

UV Matrix LCI

Ultraviolet germicidal purification equipment for air and surface disinfection

Owners / Installation Guide:

Models:

LCI-2 UVMatrix LCI Power Enclosure for 2 lamps

LCI-2Z5 UVMatrix LCI Power Enclosure for 2 lamps with UVC Lamp Monitoring LED and dry contacts for remote status

LCI-4 UVMatrix LCI Power Enclosure for 4 lamps

LCI-4Z5 UVMatrix LCI Power Enclosure for 4 lamps with UVC Lamp Monitoring LED and dry contacts for remote status

LCI-6 UVMatrix LCI Power Enclosure for 6 lamps

LCI-6Z5 UVMatrix LCI Power Enclosure for 6 lamps with UVC Lamp Monitoring LED and dry contacts for remote status



Shipping and Packaging List:

- 1- UVMatrix LCI Electrical Housing
- 1- UVC Warning Label
- 1- Warranty Card
- 1- lamp lead per lamp /power supply
- 2-T3 Mounting clips per lamp/power supply
- 2- T3 mounting plate screws per lamp/power supply
- 4- mounting screws for electrical Box
- 3-8 Water tight strain reliefs for lamp leads depending upon model and options.

Safety Precautions:

It is recommended that this unit be installed and maintained by a trained technician:

WARNING: UV Hazard. Always protect eyes from ultraviolet light. NEVER look at UV lamps in operation. Unplug or disconnect power before re-lamping or servicing.

WARNING: Severe eye damage or temporary blinding may occur.

WARNING: DO NOT operate outside of Air Handler. Mount housing to duct or air handler first.

WARNING: No openings in duct are allowed which would give direct line-of-sight to the UV light.

In the event of accidental breakage or replacement of the ultraviolet lamp, please ensure that the lamp is disposed of in accordance with local and state environmental laws regarding fluorescent lamps containing mercury.

Notice:

All wiring inside of the duct or air handling system in direct line of site of the UV lamp must be shielded with aluminum foil tape or equivalent non-combustible material. When installing this unit, select a mounting location that prevents ultraviolet light exposure to plastic flexible duct liner or other plastic components with unknown resistance to ultraviolet light. Ultraviolet light may cause color shift or structural degradation of plastic HVAC components

Warranty:

Ultravation warrants this product against any defects in material or workmanship for a period of 3 years after date of consumer purchase, with the exception of the Ultraviolet Lamp, which is warranted for a period of six months after date of consumer purchase.

This warranty does not include damage to the unit from accident, misuse or improper installation. If this product should become defective during the warranty period, Ultravation will elect to repair or replace the product free of charge.

Ultravation will return repaired or replaced warranted products pre-paid, provided that the product was delivered pre-paid. Ultravation shall have no responsibilities for charges incurred by the customer for installation or removal of warranted items. Liability is limited only to the replacement or repair of this product.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

All returns must be accompanied by a return authorization number, which may be obtained by contacting

Ultravation, Inc. Ultravation, Inc. ~ P.O. Box 165 ~ 212 Ideal Way ~ Poultney, Vermont 05764 Phone: 802-287-9735 ~ Fax: 802-287-9203 ~ www.ultravation.com

Installation steps:

1. The UVMatrix LCI equipment may be located on rooftop packaged units or other outdoor applications in addition the product may be installed internally in any HVAC system that allows for the physical dimensions or externally with the lamp leads penetrating the hvac enclosure. The lamp should be located 12" – 24" away from the coil.

2. Once the location is determined to install the UVC equipment the installing contractor should place the LCI Enclosure in its correct location, and screw in 4 mounting screws to secure the enclosure.

3. Have a qualified electrician supply 120V or 277V inside enclosure via provided ½" conduit knockouts and terminate. The UVMatrix-LCI Series systems are required to be wired from a disconnect switch so the power can be turned off for maintenance. It is recommended that the UVMatrix LCI Series systems be wired through a safety interlock switch that will disengage power to the equipment in the event that a door or access panel is opened. If –L option (Lamp monitor) was purchased connect remote monitor equipment to dry contact terminals.

NOTE:

The wiring diagram is permanently affixed inside the electrical enclosure for ease of reference.

4. Place supplied warning label on access panel to reduce the risk of UVC exposure. If additional labels are required please contact Ultravation at 1-866-468-8247.

5. With Power disconnected* route all required lamp leads from the point of installation (coil area) to the LCI enclosure.

6. Insert wires through the strain relief, remove outer jacket approximately 4 inches, be sure not to nick the wires. tighten strain relief.

7. Strip each wire back 1/4 inch. terminate each wire per instruction of the wiring diagram located within the cover of the LCI enclosure.

NOTE:

The wiring diagram is permanently affixed inside the electrical enclosure for ease of reference.

8. Complete the physical mounting of any lamp and or racking assembly.

9. Connect all lamp connectors to the lamps, note the connection is not square , the electrical connection is a rectangular pattern, do not force the lamp.

10. Using UV rated goggles or other appropriate protection, apply power briefly to ensure all lamps are operational.

Re-apply any service panels etc.. installation is complete.

Lamp Installation:

Depending on the size of the coil or duct area to be treated several options are available from Ultravation.

Popular a common T3 enhanced lamps are shown in the table below.

22 Inches AS-IH-1005
33 Inches AS-IH-0611
48 Inches AS-IH-0612
62 Inches AS-IH-0610

Maintenance:

UV lamps undergo a photochemical process during operation. This reduces the amount of UV light generated to disinfect against airborne pathogens. UVC Lamps should be changed every 6 months.

