LUXMESH™

LED LATTICE

Dry Location Series

Rigid LED lattice solution for backlighting large format projects with powerfully bright illumination. Available in three stick sizes that may be combined for larger applications.

For your safety, please read and understand these instructions completely before starting installation and retain this guide for future reference.

HANDLING & MOUNTING: GENERAL

GENERAL MOUNTING RECOMMENDATIONS

• Choose a flat, even mounting surface sturdy enough to support lattice.
• Unroll lattice and pull the top and bottom bars away from each other so that tension is applied to the wires. This will help straighten out the wires between the lattice bars.
• Do not torque fasteners so that they will crack LED lattice.
• Do not drill holes through lattice which will void the warranty.
• Screws are to only be fastened inside the holes marked on each lattice bar.
• Do not mount or slide heavy objects onto LED lattice.
• Use only round screw heads such has pan or truss, not tapered screws such as countersunk, wood, or drywall.
• Heat sinks are not required; the product acts as its own heat sink.
• If LED lattice needs to be repositioned, remove fasteners and be sure new mounting holes do not overlap with prior holes.

REQUIRED PARTS FOR INSTALLATION

• Fastener screws

MOUNTING METHODS

• **End cap mounting** Screws sticks at the end caps into the supporting material. Two screws are provided per end cap.
• **Support bar mounting** Provides a more secure mount that will prevent the product from bowing. Requires bigger screws.

GENERAL INSTALLATION INSTRUCTIONS

1) Clean the mounting surface.

2) Layout the LUXMESH onto mounting space.

3) Check and ensure correct installation.

4) Secure LED lattice with screws.

5) Connect the DC output end of the power supply to the LED lattice.

6) Power on for self-test.

MOUNTING: WALL MOUNT

Securing fasteners to support bars

Fasten screws into the holes of the support bars.
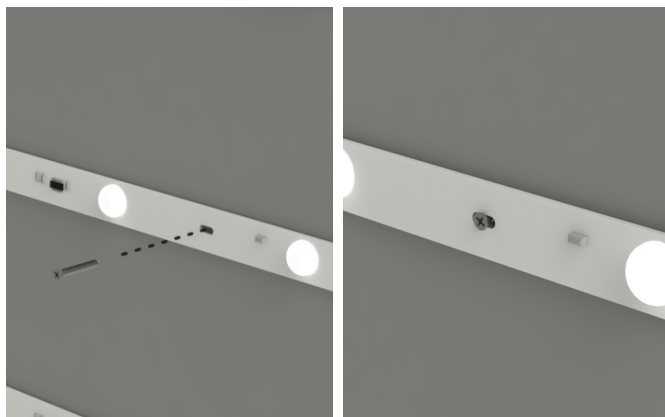
For wall mounting, fastening every single row is not necessary. Screws are only needed on the top row, middle row, and bottom row of LEDs. Screws must be securely fastened to the support bars.
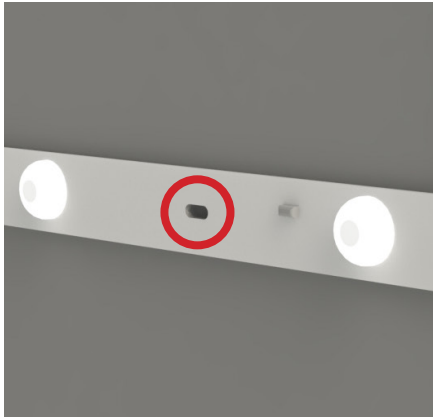
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MOUNTING: CEILING

For ceiling mounting, both end cap and support bar mounting methods will be used to ensure the lattice is securely screwed to the substrate to prevent bowing of the product.

1) Identify the holes on the support bar.

2) Use screws to fasten lattice to your substrate. To prevent bowing, start from the centermost holes on the support bar and work towards the outer holes.

3) Make sure to fasten screws at every hole on the support bar!

4) Identify the screw holes at the end caps.

