

CAUTION Read all instructions completely before beginning installation.

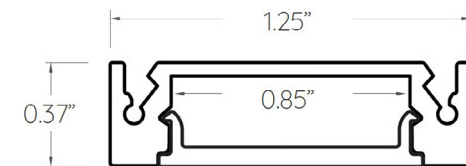
The Alcon 14027 is a field-assembled fixture combining an aluminum mounting channel, an LED tape light engine, and a frosted diffuser lens. Improper installation may result in electric shock, fire, or product damage. Installation must be performed by a qualified, licensed electrician in accordance with the National Electrical Code (NEC) and all applicable local building and electrical codes.

- Disconnect and lock out power at the circuit breaker before beginning any installation or wiring work.
- Do not connect the LED tape directly to 120V/277V line voltage. The LED tape operates on low-voltage 12V or 24V DC and must be powered through an external, compatible LED driver.
- Use only the Alcon-specified 120-277V universal driver rated for this fixture (0-10V, MLV, ELV, or TRIAC dimming to 1%, IP65-rated). The driver is sold separately and must be installed per its own instructions and code requirements.
- This fixture is rated for indoor use only.
- Do not install the LED tape less than 6 inches (152 mm) from combustible materials.
- Do not look directly into the illuminated light source.
- Test the LED tape for damage before installation and again before final closeup, using a low-voltage bench supply matched to the tape's rated voltage.
- Confirm the ceiling/mounting structure (T-bar grid or surface) can adequately support the fixture weight.
- Allow the driver and channel to reach room temperature before handling in cold environments; do not install if any component shows signs of shipping damage.

Materials Provided (Alcon 14027 Kit)

- Aluminum mounting channel/profile, low-profile surface/T-bar type
- Frosted acrylic diffuser lens
- LED tape light (LSM-series), factory-tested
- End caps (with and without wire-access holes)
- Mounting clips (surface-mount or T-bar grid clips as ordered)
- Mounting hardware (screws/anchors)

**14027 | 1-Inch Linear LED T-Bar
Grid Ceiling Light**



STEP-BY-STEP INSTALLATION PROCESS

Complete all mechanical channel installation first, then install and wire the LED tape, and finish by snapping on the lens.

Step 1 – Layout & Marking

Turn off power at the breaker serving the installation area. Verify with a voltage tester.

Determine the fixture run length and mark the mounting location on the ceiling, T-bar grid, or surface using a pencil and level.

Mark reference points for the mounting clips along the full run. The manufacturer recommends one mounting clip every 12 inches. (Figure 1)

Step 2 – Prepare the Channel & Lens

If the channel must be shortened, snap the diffuser lens into the channel temporarily to support the cut, then cut both to the desired length together using a blade suitable for aluminum.

Separate the lens from the channel and set the lens aside. Clean any metal shavings or debris from inside the channel extrusion. (Figure 2)