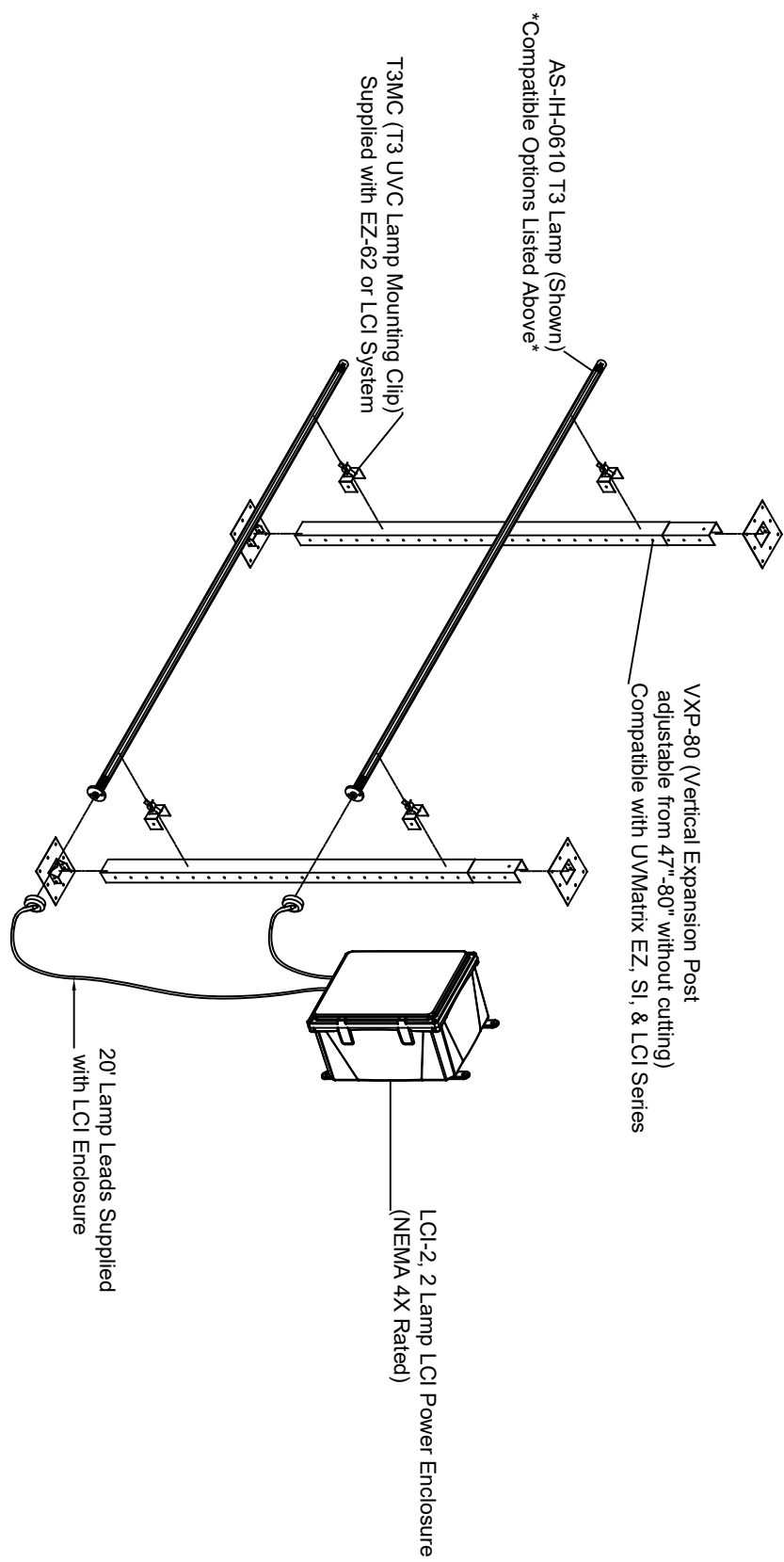
When installing new lamps, ensure that the lamp glass is free from any fingerprints or debris, as this may alter the path of the UV energy. Use rubbing alcohol and a dry cloth to remove any surface contaminants.

Lamp Replacement:

Approximate lamp life 18,000 hours of continuous operation.

Models & Specifications

Model Number	Description	Includes
UVMatrix LCI-2	Light Commercial irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure, Lamp Leads, & Lamp Mounting Brackets/Clips
UVMatrix LCI-2-M	Light Commercial irradiation Kit, Lamp Status, Building Integration Terminals within NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure with LED Status Indicator & Dry contacts, Lamp Leads, & Lamp Mounting Brackets/Clips
Compatible Lamp Options		
Lamp Part Number	Lamp Length (X)	Power Consumption
AS-IH-0611	33" T3 Lamp	.35 amps @ 120V
AS-IH-0612	48" T3 Lamp	.49 amps @ 120V
AS-IH-0610	62" T3 Lamp	.625 amps @ 120V