5) Use screws to fasten end caps to your substrate.
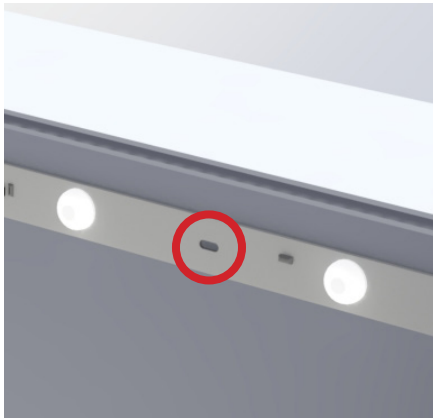

6) Make sure to fasten every end cap with 2 screws.

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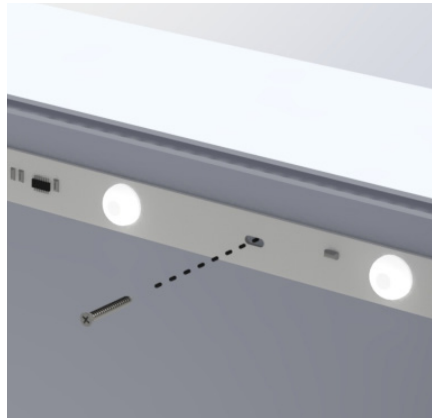### LED LATTICE Dry Location Series

SCAN FOR
DIGITAL VERSION

MOUNTING: FABRIC LIGHT BOX

To install LUXMESH within a fabric light box, lattice bars must be securely fastened to the light box backer by threading screws through the bar holes. Ceiling applications require every lattice to be screwed in.

1) Identify the holes on the support bar.

2) Use screws to fasten lattice to the backer. To prevent bowing, start from the centermost holes on the support bar and work towards the outer holes.
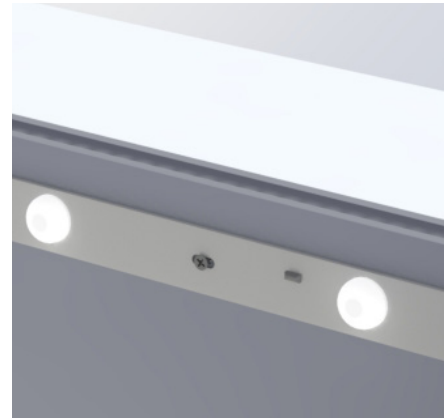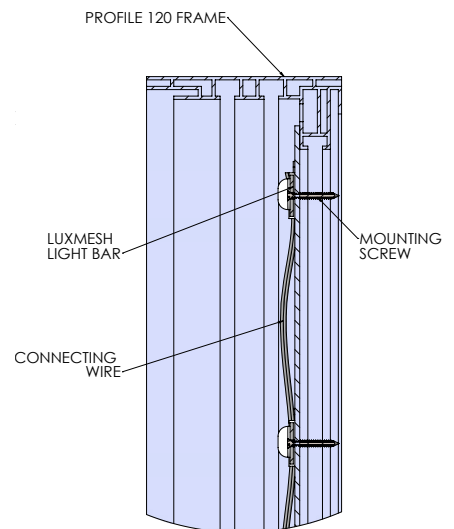

3) Make sure to fasten screws to the backer at every hole on the support bar!

4) Identify holes on the end caps and thread screws through holes.

5) Fasten end caps to backer with two screws per end cap. Make sure each end cap is securely fastened.

PROFILE 120 FRAME

LUXMESH
LIGHT BAR

MOUNTING
SCREW

CONNECTING
WIRE

Mounting Cross Section

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POWER & WIRING

Dimmers, split connectors, extension cords, and power supplies are available for purchase.

Before wiring to a power supply, always turn off electricity at the fuse or circuit breaker box.

