended to maintain optimal performance. Accumulation of dust or other organic contaminants on the front glass of the Far-UVC lamp may impact overall performance of your Apex.

If front glass of the device appears to be dirty, use mild window cleaning agent such as Windex and a soft non-abrasive anti-static microfiber cloth to gently wipe down the glass surface.

NOTE: Never clean the lamp when the device is on. Always turn off device and wait 15 minutes to cool before cleaning. Please be mindful when cleaning.



## LED Status Indication

LED Color	Device Status
Solid Green	Device online and operating normally
Solid Red	Far-UVC lamp at end of life
Solid Blue	WiFi is not connected
Solid Yellow	Far-UVC approaching end of life
Solid White	Device is commissioning. Device in access point mode and not connected to WiFi
Flashing Light Blue	Firmware updating in process

## When to Replace Lamp

The integral Far-UVC lamp within Apex has an operating life of up to 10,000 hours. When the LED status light on the face of the device turns solid yellow (●), it indicates the Far-UVC lamp is near the end of its life and will require replacement soon. When the LED status light turns solid red (●), it indicates the Far-UVC lamp is at the end of its life and the lamp must be replaced to resume proper operations.

## Replacing Far-UVC 222 Lamp

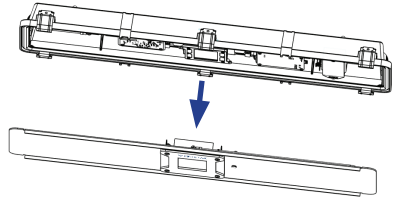
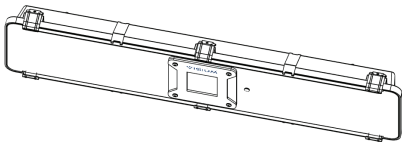
### 1 Turn Off Power

Before servicing, disconnect and lock out power to the device.

### 2 Uninstall Front Cover

While supporting the front cover, release the six (6) external retaining clips. If installed, the front cover will remain supported by two safety lanyards.

Note: Some external clips may include retaining screws to prevent accidental release. Remove these screws before unclipping.

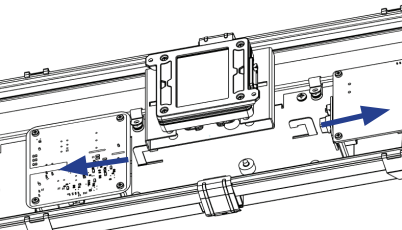
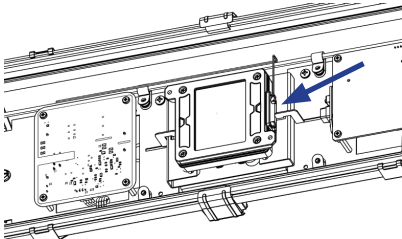


### 3 Disengage Connector

Locate the small electrical connector on the side of the lamp module and gently pull to disconnect.

### 4 Remove Lamp Module

Using fingers or needle-nose pliers, slide each retaining clip away from the lamp module, one at a time. Once both retaining clips are disengaged, carefully remove the lamp module from the fixture.



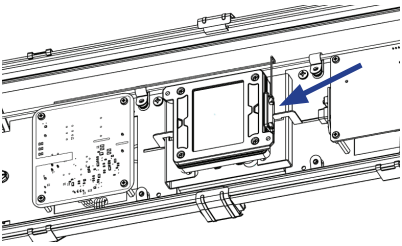
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# Replacing Far-UVC 222 Lamp

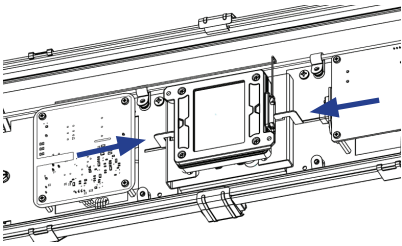
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## 5 Reconnect Lamp Connector 6 Install New Lamp Module

Reconnect the small wire harness by gently inserting it into the electrical connector on the side of the lamp module until fully seated.

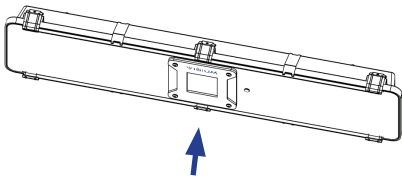


Align the lamp module bracket with the electrical connections and position it onto the metal gear tray. Using fingers or needle-nose pliers, slide the retaining clips over the lamp module bracket, one at a time, until fully engaged.



## 7 Reinstall Front Cover

Align the front cover with the housing and re-engage the six (6) external retaining clips to secure the front cover. Note: Retaining screws may be installed in the clips to prevent accidental release.



## 8 Turn Power On

Reconnect power to the unit.

## 9 Resetting Lamp Life Counter

Commissioning of the fixture using the Lit Thinking Connect App is required to reset the lamp counter in the software.

The LED indicator will change from



Once LED is yellow, let go of the reset button. LED will return to Green (●) and lamp life counter is reset.

# Troubleshooting & Warranty

## Troubleshooting

If you encounter any issues when using the device, refer to the table below. If problems persist, cut-off the power supply and contact the manufacturer.

Failure Mode	Cause	Solution
Device is unresponsive	Unexpected error or failure	Power cycle device. Turn off, wait 10s, then turn on power. If device is still unresponsive, perform a factory reset
The LED Indicator is OFF	There is no power to the device	Verify power is properly supplied to the device
The LED Indicator is 'Solid Blue'	Wifi is not connected or network configurations may have changed	Device is in Discovery Mode and not connected to WiFi. The unit will continue running normally, but remote access is unavailable. Verify the 2.4 GHz WiFi network is available and confirm the correct SSID and password. Reconnect using the Visium Core App.
The LED Indicator is 'Solid Yellow'	Far-UVC lamp life less than 10%	Refer to the Apex installation guide for detail instructions on how to replace the Far-UVC lamp
The LED Indicator is 'Solid Red'	Far-UVC lamp at end of life	Refer to the Apex installation guide for detail instructions on how to replace the Far-UVC lamp

## Warranty

1 year limited warranty on Apex device / 1 year limited warranty on Far-UVC Lamp and lamp electronics.

## Resources



Scan QR Code for product information and other helpful resources.



## **Installation Guide**

For more information:  
Visit us online at [Visium.one](http://Visium.one)