

WARNING — RISK OF ELECTRIC SHOCK

Disconnect power at the circuit breaker and verify the circuit is de-energized before installing or servicing this luminaire. Lock out and tag the circuit.

Installation must be performed by a qualified electrician in accordance with the National Electrical Code (NEC), NFPA 70, and all applicable state and local codes.

Before installation, consult your local ordinances and building codes for compliance. LAMAR LED assumes no responsibility for misapplication of fixtures.

Do not install a damaged luminaire. Do not modify the housing, driver, LED boards, or factory wiring — doing so voids the UL certification and the warranty.

1. Before You Begin

Confirm the following before pulling wire or hanging fixtures. The catalog number on the fixture label is the authority for what was supplied.

- Match the catalog number. Compare the label on the housing to the approved submittal — series, size, power, CRI/CCT, driver, controls and options (for example DCL-48-M-8030-DTD-PIR-EM).
- Verify supply voltage. The standard driver is universal input 120–277V. MX1 drivers are 120V only and MX2 drivers are 277V only.
- Check the ambient. The DCL is rated for 50°C maximum ambient operating temperature up to 7,080 lumens (4') and 14,160 lumens (8'). For higher lumen outputs, consult the factory for the maximum ambient before installing.
- Inspect the shipment. Check the aluminum housing, reflectors and diffuser for shipping damage. Report freight damage before installing.
- Confirm the mounting method matches the structure (see table below). Aircraft cable, rigid stems and chain are optional or by others.
- Verify the supporting structure. Every support point must be anchored to building structure adequate for the fixture weight.
- Tools required. Power driver with the appropriate bit, wire strippers, listed wire connectors, tape measure, level, and an appropriate ladder or lift.

Mounting method	Typical application
Surface mounted	Direct mount on the ceiling
Aircraft cable	Suspended mount using the optional aircraft cable
Rigid stem (by others)	Stem-hung applications
Chain (by others)	Chain-hung applications, using the VH V-hanger accessory

Each method is detailed in Section 5. Fixtures mount individually or in continuous rows. Sizes: 48 = 4' nominal, 96 = 8' nominal.

2. Prepare the Location

1. Lay out fixture locations and rows from the reflected ceiling plan, typically centered over the aisles. Confirm each row is straight and level before drilling.
2. Keep fixtures, supports and conductors clear of cable trays, containment, sprinklers and other equipment shown on the coordination drawings.
3. For suspended rows, mark and verify every support point against building structure, and confirm the drop height clears racks, trays and equipment.
4. Route branch-circuit conductors to each fixture location, leaving 6–8 in. of free conductor. Support the whip or conduit independently of the luminaire.

3. Electrical Connection

1. Confirm power is off and locked out.
2. Open the fixture for access per its construction and retain all fasteners.
3. Select the entry closest to the incoming feed. Use only the provided entries — do not drill the housing.
4. Install a listed connector or fitting in the knockout and bring conductors into the wireway. Protect conductors from the knockout edge.
5. Connect line, neutral, and ground to the corresponding fixture leads using listed wire connectors. Bond the equipment ground to the housing ground screw.
6. Keep low-voltage control conductors separated from line-voltage conductors per NEC Class 1 / Class 2 requirements. See Sections 4 and 7.
7. Dress all conductors neatly inside the housing so nothing is pinched when the fixture is closed.

4. Wiring

0-10V control conductor colors have changed. Effective January 1, 2022, NEC 2020 Article 410.69 prohibits colors reserved for the grounded conductor (white or gray) and the equipment grounding conductor (green) on field-connected control conductors.¹ NEMA Publication 100-2021 adopted pink in place of gray, making violet (+) and pink (–) the compliant 0-10V pair.² Legacy stock may still have a gray lead — see the wire color reference below.

4A. Line-voltage supply and 0-10V dimming (drivers D and DTD)

1. Connect the branch-circuit hot (black), neutral (white) and equipment ground (green) as described in Section 3.
2. Connect the driver's violet (+) and pink (–) leads to the 0-10V dimmer or control system. Observe polarity. D dims to 1%; DTD dims to dark. Where no dimming control is used, cap each control lead individually.

4B. Other drivers (LDH, MX1, MX2, BT, BTM)

1. LDH (Lutron EcoSystem Hi-lume, digital 1% with Fade to Black): wire the EcoSystem digital link per the Lutron documentation supplied with the driver.
2. MX1 / MX2 (2-wire 5% phase-cut dimming): connect the dimmed hot from a compatible phase-cut dimmer, the neutral and ground. MX1 is 120V; MX2 is 277V. There are no separate control leads.
3. BT / BTM (Bluetooth programming / Bluetooth mesh): make the line-voltage connections in 4A, then commission the fixtures per the documentation supplied.