ELECTRICAL POWER CONSIDERATIONS

• Use the supplied Class 2 power supply to power the LED lattice. The warranty will be forfeited if a power supply not approved by LEDCONN is used.
• LUXMESH lattice is offered with UL & cUL Listed & Recognized Class 2 24VDC power supplies. Please check the input voltage for your lattice and use the power supply that matches the indicated voltage.
• The total power of the lighting fixture must be lower than the output power of the power supply and dimming controls.
• Unless otherwise specified, use only Class 2 power supplies rated 24V or less. LUXMESH is not suited for power supplies that do not comply with Class 2 or are greater than 24VDC.
• To maintain Class 2 power compliance, do not exceed more than a 96W load.
• Using a power adapter is essential. Never apply direct AC power. Doing so will instantly burn the LEDs, permanently damage the product and void the warranty.
• Ensure enough spacing between pieces of assembled LUXMESH products to avoid conductors shorting against each other

MANAGING VOLTAGE DROP

• Keep wires between LED lattice and power supplies as short as possible to prevent voltage drop.
• We recommend heavier wire guages for longer distances. Please see voltage drop table for recommended AWG.
• We recommend keeping wire gauges no larger than 24AWG and less than 10ft long.

LEAD WIRING

• Jumper/tiling cables are provided with 20AWG wires with Molex connectors.
• Hardwire-to-Molex connections are provided with standard 20AWG hardwire.
• All LUXMESH products use a common positive (+) lead wire. Please see the table "Wiring Color Codes" for more information.

WIRING COLOR CODES

LUXMESH Product Type	Min. Wire Guage (AWG)	Wire Color	Charge
Short, Medium & Long	20	White with black stripe	+
		White only	-

MULTI-LATTICE ASSEMBLY: DAISY CHAINING LUXMESH WITH MOLEX

Daisy-chaining multiple LUXMESH lattices together is feasible through the Molex connector. A single power supply can power multiple lattice bars if the total power consumption of the lattice is lower than the power supply power output. **Notify the LEDCONN team in advance If daisy chaining is desired, so that your luminaire arrives provided with the appropriate connectors.**

To Daisy Chain LUXMESH Horizontally
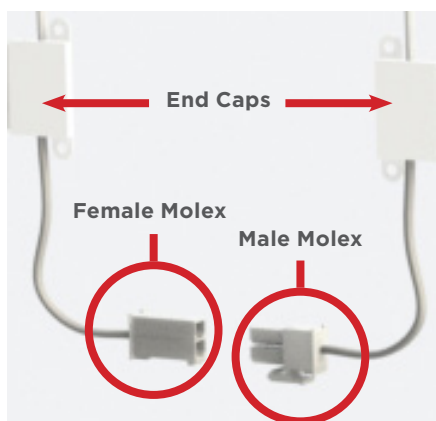
End Caps

Female Molex

Male Molex

1) Identify the male and female Molex connectors connected to the end caps.

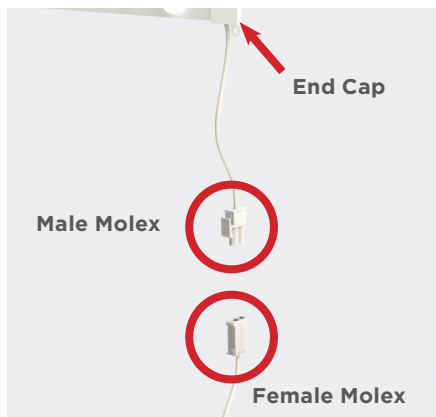**2) Position lattice side by side horizontally.**

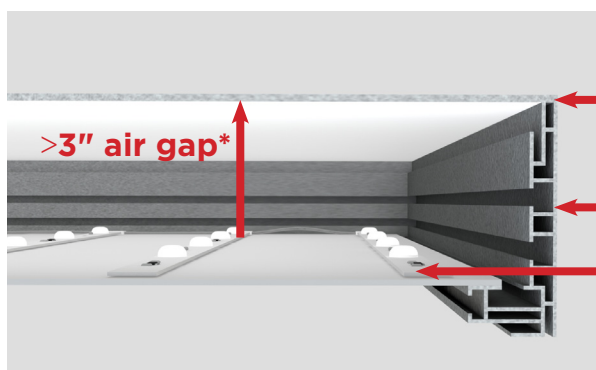**3) Connect male to female Molex.**

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To Daisy Chain LUXMESH Vertically

End Cap

Male Molex

Female Molex

1) Identify the male and female Molex connectors connected to the end caps.

