

## MICROLINE STEP (Double Drywall Construction) - ELECTRICAL INSTALLATION INSTRUCTIONS

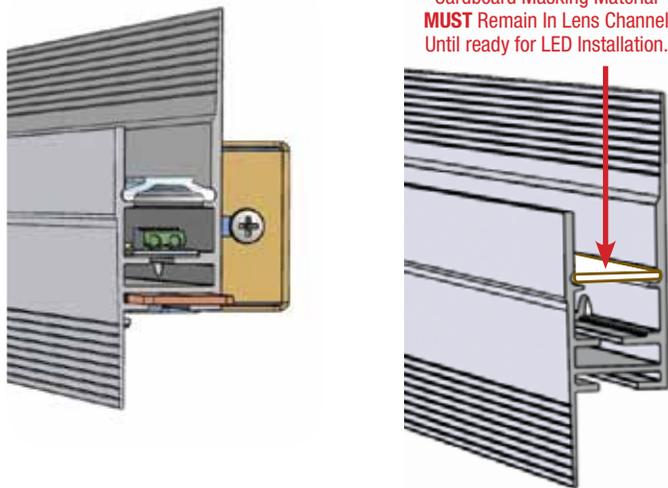
**CAUTION:** BEFORE CONNECTING THE FIXTURE TO A POWER SUPPLY, MAKE SURE THE POWER IS SWITCHED OFF.

### DETAILED ILLUSTRATION

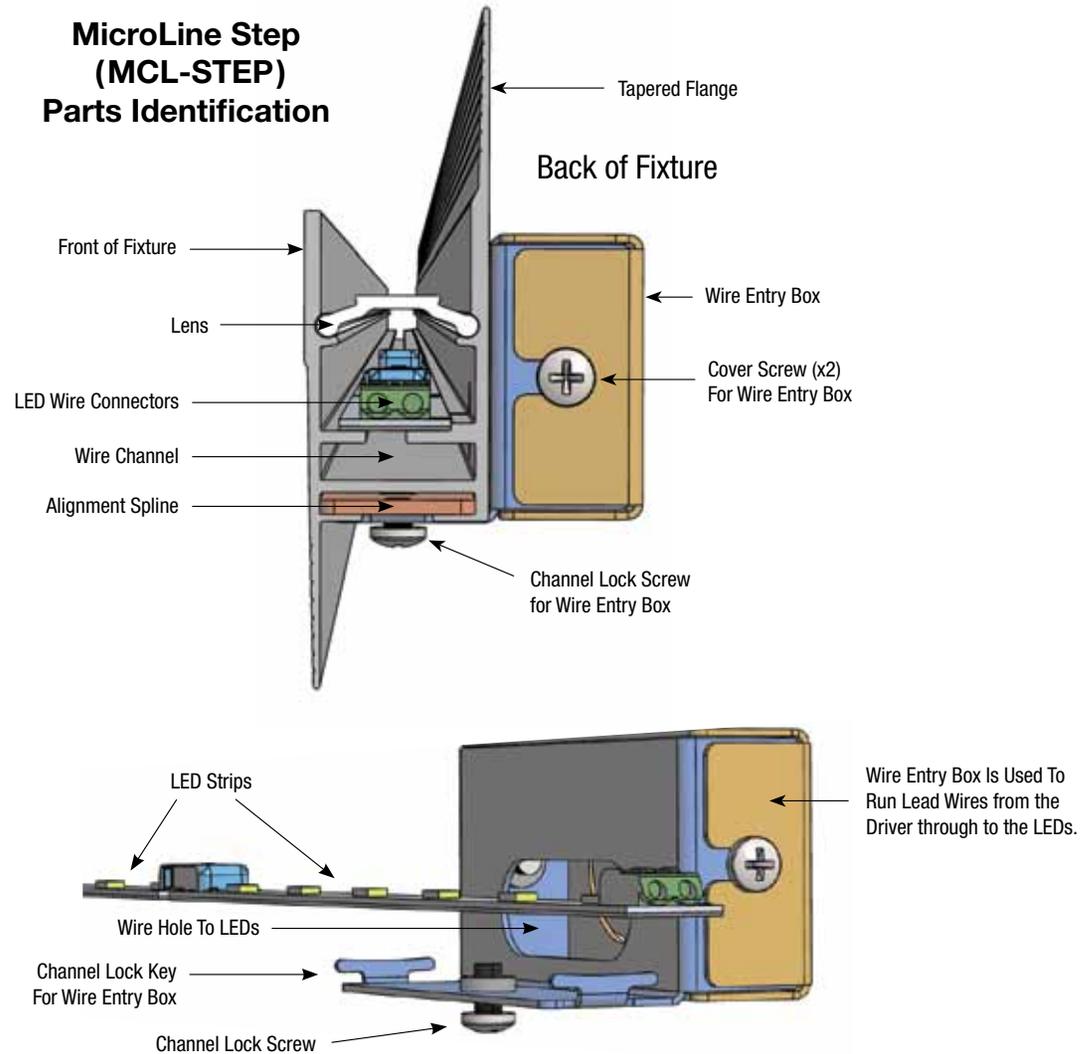
#### GENERAL:

1. Before starting the installation, make sure all electricity has been turned off and electrical breaker has been locked out and tagged out.
2. To ensure the success of the installation, be sure to read these instructions and review the diagrams thoroughly before beginning.
3. All electrical connections must be in accordance with local codes, ordinances, or the National Electrical Code.

**NOTE:** The important safeguards and instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur.



### MicroLine Step (MCL-STEP) Parts Identification



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#### INSTALLATION:

1. Locate wiring in wall at desired start point for run length. Generally this will be at the start of a run length. **Note:** You can use a center point feed location to power runs in two different directions. Maximum distance from driver is 20 feet.

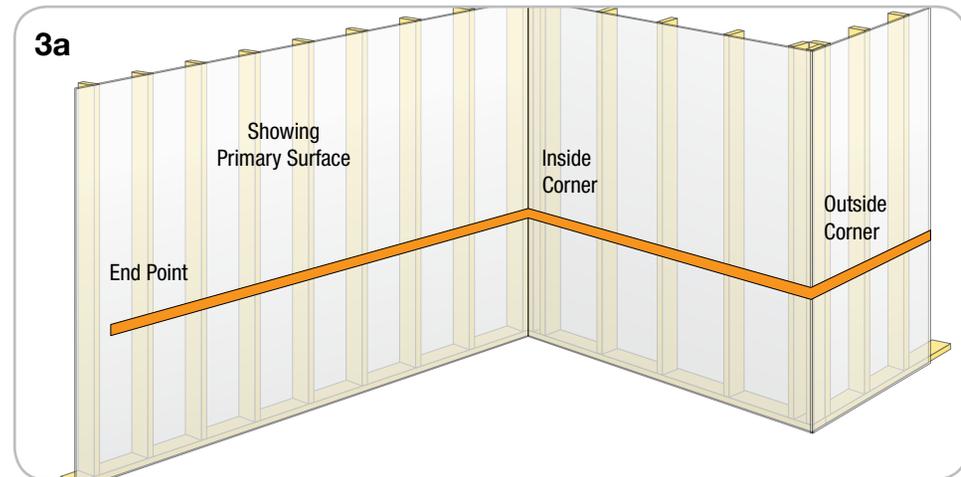
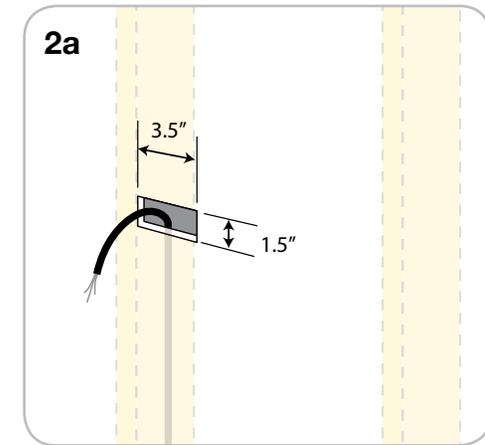
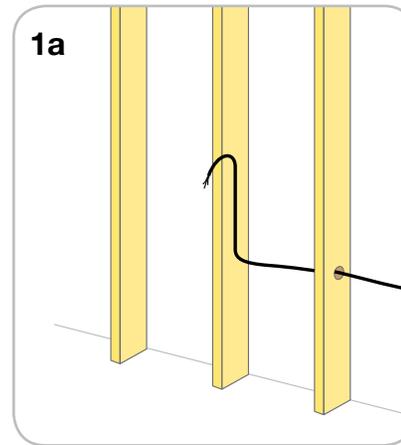
**IMPORTANT:** Maximum wire gauge for connecting to fixture is 18AWG solid.

