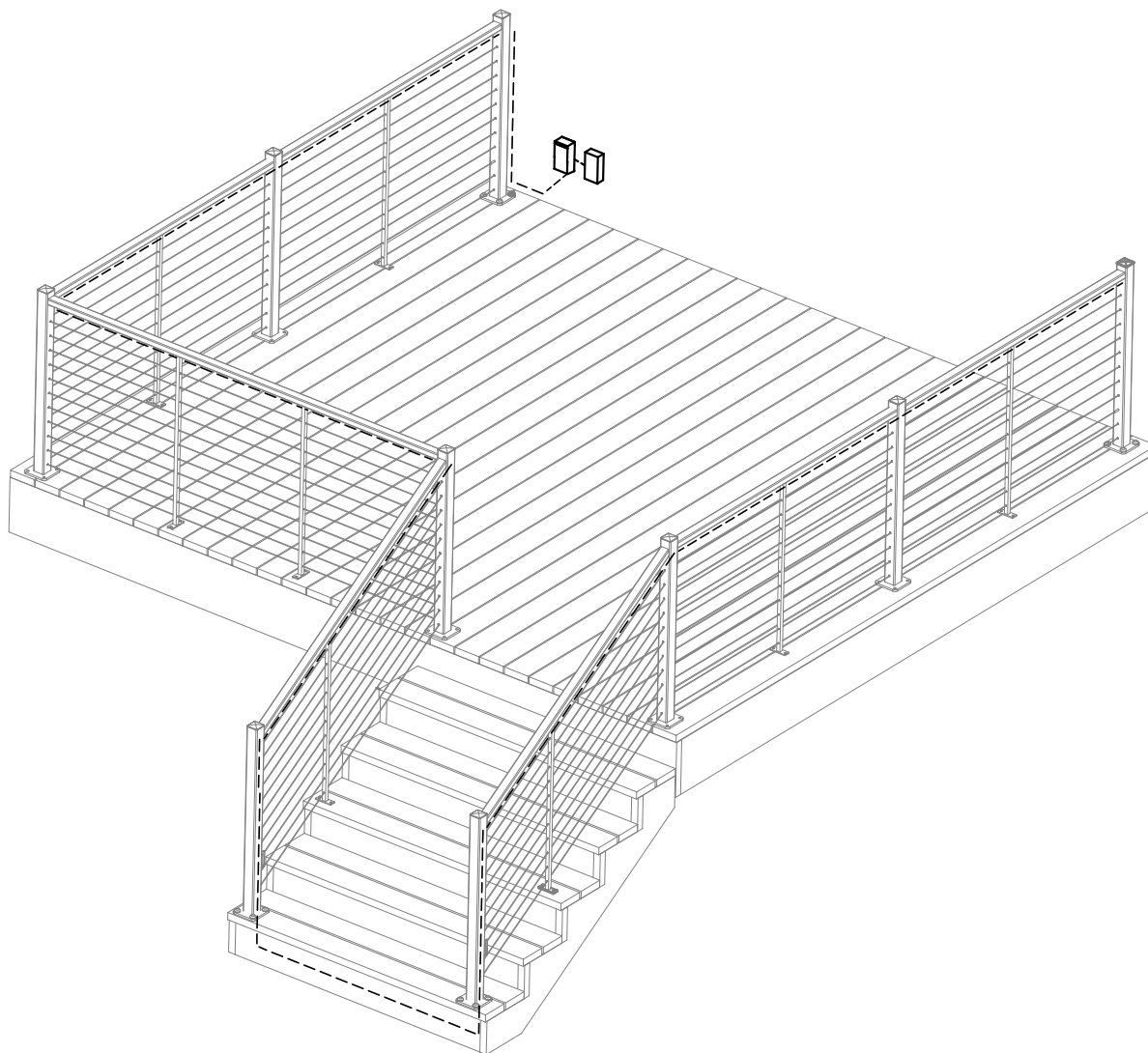


LED Lighting Kits (24V) for DesignRail® Modern

Installation Instructions for **LED : 25KIT** and **LED : 55KIT**



NOTE: Building codes vary by location and jurisdiction. Consult all applicable codes before installing Feeney LED Lighting Kits. Feeney LED Lighting Kits are only intended for use with DesignRail® Modern Kits and may not be suitable for every application and it is the sole responsibility of the installer to ensure that Feeney LED Lighting Kits are used for their intended purpose.

IMPORTANT: Be sure to consult with a professional electrician before beginning installation.