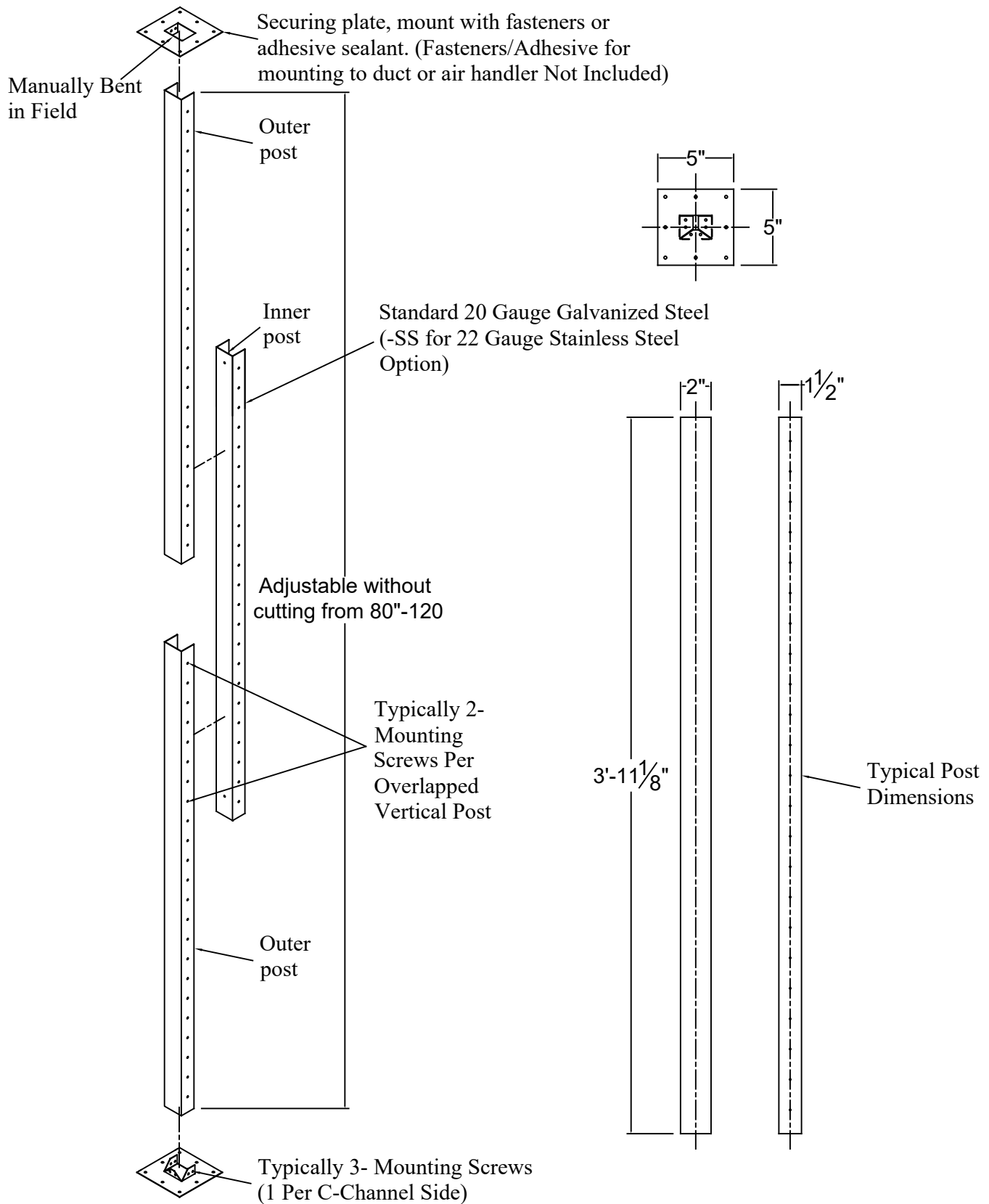


Ultravation, Inc.
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 Ph: 802-287-9735
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 www.Ultravation.com

Drawing #1.GI2L-CON Rev. *

Description: Typical 2 Lamp UVMatrix LCI Configuration, Shown with compatible 62" T3 lamps and Optional VXP-80 Post

Date: 7/19/20 Scale: Creator: JSM



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Part #: VXP-120

Drawing #: VXP120-DSS Rev -*

Description: Verticle expansion post for UVMatrix LCI & UVMatrix EZ systems. Adjustable without cutting from 80" to 120", , (Ships with 3- Verticle posts, 2- Securing Plates, 14- Self Tapping screws). Standard 20 Gauge Gavanized Steel with optional 22 Gauge Stainless Steel.