**NOTE:** Max run length for MicroLine is 20 ft. - using Max. 100W power supply.  
Use a 50W power supply for a 10 ft run.

2. Cut opening in primary wall surface to accommodate wire entry box on back of fixture. Opening is 3-1/2" wide by 1-1/2" high (3.5"W x 1.5"H). Pull wire through opening, leaving approximately 18" exposed from wall surface.

**NOTE:** Some preassembly is required before mounting fixture to wall.

3. Layout the fixture housing, inside/outside corners, end conditions and final housing details. Also, inspect flatness of wall along the length of the intended installation and correct as needed to maintain a flat, even surface throughout. A straighter wall will result in a straight linear light pattern.



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### DETAILED ILLUSTRATION

#### INSTALLATION:

4. Secondary Wall may be of 3/8", 1/2", 5/8" or 3/4" thickness. Use lath, blocking or spacer strips to ensure that the FACE of the Secondary Wall Surface is finally 3/4" from the FACE of the Primary Wall Surface. **Fig. 4a-4c**

**NOTE:** Spacers should be applied across the Primary Wall Surface where the Secondary Wall is to be added. Spacers should also be positioned behind the Tapered Flange of the fixture for added support with the Secondary Wall Surface.

5. Hang Secondary Wall Surface

**PREASSEMBLY:** (Shown with MicroLine Cove, same procedure.)

P1. Attach Wire Entry Box to back of aluminum fixture, by aligning the Channel Key with the bottom channel and sliding it in.

P2. Align the Wire Entry Box opening over the 3/8" hole in the back of the fixture.

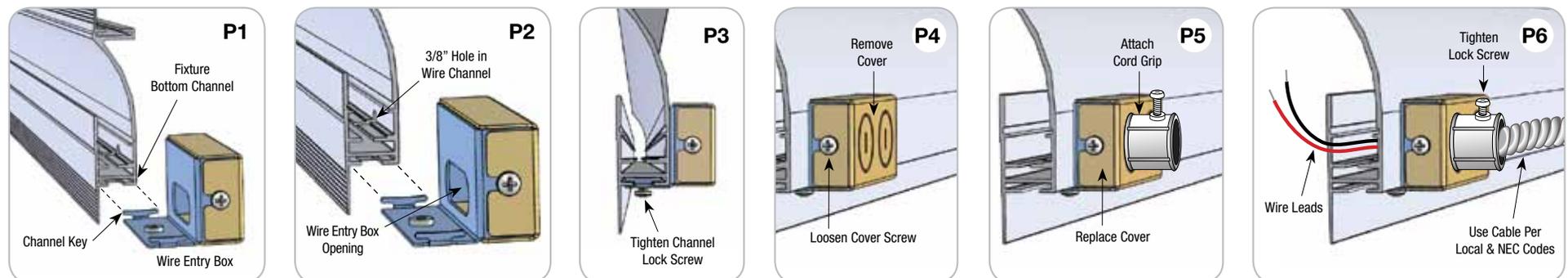
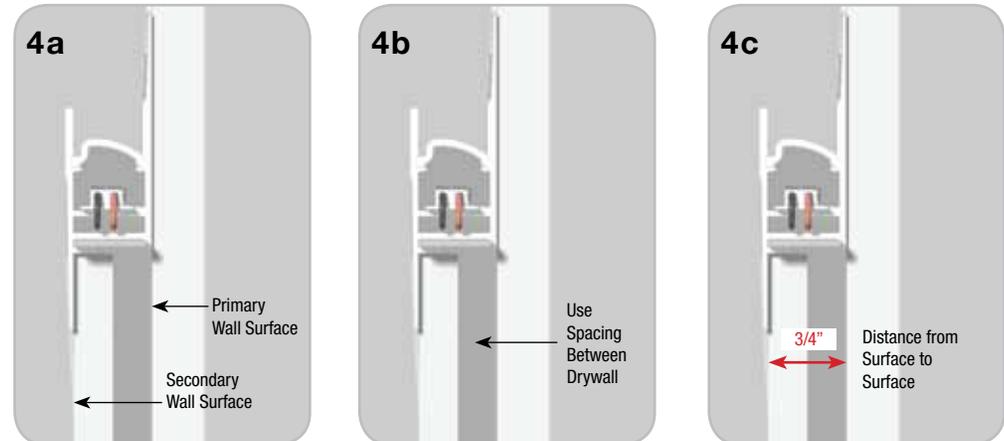
P3. Tighten Channel Lock Screw on bottom to hold the Wire Box in place.