2) Position lattice vertically.

3) Connect male to female Molex.

>3" air gap*

Fabric material

Aluminum extrusion

Lighting component

To Daisy Chain LUXMESH installed within an aluminum extrusion or fabric light box, follow the daisy chaining steps as described, and ensure a min. 3" airgap between the lighting component & fabric material to prevent hot spots.

*DISCLAIMER PLEASE NOTE THIS JUST A GUIDELINE. ACTUAL AIR GAP DEPTH WILL VARY DEPENDING ON YOUR FACE MATERIAL.

DIMMING INSTRUCTIONS

1) Connect the power adapter and LED lattice to the dimmer per dimmer instructions.
2) Adjust the light to the desired brightness level with the dimmer.
3) You may use one dimmer for a multi-lattice bar installation as long as the total power consumption is lower than dimmer output power.
4) Use only LEDCONN supplied dimmers for maximum performance. Using any other dimmers can affect latticel performance & void warranty. Consult with LEDCONN engineers for compatibility.

COMPATIBLE DIMMER TYPES

IN-LINE DIMMER (PWM)

DIMMER WITH REMOTE CONTROL (PWM)
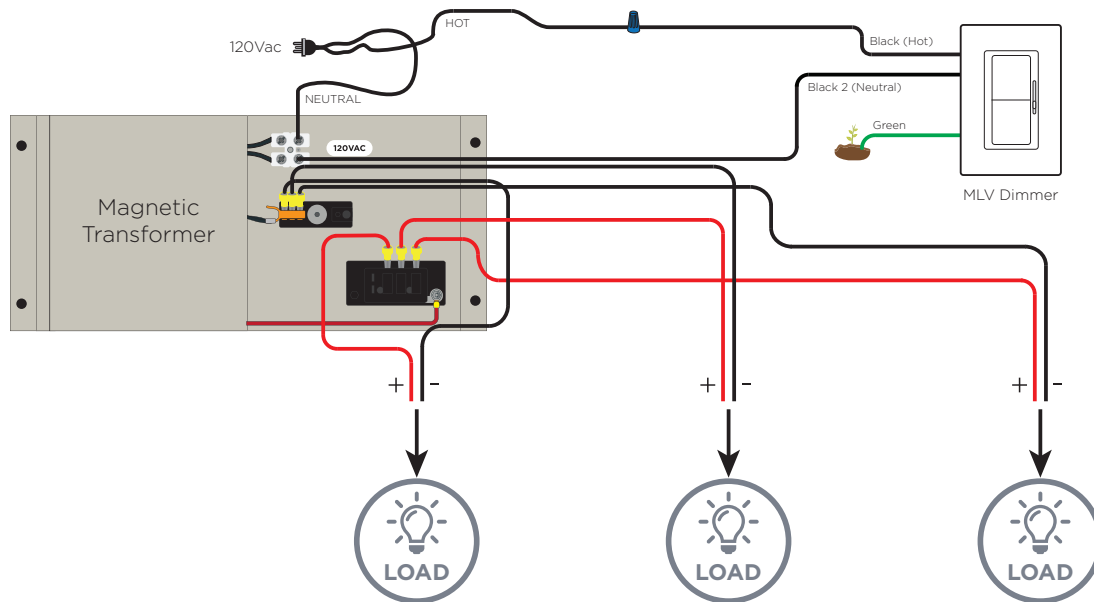
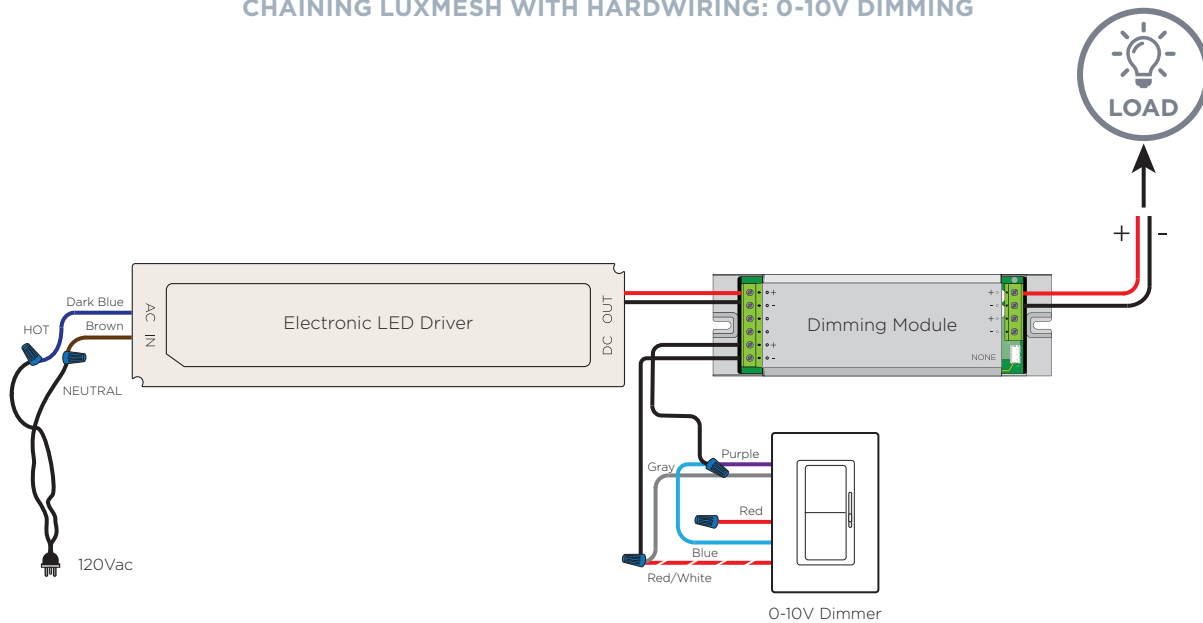**MAGNETIC (MLV)/ 0-10V**

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CHAINING LUXMESH WITH HARDWIRING: MAGNETIC LOW VOLTAGE
EXAMPLE: SEBCO 288W TRANSFORMER WIRING DIAGRAM

CHAINING LUXMESH WITH HARDWIRING: 0-10V DIMMING

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CHAINING LUXMESH WITH HARDWIRING: 0-10 DIMMING WITH ON/OFF CONTROL FOR DRIVER