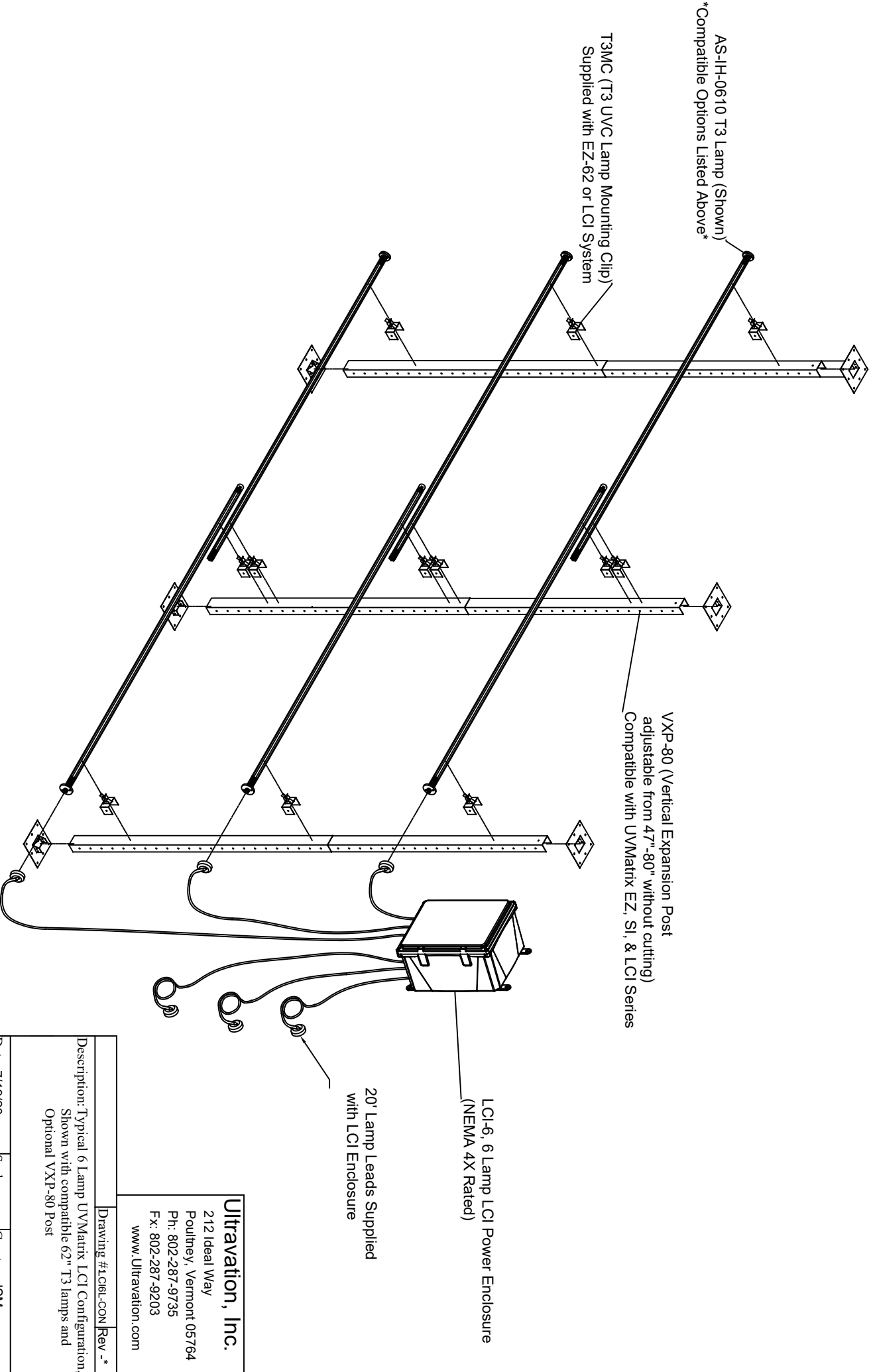
Date: 1/26/20

Scale:

Creator: JSM

Models & Specifications

Model Number	Description	Includes
UVMatrix LCI-6	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure, Lamp Leads, & Lamp Mounting Brackets/Clips
UVMatrix LCI-6-M	Light Commercial Irradiation Kit, Lamp Status, Bulding Integration Terminals within NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure with LED Status Indicator & Dry contacts, Lamp Leads, & Lamp Mounting Brackets/Clips
Compatible Lamp Options		Power Consumption
	Lamp Part Number	
	AS-IH-0611	.35 amps @ 120V
	AS-IH-0612	.49 amps @ 120V
	AS-IH-0610	.625 amps @ 120V
	Lamp Length (X)	
	33" T3 Lamp	
	48" T3 Lamp	
	62" T3 Lamp	



LCI-6, 6 Lamp LCI Power Enclosure
(NEMA 4X Rated)

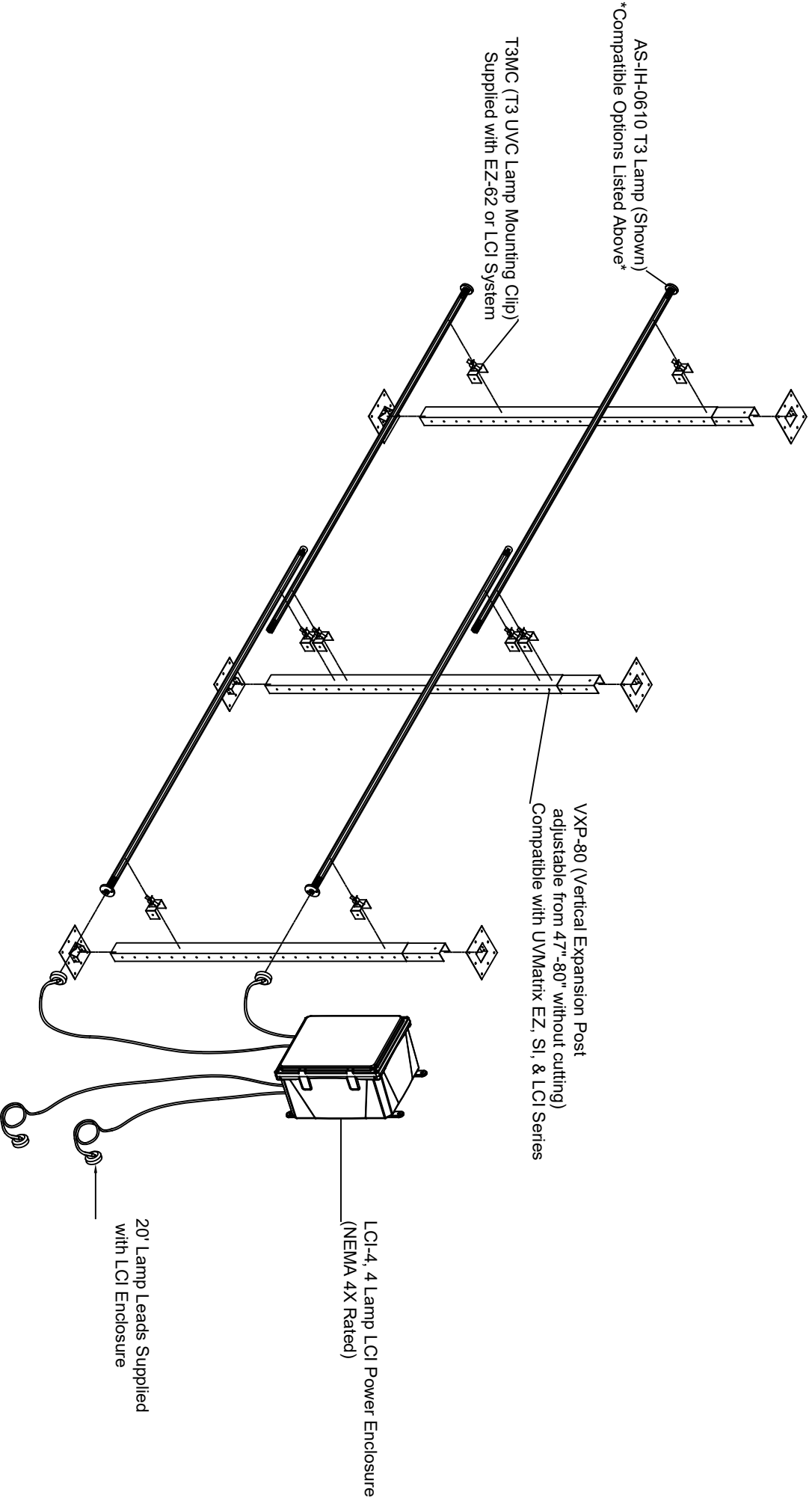
20' Lamp Leads Supplied
with LCI Enclosure