P4. Loosen the Wire Box Cover Screw and remove cover.

P5. Attach a 1/2" (O.D. threads) trade quality Cord Grip to the cover using provided knockout. Then replace cover and tighten with Cover Screw.

P6. Attach and fasten Code approved wire cable, running wire through the back, into the fixture leaving 6" to 12" of lead wire tucked in the LED channel, underneath the Masking Material.

**NOTE:** No splices are to be placed in the Wire Entry Box as this is inaccessible after installation. Some excess wire can be pushed into the Wire Entry Box after connecting LED Strips.



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**DETAILED ILLUSTRATION**

**INSTALL END CAPS AS NEEDED**

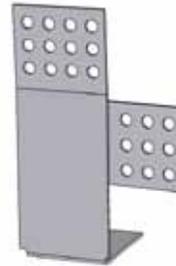
**INSTALLATION:**

7. Install Cove End Cap trims into fixture housing ends to match wall condition. Apply a small amount of silicone or construction adhesive to the bottom tab on end trim to secure in place during installation.

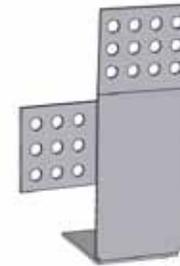
**Bend tabs as needed:**

**End at 90° Wall** - When ending at a 90° wall angle, leave the End Cap in it's original 90° position.

**End on Flat Wall** - When fixture ends on flat continuing wall, evenly fold the End Trim Flange over flush with flat wall surface.

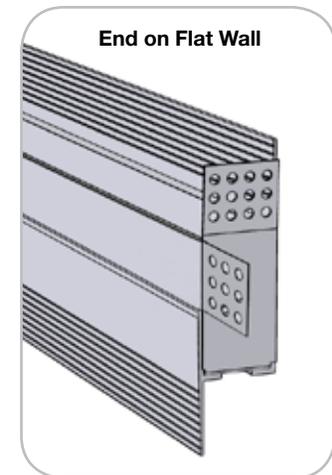
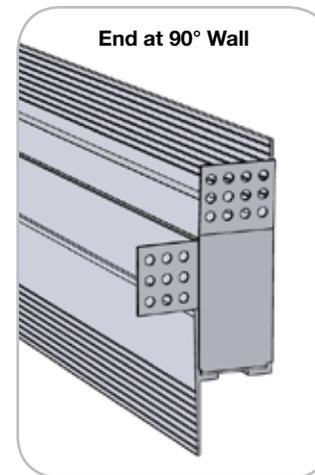
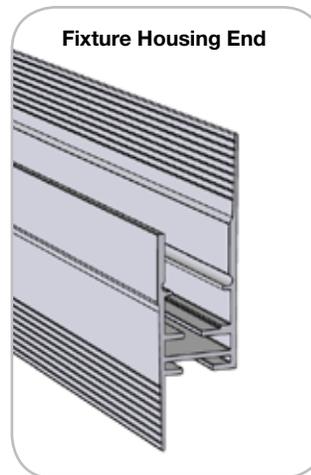


**Bend Bottom Tab Right  
For Left Side End Cap**



**Bend Bottom Tab Left  
For Right Side End Cap**

**SHOWN WITHOUT WIRING COMPONENTS**



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### DETAILED ILLUSTRATION

#### INSTALLATION:

8. Apply a few spots of construction adhesive to the back of the fixture housing and end trim flanges to tack to the drywall system and install housing into wall. Hold in place with tape or blocking until adhesive has set sufficiently in place. Optionally, you can drill countersink holes in the top and bottom flange and use flathead screws to secure the fixture to the surface. Stagger screws on top and bottom to avoid material distortion when fastening screws and avoid overtightening.