Step 3 – Install End Caps

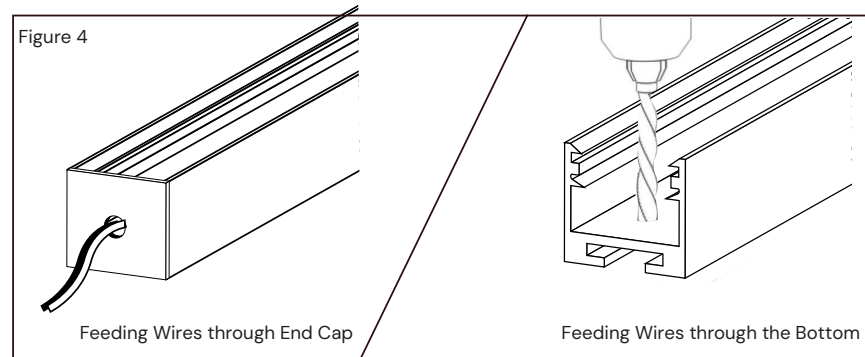
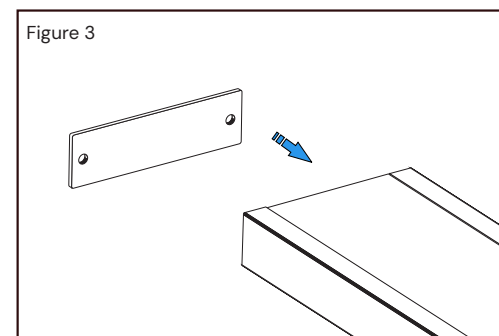
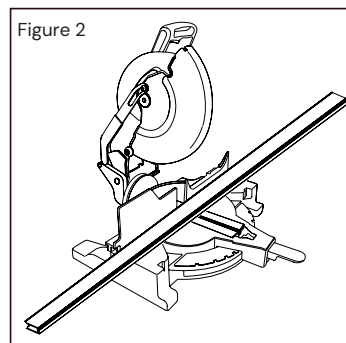
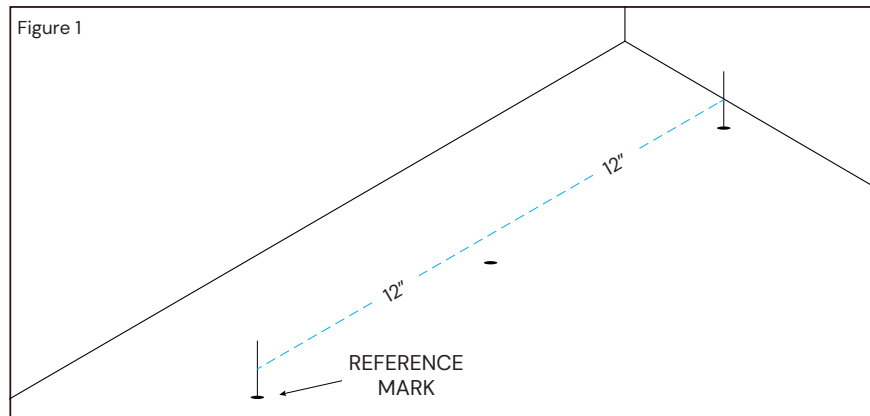
Fit the end caps onto both ends of the channel. Feed the LED tape's lead wire through the end cap that has a pre-drilled wire-access hole. (Figure 3)

If your chosen end cap does not have a hole and the lead wire must exit through the endcap, carefully drill a hole in the endcap. If the wire will instead exit through the bottom of the channel, drill the access hole at the base of the channel. Reference the channel's cut sheet before drilling. (Figure 4)

Step 4 – Mount the Channel

Using appropriate hardware for the mounting surface (screws for surface mount, or grid clips for a T-bar ceiling), secure the mounting clips at each marked location along the run. (Figure 5)

Gently press the channel into the installed mounting clips until it seats fully and sits level along the entire run. (Figure 6)



STEP-BY-STEP INSTALLATION PROCESS

Step 5 — Prepare & Install the LED Tape

Determine the exact tape length needed. If a cut is required, cut only at the marked cut points located between the copper soldering pads, always cutting from the end opposite the factory lead wire. (Figure 7)

Peel back the adhesive paper backing from the LED tape in short sections as you go. (Figure 8)

Firmly press the LED tape into the interior tray of the aluminum channel, working from one end to the other. Keep the tape straight and laid perfectly flat — any lifting or waviness will create visible dark spots once illuminated. (Figure 9)

Step 6 — Make the Low-Voltage Connections

Feed the LED tape's lead wire (or connector) through the wire-access hole in the end cap or channel base prepared in Step 3.

Connect the LED tape's supply wires to the driver's low-voltage leads, matching polarity (+ to +, - to -). Use Connector Type A or Type B as shown in **Figures 10–11**, following the contact or terminal method for your chosen connector

If using a solderless clip-style or terminal-block connector, align the copper solder pads with the connector's contact points and secure per the connector's method (press-fit with pliers, or tighten terminal screws with a screwdriver).