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Drawing #1.CI6L-CON Rev. *	
Description: Typical 6 Lamp UVMatrix LCI Configuration, Shown with compatible 62" T3 lamps and Optional VXP-80 Post	
Date: 7/19/20	Scale:
Creator: JSM	

Models & Specifications

Model Number	Description	Includes
UVMatrix LCI-4	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure, Lamp Leads, & Lamp Mounting Brackets/Clips
UVMatrix LCI-4-M	Light Commercial Irradiation Kit, Lamp Status, Building Integration Terminals within NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics	Power Enclosure with LED Status Indicator & Dry contacts, Lamp Leads, & Lamp Mounting Brackets/Clips
Compatible Lamp Options		
Lamp Part Number	Lamp Length (X)	Power Consumption
AS-IH-0611	33" T3 Lamp	.35 amps @ 120V
AS-IH-0612	48" T3 Lamp	.49 amps @ 120V
AS-IH-0610	62" T3 Lamp	.625 amps @ 120V

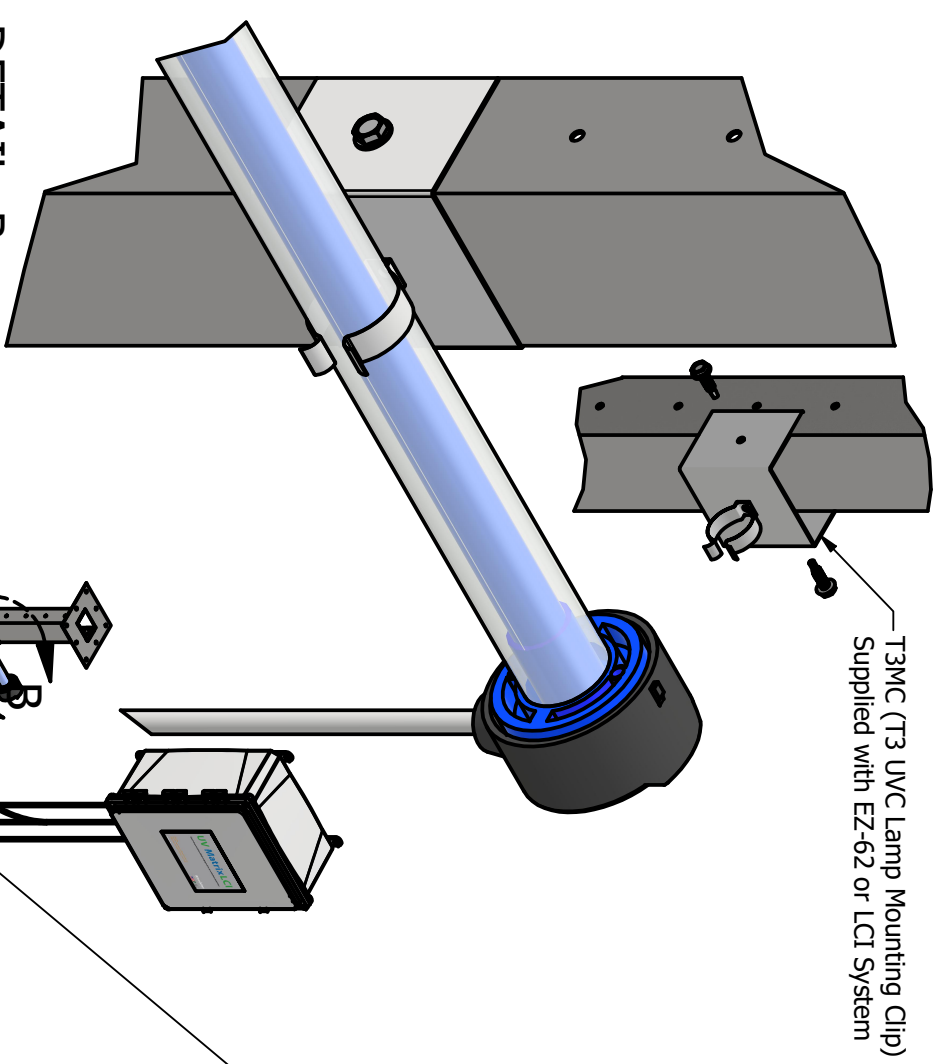


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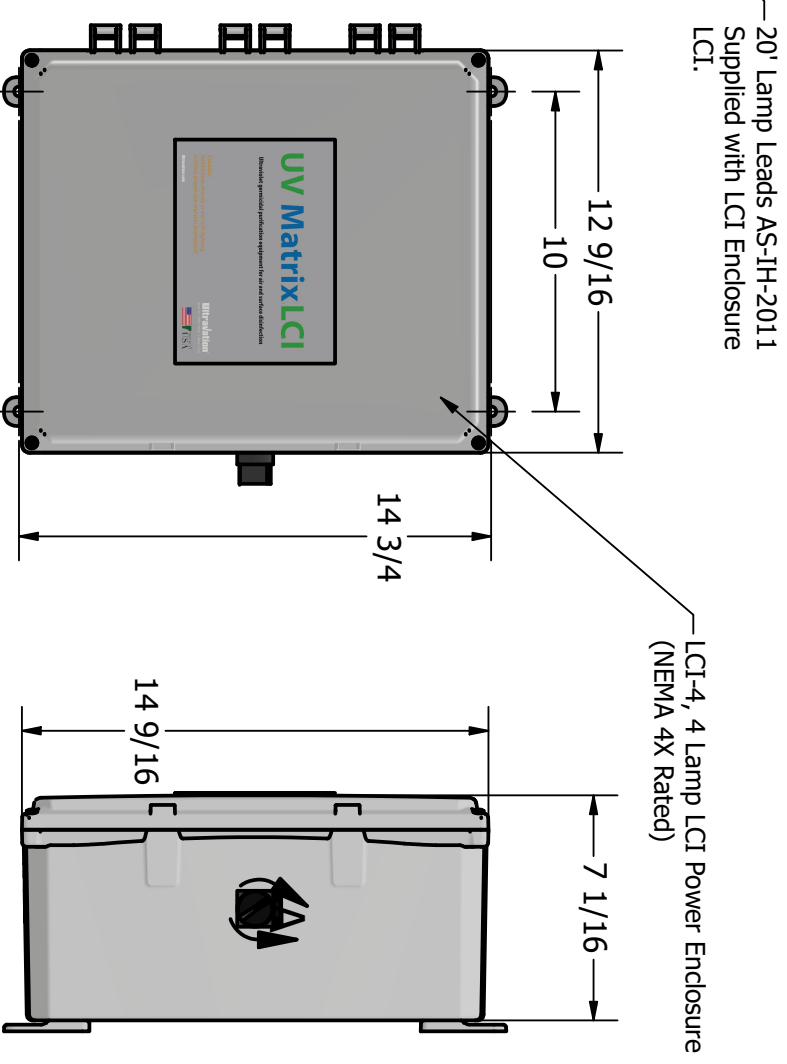
Description: Typical 4 Lamp UVMatrix LCI Configuration, Shown with compatible 62" T3 lamps and Optional VXP-80 Post	
Date: 7/19/20	Scale:
Creator: JSM	Rev: *

Model	Description	Lamp Part No	Lamp Length	Each Lamp Draw