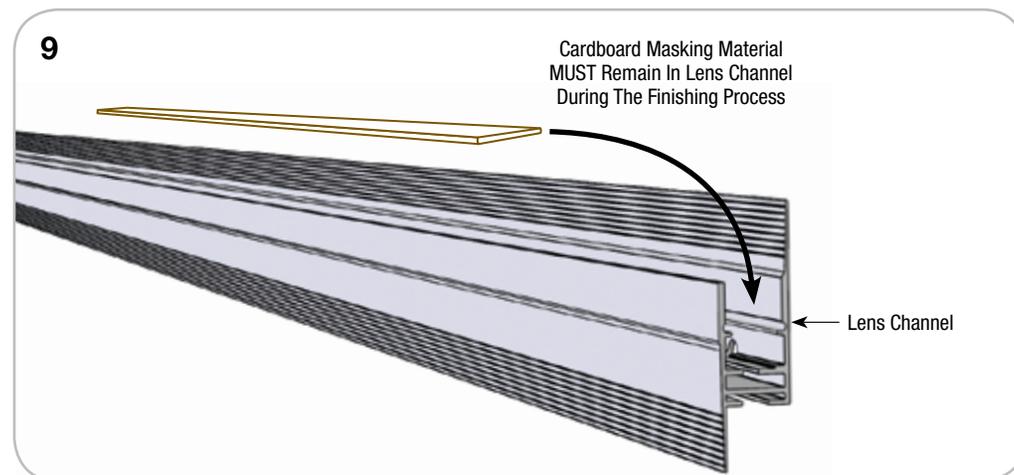
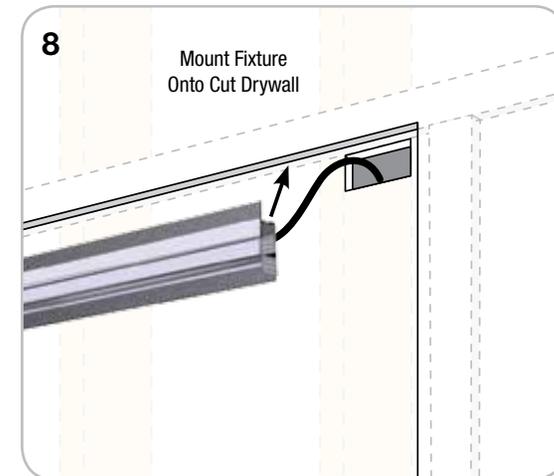
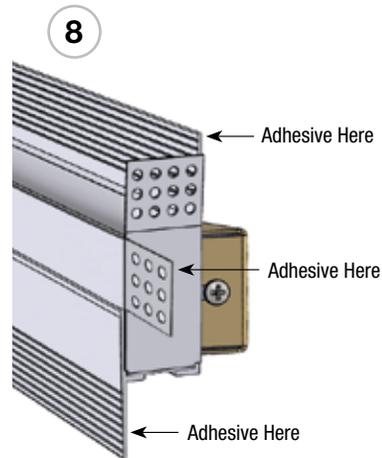
#### IMPORTANT - Cardboard Masking Material:

9. The white Cardboard Masking Material provided, must remain in place in the Lens channel for the wall & surface finishing process. This will keep the inner LED channel free from debris when finishers are mudding, sanding and painting. Care should be taken during the finishing process to NOT over mud or over paint inside the fixture channel and ensure that debris does not foul the interior features of the product, designed to snap fit the lens, and allow contact of the LED light strips with the aluminum housing upon final assembly.

The Masking Material is inserted in the Fixture Housing before shipment from the factory.

The Fixture Housing can now be taped and mudded into wall surround in the same manner as corner bead or drywall joints.

**IMPORTANT:** Final finishing should be completed with as smooth and sharp edges as possible to ensure a smooth, clean LED light pattern. The smoother the finished sanding and painting is, the smoother the linear light pattern will be from the fixture.



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### DETAILED ILLUSTRATION

#### INSTALLATION:

10. Once the wall finishing is complete, remove the Masking Material and clear any foreign material and debris from the light channel interior.