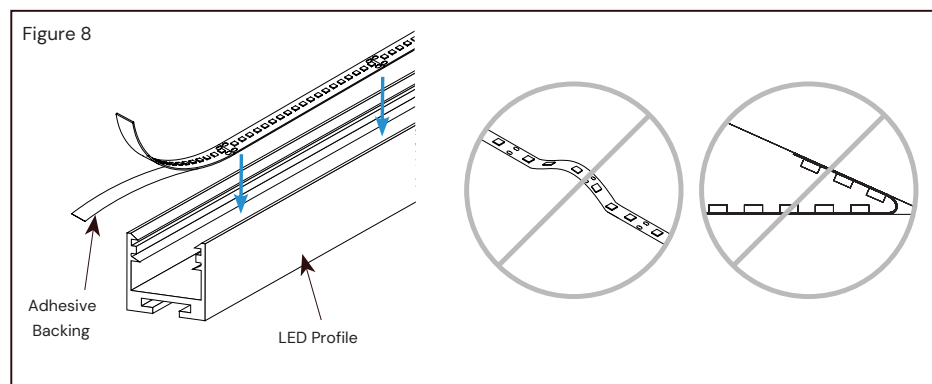
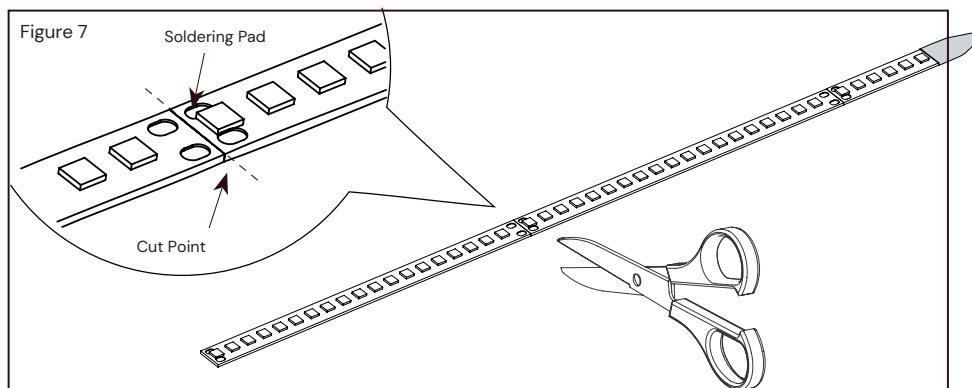
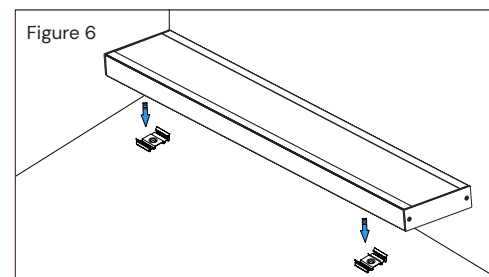
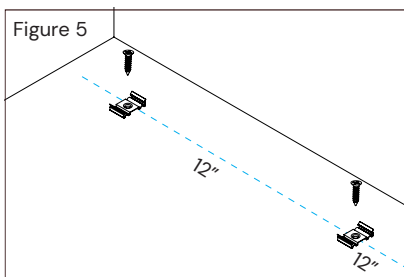
Route the low-voltage wiring back to the driver location, keeping runs neat and clear of sharp edges.

Step 7 — Install the Lens

Once the tape is fully seated and wired, carefully snap the frosted diffuser lens back onto the aluminum channel along its full length, pressing evenly until it clicks into place on both edges. (Figure 9)

Step 8 — Connect & Test the Driver

Install the external LED driver in an accessible location per its instructions and local code (in a junction box or approved enclosure).



STEP-BY-STEP INSTALLATION PROCESS

Wire the driver's line-voltage side (120–277V) to the branch circuit per NEC requirements. Wire the driver's low-voltage output to the LED tape leads, matching polarity.

Restore power at the breaker and confirm the fixture illuminates evenly along its full length with no dark spots or flickering.

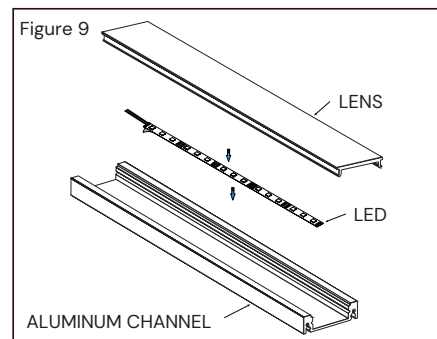
Turn power back off, complete final closeup of any junction boxes and covers, then restore power for normal use.