LCI-2-33	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 2 T3 Lamp.	AS-IH-0611	33" T3 Lamp	0.35 A @120 V
LCI-4-33	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 4 T3 Lamp.	AS-IH-0611	33" T3 Lamp	0.35 A @120 V
LCI-6-33	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 6 T3 Lamp.	AS-IH-0611	33" T3 Lamp	0.35 A @120 V
LCI-2-48	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 2 T3 Lamp.	AS-IH-0612	48" T3 Lamp	0.49 A @120 V
LCI-4-48	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 4 T3 Lamp.	AS-IH-0612	48" T3 Lamp	0.49 A @120 V
LCI-6-48	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 6 T3 Lamp.	AS-IH-0612	48" T3 Lamp	0.49 A @120 V
LCI-2-62	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 2 T3 Lamp.	AS-IH-0610	62" T3 Lamp	0.625 A @120 V
LCI-4-62	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 4 T3 Lamp.	AS-IH-0610	62" T3 Lamp	0.625 A @120 V
LCI-6-62	Light Commercial Irradiation Kit, NEMA 4X enclosure and 20' lamp leads for internal or external mounting of electronics. Comes w/ 6 T3 Lamp.	AS-IH-0610	62" T3 Lamp	0.625 A @120 V

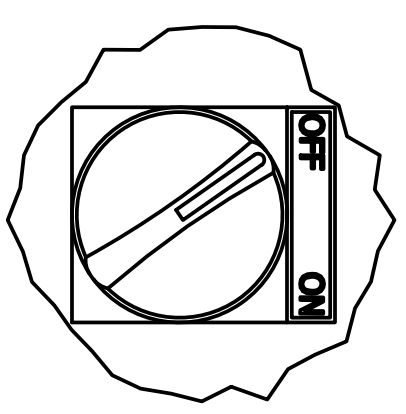
* Add - 2XP to any part number for 2 Vertical Expansion Posts for maximum installation options.
 ** Add - 3XP to any part number for 3 Vertical Expansion Posts for maximum installation options.