#### IMPORTANT

Failure to proceed with a clean interior channel will result in unsatisfactory LED Strip adhesion, resulting in strip detachment and loss of thermal control of the LED components. It is critical to clear all materials, dirt and debris from the interior of the fixture to have optimal performance.



### PREPARING FOR LED INSTALLATION

#### CONNECTOR TYPES for LED Strips

There are two connector types for the LED Strips. The **Push-In Wire Connector** is used to begin an LED run with wire leads from the driver, or to make short wire jumps, like rounding an inside or outside corner. Next is the **Board to Board Connector** for chaining the LED Strips together end to end. Also, the 12" and 24" LED strips have a snap line in the middle of each strip, that when spliced will terminate a run.

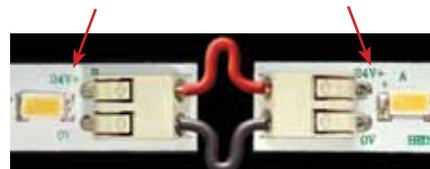
#### 24V DC Low Voltage System

MicroLine LED Strips run on a 24V DC, constant voltage system. Use maximum wire gauge of 18 AWG. The LED Strips have a thin metal backing that helps keep them rigid for assembly, adds to thermal control, and yet allows flexibility for linear installation. Max 20' run of LED Strips per 98W driver.

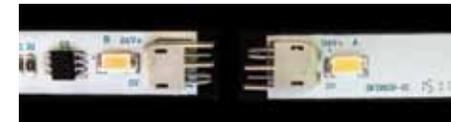
#### Push in Wire Connection (Max. gauge 18 AWG)



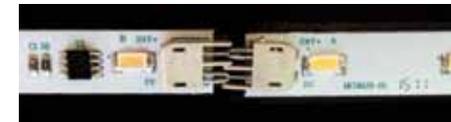
**NOTE:** POSITIVE Symbol (+) always has to be aligned on the same side for each connected LED Strip.



#### Board Connection 1) Always align (+) on LED Strips



#### Board Connection 2) Align metal contacts



#### Board Connection 3) push together



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### DETAILED ILLUSTRATION

#### INSTALLATION:

11. Prior to LED Strip installation, layout the LED Strips for intended run on a flat surface, then connect and test them. LED Strips will be difficult to remove once they are adhered to the aluminum housing. This will also help ensure proper run length for the fixture before installation.

11a. Run 18 AWG wire leads to LED Strip to start the run. Connect Red wire to Positive (+) and Black for negative. To start a run from wire leads use the end of the LED Strip with the Push-In Wire Connector.

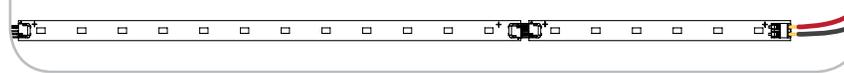
11b. Connect the remaining LED Strips using Board-To-Board Connectors. Align Positive Symbols (+) on LED Strips before connecting run.

12a. When connecting LED Strips Board-To-Board, align the metal contacts and push both ends together.

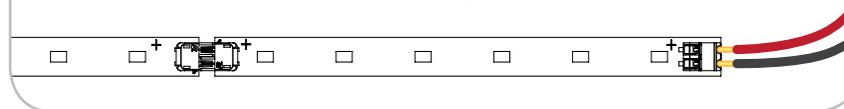
12b. To ensure good contact, the connectors should snap together. Use your fingers to push the connectors together.

12c. Once the contacts snap together that should complete having a good connection.

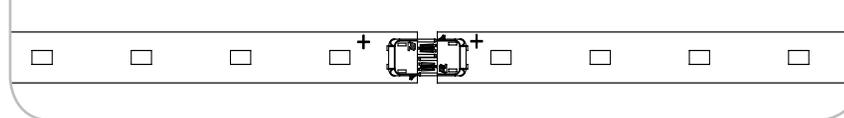
**11** Layout and test LED Strips before installation.