POWER CONNECTIONS

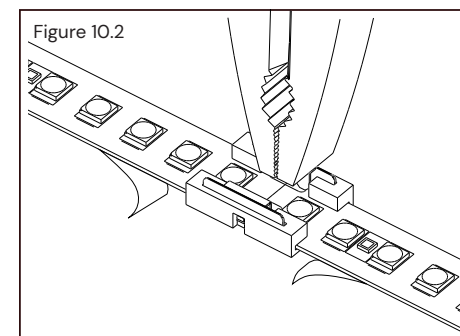
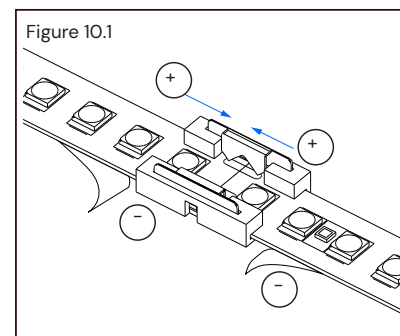
The **14027** is a low-voltage (12V or 24V DC) fixture. The LED tape must never be wired directly to line voltage, an external driver is always required.

Power Source	Component	Connection
120–277V AC branch circuit	LED Driver (input side)	Line + Neutral + Ground, per NEC
LED Driver (output side)	12V or 24V DC low-voltage leads	Positive (+) to Positive (+) Negative (–) to Negative (–)
Low-voltage leads	LED Tape supply wires (inside channel)	Match polarity via wire nut, crimp, or terminal connector
Dimming control (optional)	0–10V / MLV / ELV / TRIAC input on driver	Wire per driver dimming instructions

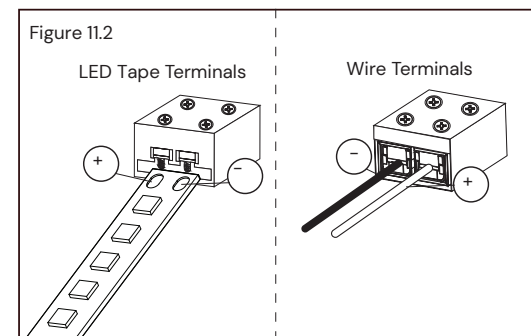
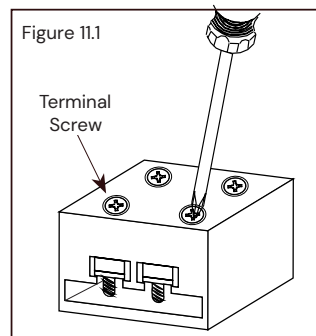
Never connect the LED tape's supply wires directly to a 120V/277V source. This will destroy the tape and creates a serious fire and shock hazard.



Connector Type A



Connector Type B



TROUBLESHOOTING & CARE

If the led tape does not light

Confirm the breaker is on and the driver has power at its input terminals using a voltage tester.

Verify driver output voltage matches the LED tape's rated voltage (12V or 24V) — a mismatch will prevent operation or damage the tape.

Check polarity at every connection point (driver-to-lead-wire and lead-wire-to-tape). Reversed polarity is the most common cause of a non-lit run.

Inspect each connector (wire nut, crimp, or terminal block) to confirm the contacts fully pierced or gripped the solder pads. A loose or shallow connection will not conduct.

Confirm the tape was cut only at a marked cut point. Cutting between cut points severs the circuit.

Check driver load: confirm the connected LED tape wattage does not exceed the driver's rated output capacity.

If sections are dim, flickering, or show dark spots

Re-seat the tape fully flat against the channel — lifted or wavy tape causes uneven light output.

Confirm the driver is compatible with the dimmer type in use (0-10V, MLV, ELV, or TRIAC) if dimming issues occur.

Check for a loose connection at the point nearest the dim or dark section.

General Care

Clean the diffuser lens with a soft, dry or slightly damp cloth. Do not use abrasive cleaners or solvents.

Do not expose the fixture to moisture; it is rated for indoor use only.

Always disconnect power at the breaker before servicing, relamping, or removing the lens.

For persistent issues, contact Alcon Lighting technical support with the model number **(14027)** and driver model on hand.