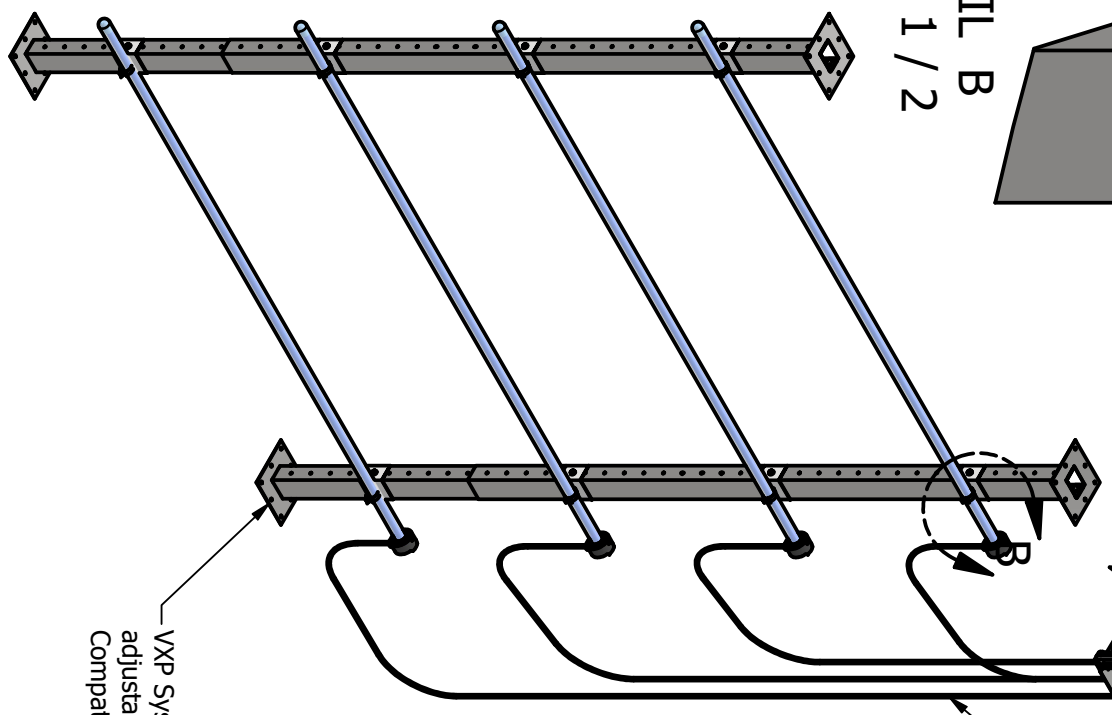
DETAIL B
SCALE 1 / 2



LCI-4, 4 Lamp LCI Power Enclosure (NEMA 4X Rated)



DETAIL A
On / Off Switch



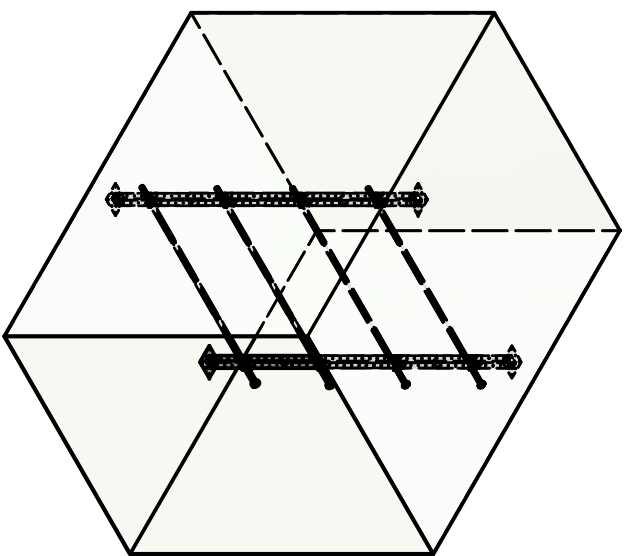
VXP System (Vertical Expansion Post adjustable from 47"-120" without cutting) Compatible with UVMatrix EZ, SJ, & LCI Series

DRAWN	Anik D.	2/29/2024	TITLE 67 TUBBS AVE, BRANDON VT-05733. 866-468-8247. www.ultravation.com UVMatrix LCI Products W/ Multiconfigurable Lamp Systems, 20 Ft lamp lead and Nema 4X rated housing lamp system W/ option for 2 or 3 Vertical Expansion Posts for maximum installation options.	
CHECKED			SCALE	1/16
QA			SIZE	A3
MFG			DWG NO	LCI Series Specsheat
APPROVED			REV	0
All Dimensions are in INCHES			Tolerance	±0.031
			SHEET	1 OF 2

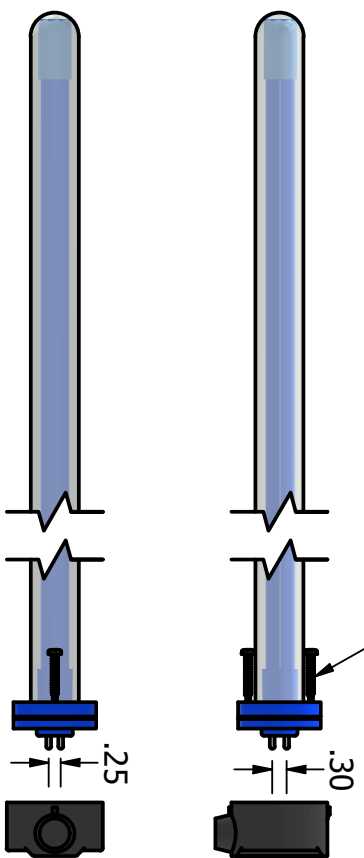
Units quoted with -2VXP Should be setup following 2 VXP Standard setup
 Units quoted with -3VXP Should be setup following 3 VXP Standard setup

LS = Inner Height (H) / Number of Lamps [In case of 2 VXP Setup]

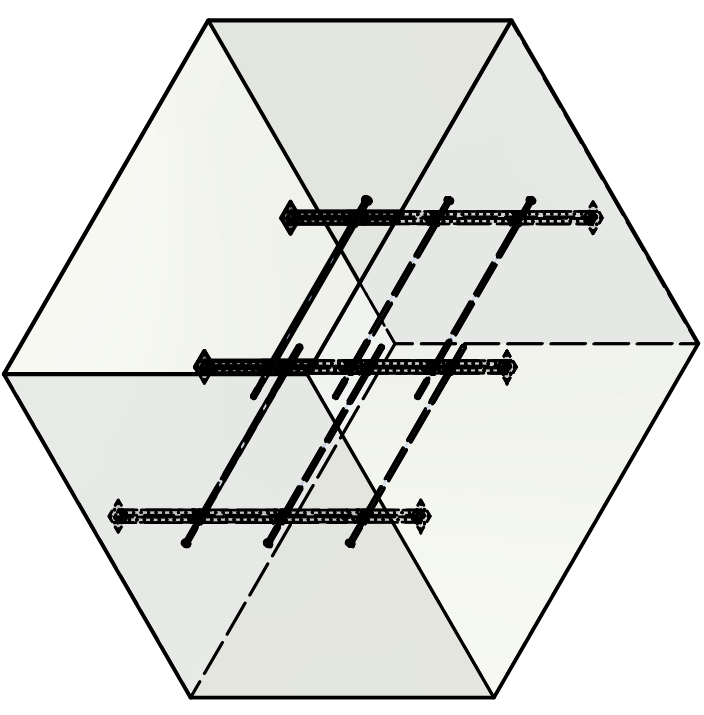
LS = 2 X Inner Height (H) / Number of Lamps [In case of 3 VXP Setup]