**11a** Connect wire leads to LED Strip, using end with Push-In Wire Connectors.



**11b** Connect remaining LED Strips using Board-To-Board Connectors. Align Positive (+).



**12a**



**12b**



**12c**



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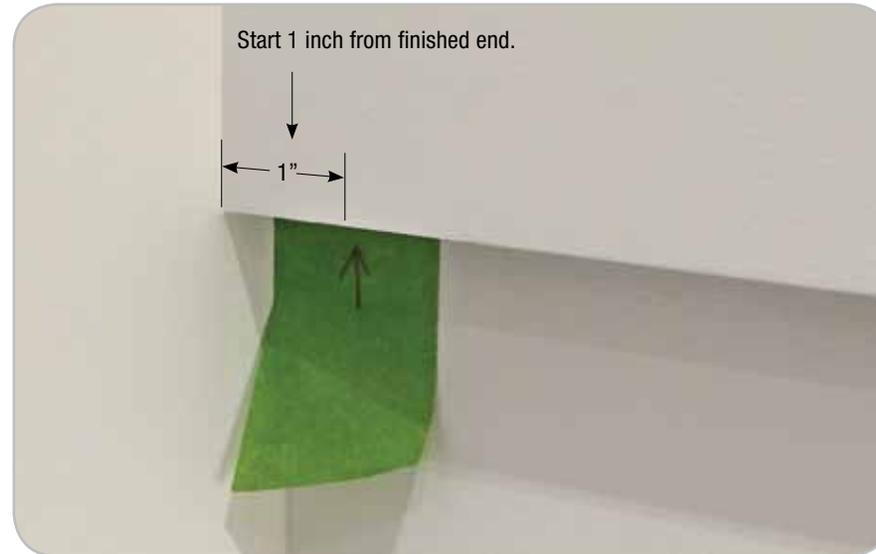


### DETAILED ILLUSTRATION

#### LED INSTALLATION:

13. Start LED Strip run 1 inch from inside the finished end of the fixture housing. Running LEDs too close to the end of the fixture housing or an inside corner is not necessary and could create undesired light reflection patterns or overlapping light spikes.
14. Trim the lead wires down to about 6-8", then attach the two 18 AWG lead wires to the Push-In Wire Connector of the first LED Strip if you haven't already.
15. Push excess wire in to wire channel, located under the LED Strip channel.

13



14



15



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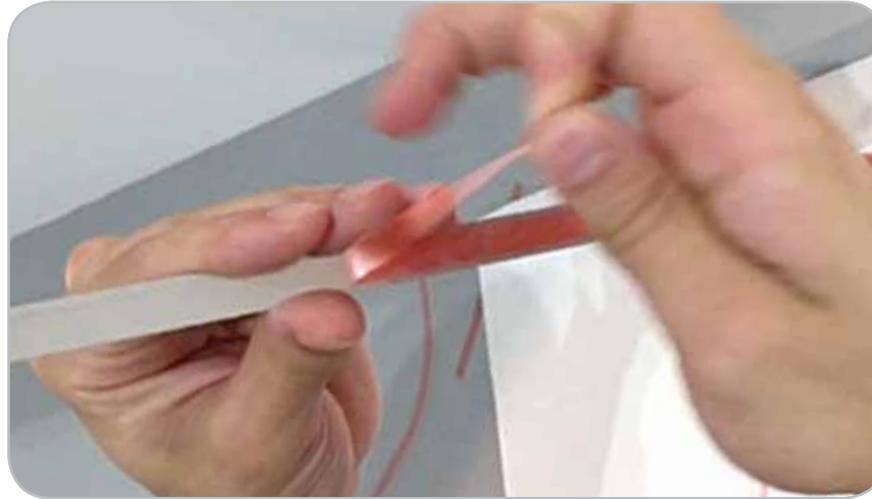
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### DETAILED ILLUSTRATION

#### LED INSTALLATION:

16. As you begin to remove the red adhesive cover from the back of the LED Strip, only remove as much as you need to for adhering it into the aluminum channel. As you continue to connect LED Strips end-to-end and adhere them into the channel in a linear fashion, leave some of the red adhesive cover on the LED to avoid having it stick to the aluminum before you connect the next LED Strip.

16



17. To start, use the LED install tool to align the LED Strips into the housing and begin pressing them into place. Once you've properly started the Led run you can continue to push the LEDs in place using your finger tips.