RED/WHITE
VIOLET (+)
GRAY (-)
BLUE

0-10V Dimmer

LOAD

0-10V Dimmer
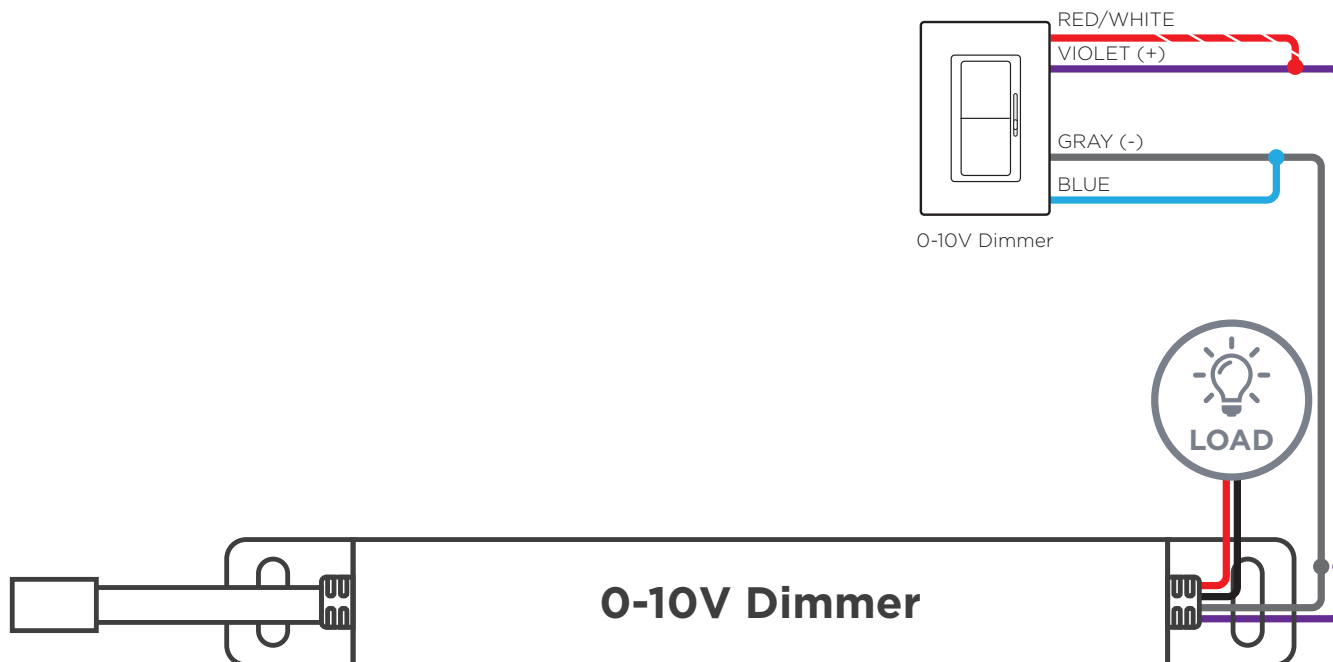
CHAINING LUXMESH WITH HARDWIRING: 0-10V GENERAL (SINGLE POLE) DIMMING

LOAD

LINE/HOT   BLACK   RED   SWITCHED HOT
NEUTRAL   WHITE
VIOLET (+)
GRAY (-)

0-10V Dimmer

0-10V Dimmer
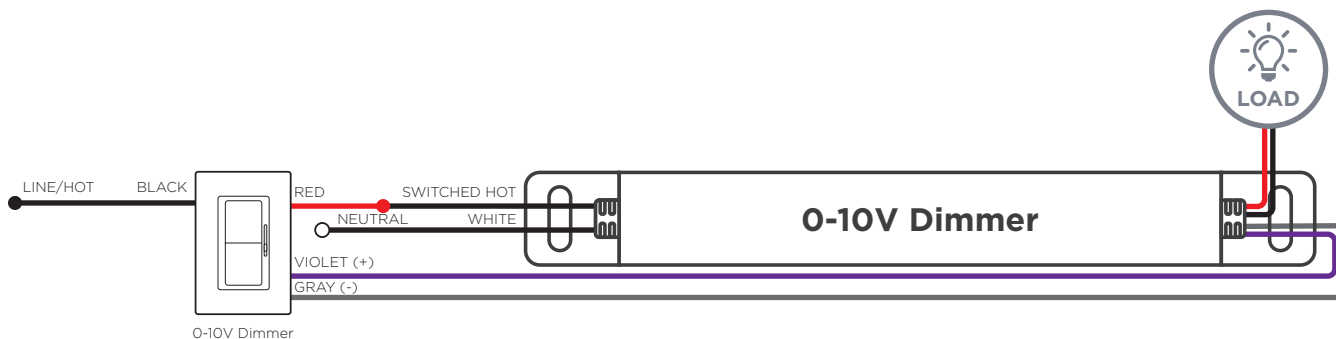
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STORAGE & MAINTENANCE

• LUXMESH is provided by default with an IP60 rating that provides total protection against dust ingress. Please only use the product indoors and do not get the product wet.
• Damp location rating (IP65) is available upon request.
• Environmental factors will affect the type of IP rating required for your application. If a custom IP Rating has been requested, please consult with our engineering team for more specific information.
• Relative humidity should never exceed 70% MAX for indoor applications.