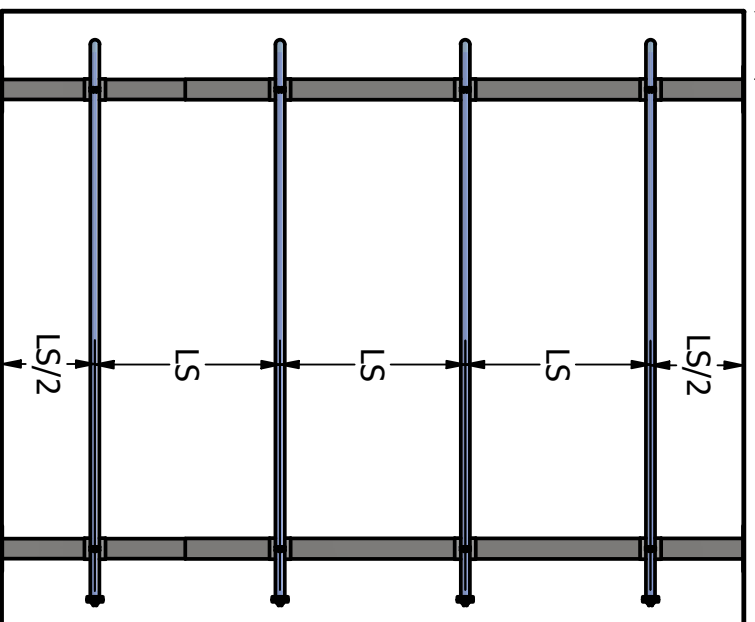
Ø2.00 Lamp Screw → Lamp Base to Lamp Lead



Lamp Pins Are Rectangular, Please Install In Right Orientation.

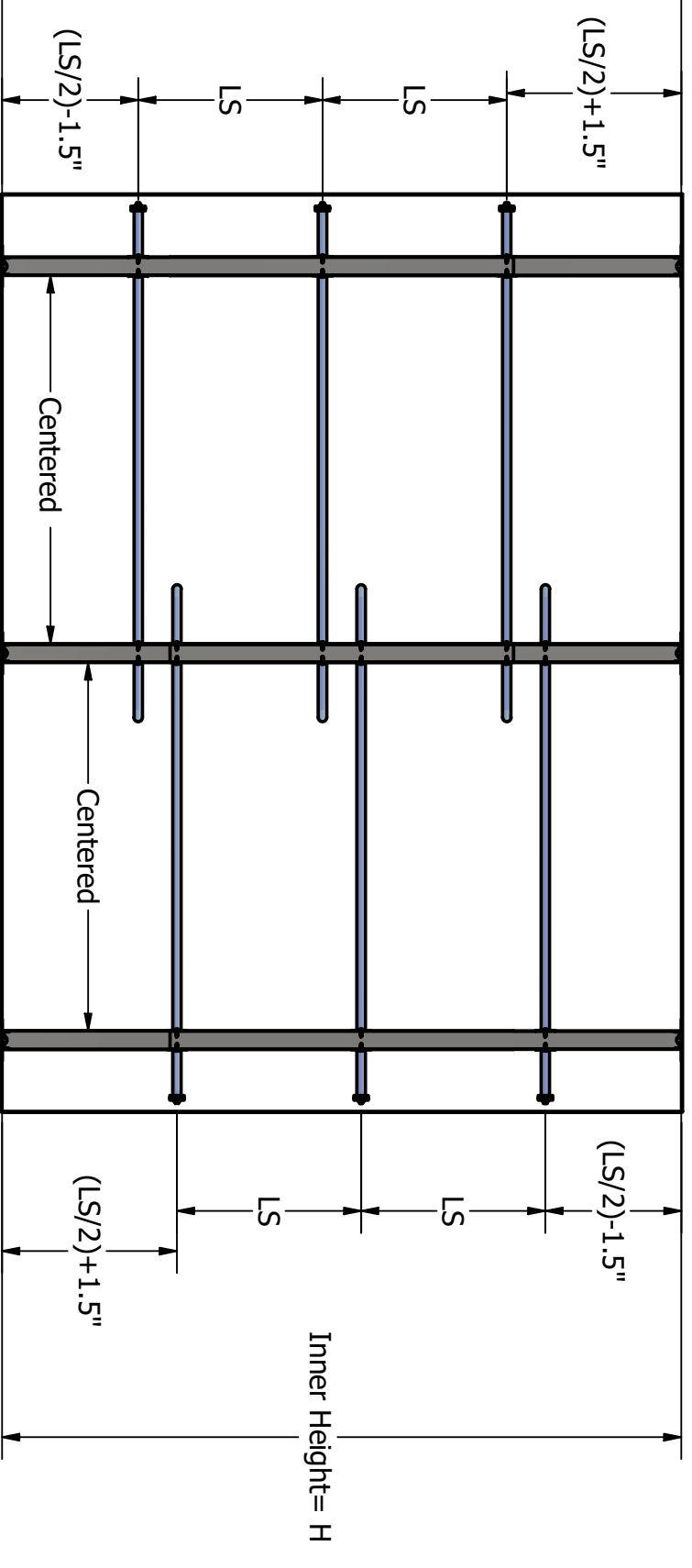


6-12" From Inside Wall



2 - VXP Standard Setup

3 - VXP Standard Setup



6-12" from Inside Wall

Inner Height = H

Centered

Centered

(LS/2)+1.5"

(LS/2)+1.5"

(LS/2)+1.5"

LS

LS

(LS/2)-1.5"

(LS/2)-1.5"

(LS/2)-1.5"

LS

LS

(LS/2)+1.5"