4C. Two-circuit wiring (option 2C) and emergency packs

1. Option 2C (High or Very High power only): connect each circuit's hot to the fixture lead for that circuit as shown on the fixture label and project drawings.
2. Emergency packs (EM, EMB, EMH): connect the pack to an unswitched hot tapped ahead of any switch or dimmer, so the pack senses loss of normal power. Connect the switched hot to the driver for normal operation.

Conductor	Color and notes
Line / hot	Black. Branch circuit, 120–277V (MX1 120V, MX2 277V). Switched or dimmed hot where a switch or phase-cut dimmer is used.
Neutral	White. Grounded conductor. Reserved color — never use for control conductors.
Equipment ground	Green or green/yellow. Bond to the housing ground screw. Reserved color — never use for control conductors.
0-10V control (+)	Violet. Class 2 low voltage. Observe polarity.
0-10V control (–)	Pink (gray on legacy stock). Verify against the label on the driver supplied. A gray control lead must be re-identified with pink tape or paint where visible and accessible. ¹
Unswitched hot (EM / EMB / EMH)	Per project drawings. Tap ahead of the switch and dimmer so the pack senses loss of normal power.

1. Electrical Contractor Magazine, "Color Coding Changes: NEC 2020 impacts 0-10V control wiring" — ecmag.com

2. Inside Lighting, "No More Gray: Low Voltage Wiring Changes" — inside.lighting

5. Mounting

5A. Surface mounted on ceiling

1. Mark the fixture position and the fastening points from the reflected ceiling plan.
2. Locate structure, or install blocking or an approved anchor suited to the construction. The fixture must be supported by structure, not by the finish alone.
3. Bring the branch circuit into the housing through the knockout nearest the feed, using a listed connector or fitting, and complete the connections in Section 4.
4. Fasten the fixture to the structure, then confirm it is level, tight to the surface and does not rock.

5B. Suspended — aircraft cable, rigid stem or chain

1. Confirm the finished mounting height. Anchor every support point to building structure adequate for the fixture weight.
2. Aircraft cable: attach the optional aircraft cable to the structure and to the fixture per the hardware supplied.
3. Rigid stem (by others): install stems plumb and tighten all fittings.
4. Chain (by others): attach the VH V-hanger to the fixture and hang it from chain anchored to structure. Close all hooks fully.
5. Suspend the fixture from all support points before making any electrical connection, then level it along its length.

6. Confirm the supply conductors carry no load and are protected where they enter the housing.

5C. Continuous rows and aligner clips (AL)

1. Hang the first fixture of the row, then butt each following fixture to it on the same line and height.
2. Install aligner clips (AL — standard on 8' units, order separately for 4') to keep reflectors aligned from fixture to fixture.
3. Sight the full row for consistent height and alignment before final tightening.

6. Reflector and Diffuser

1. Close the fixture with the original fasteners. Confirm no conductor is pinched.
2. Handle the frosted polycarbonate diffuser and the white aluminum reflectors by their edges; do not bend the reflectors or force the diffuser.
3. Remove any protective film and clean fingerprints before closing out the space.

7. Controls and Optional Equipment

Option	Installation requirement
PIR — aisle sensor	Standalone passive infrared aisle sensor. Mount and aim it so it has a clear view down the aisle it controls. Adjust settings only by the method described in the sensor documentation supplied.
EM — emergency pack	Emergency pack >90 min., >500 lumens. Connect to an unswitched source — see 4C. Allow a full 24-hour charge before testing.
EMB — emergency pack	BABA compliant emergency pack >90 min., >500 lumens. Wire as EM.
EMH — emergency pack	High lumen emergency pack. Wire as EM.
2C — two-circuit wiring	High or Very High power only. See 4C.
VH / AL — accessories	VH V-hanger for chain mounting (see 5B). AL aligner clips (see 5C).

Universal voltage 120-277V standard, 0-10V dimming to 1% standard. Consult the factory for additional options not shown or listed.

8. Start-Up Check and Maintenance

- Restore power and confirm every fixture energizes at its specified power.
- Operate the dimming control through its full range and confirm the fixtures dim smoothly and together.
- On 2C fixtures, operate each circuit separately and confirm it controls the intended portion of the fixture.
- Allow a full 24-hour charge, then test emergency units by interrupting normal power and confirming transfer to the emergency pack for the rated duration.
- Walk-test each PIR aisle sensor and confirm its settings match the project requirements.
- No routine relamping is required — the LED boards and driver are the serviceable components. Disconnect power before any service.
- Clean the diffuser with a soft cloth and mild soapy water only. Do not use ammonia, solvents, or abrasive cleaners on polycarbonate.
- Warranty: 5-year standard warranty; 10-year warranty available. Listings and ratings as published: all electrical components are UL Certified, IP55-rated for dust.

QUESTIONS OR APPLICATIONS NOT COVERED HERE

Contact LAMAR LED at 631.777.7700 or sales@lamarled.com, or visit www.lamarled.com.