• For optimal LED performance, make sure LUXMESH™ LED Lattice lights do not exceed an operating temperature range of -13˚F min to +140˚F max (-25˚C min to +60˚C max).
• For product without damp location treatment, store in a dry, clean area.
• LUXMESH may be cleaned, with the power off, by gently wiping with a soft cloth, using care not to snag or harm the LED components.
• If LUXMESH is dusty, turn the power off and apply compressed air to clear any debris.

IMPORTANT SAFETY INSTRUCTIONS

Installation of this assembly requires a person familiar with the construction and operation of the luminaire's electrical system and the hazards involved. If not qualified, do not attempt installation. Contact a qualified electrician If you are unfamiliar with methods for installing electrical wiring, secure the services of a qualified electrician.

LEDCONN LED fixtures are designed to meet the latest NEC requirements and are listed in full compliance with the relevant UL standard(s). Before attempting installation of any LED fixture, check your local electrical building code. All electrical connections must be in accordance with local codes, ordinances and the National Electric Code. Always confirm that the maximum wattage of your luminaire does not exceed the maximum wattage of the connected electrical circuit.

• **IMPORTANT** Risk of fire or electric shock. Installation of this luminaire assembly requires a person familiar with the construction and operation of the luminaire's electrical system and the hazard involved. If not qualified, do not attempt installation. Contact a qualified electrician
• **IMPORTANT** Do not connect directly to AC power!
• **IMPORTANT** Risk of fire or electric shock. Install this assembly only if the luminaires have the construction, features, and dimensions shown in the photographs and/or drawings.
• **IMPORTANT** To prevent wiring damage or abrasion, do not pinch or damage exposed wiring during installation. Keep away from edges of sheet metal or other sharp objects
• Verify power is off before installing or un-installing.
• Do not use product if any LED lattice components are damaged.
• The product has no user serviceable parts. Do not attempt to open the product or repair it on site. If damaged, please notify LEDCONN immediately for servicing.
• Do not exceed the specified voltage and current input (refer to the specification sheet for power limitations).

• Do not hot plug the light engine to an energized power supply. Hot plugging may cause permanent damage to the LEDs.
• Avoid looking directly into the luminaire as the high brightness beam may damage eyes.
• LEDCONN's limited warranty applies only to LEDCONN's LUXMESH LED lattice luminaire.
• This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.
• Do not make or alter any open holes in an enclosure of wiring or electrical components during installation.
• Please retain these instructions for maintenance reference.
• Test before installing; LEDCONN products undergo rigorous reliability testing before shipment, but due to unforeseen shipping and handling issues, inspect all LED lattice before first use.

WARRANTY

2 YEAR LIMITED MANUFACTURER WARRANTY

These handling and mounting materials and any other communications related to the installation of LUXMESH LED lattice are offered for informational purposes only. Handling and mounting is the installer's responsibility. Under no circumstances is LEDCONN assuming any liability, express or implied, regarding the installation or application of any of its LUXMESH LED lattice, whether proper or improper. Further, LEDCONN assumes no liability for any costs associated with the installation or re-installation of LUXMESH LED lattice.

The standard warranty for this product is 2 years. Any damage caused by mishandling or improper installation of the product as outlined in this installation guide will void the warranty. Examples of mishandling or improper use include but are not limited to: not cutting along product cut lines; using power supplies or controls not recommended by LEDCONN; and using product in damp environments without proper damp location treatment. Please consult a LEDCONN team member for more information about the warranty coverage.