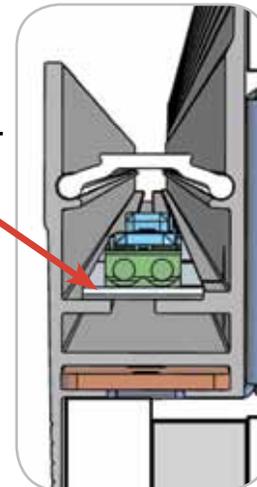
**NOTE:** The LED boards should lay flat in the LED channel. Avoid fastening the boards towards the back of the housing where they won't sit flat, which will reduce the quality of lighting and heat dissipation control. See correct and incorrect install below.

LED Strip Install Tool

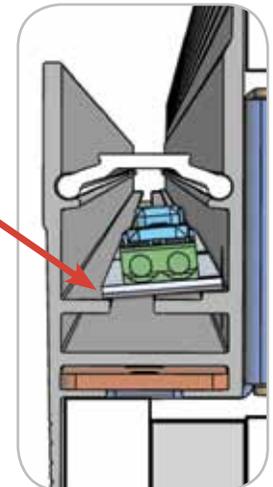
17



**CORRECT  
INSTALL**



**INCORRECT  
INSTALL**



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### DETAILED ILLUSTRATION

#### LED INSTALLATION:

18. To make connecting LED Strips easier, leave the end of the partially connected board hanging down, to easily connect the next strip to it. Connect the next LED Strip, remove the adhesive cover and c
19. Continue ensuring that the LED Strips are placed straight into the LED Channel of the housing.

#### LENS INSTALLATION:

20. To start the Lens installation, determine if you have an inside corner in your linear configuration, and if so, start from that location and work away from the corner.

**NOTE:** The Lens comes in 48" (4 feet) increments and can be cut to size in the field. Layout your Lenses first to anticipate where you may have to make a cut. Try to avoid making tiny cuts as this may hinder installation.

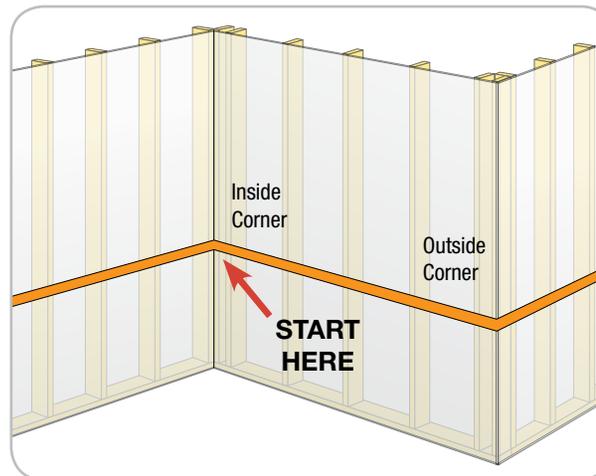
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19



20



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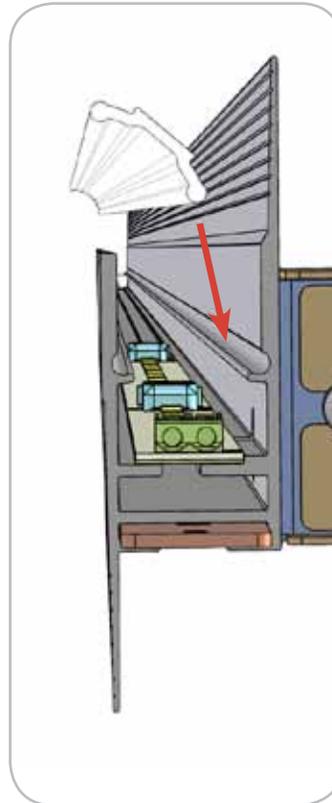
### DETAILED ILLUSTRATION

#### LENS INSTALLATION:

**NOTE:** Remove protective plastic covering from Lens.

21. To start, angle the Lens down towards the Lens Channel at the back of the fixture housing.
22. Make sure the back edge of the Lens is resting on the back edge of the Lens Channel before lower the front of the Lens down.
23. Lower the front edge of the Lens down into the channel and push on the front edge to snap it into place.
24. Restore power to circuit and turn on LEDs.
25. If troubleshooting is necessary, follow steps to turn off main power, lock out and tag out procedure.

21



22



23