WARNING: ELECTRIC SHOCK IS ALWAYS POSSIBLE WHEN WORKING WITH ELECTRICITY. THIS CAN CAUSE SERIOUS PERSONAL INJURIES OR DEATH. ELECTRICAL SHORTS CAN ALSO CAUSE FIRES AND PROPERTY DAMAGE. ALWAYS MAKE SURE THE ELECTRICAL OUTLET YOU ARE PLUGGING INTO IS GROUNDED.

LED Lighting Kits - Layout Guidelines

When planning your project, you will first need to determine the number of LED Lighting Kits required. This depends on the total length of lighting desired and the layout of the railing frame. Each LED Lighting Kit includes a 96W OmniDriver® X that can support up to 55 feet of strip lighting

Using your layout drawing, map out each straight run of lighting starting at the post closest to the power source (see Figure 1).

Light strips are not designed to bend. Light strips can be joined at corners using the supplied 8" Crimp Connectors.

Important Note: Bending the LED light strip will void the warranty!

LED Lighting can span a large gap in the railing using an optional 132" Extension Cable, sold separately. Frequently, this cable is used to connect light strips on either side of a stair railing. The extension cable runs under the deck and up through the posts, typically at the bottom of the stairs (see Figure 2).

Add up all the segments to get the total length of strip lighting. If your total exceeds 55 feet, you will need more than one LED Lighting Kit. You may install the second driver at the opposite end of the railing, so that the light strip ends meet in the middle (see Figure 3).

Note: It is best to locate the drivers as close as possible to the LED strips to reduce the possibility of voltage drop occurring. If possible, the driver should be within 15 feet of the post that will accept the 20' starter cable.

Make a note on your layout drawing indicating the location of the driver or drivers, which should be within 15 feet of a post.

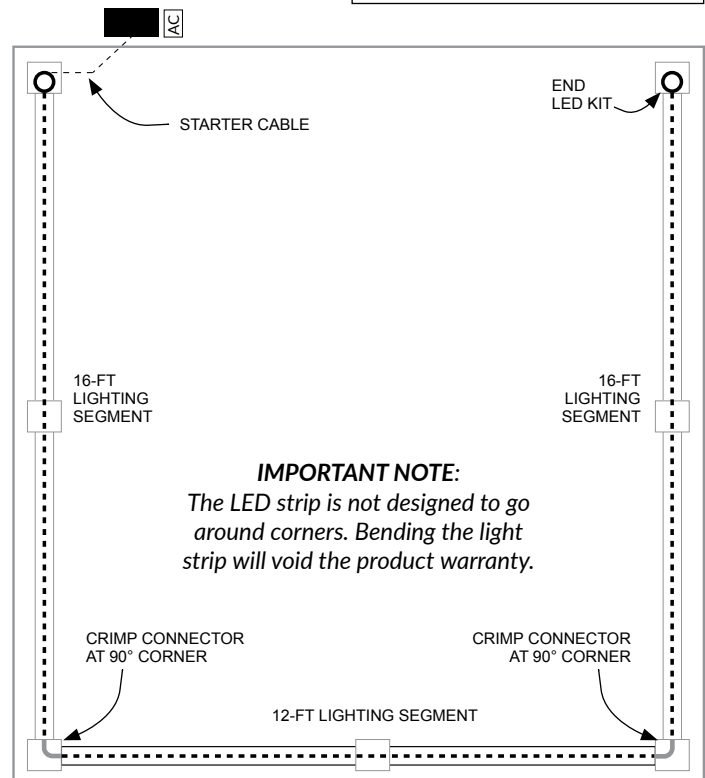
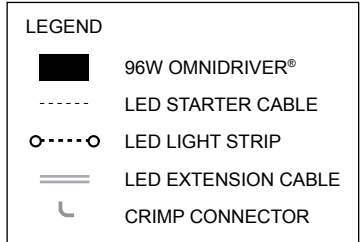


Figure 1

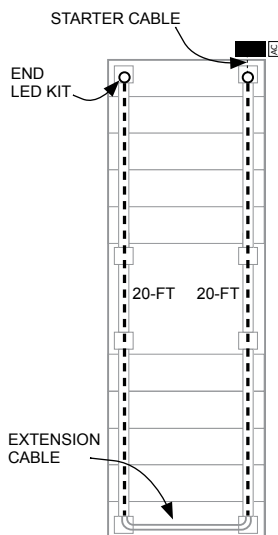


Figure 2 LED Extension Cable for Stairs

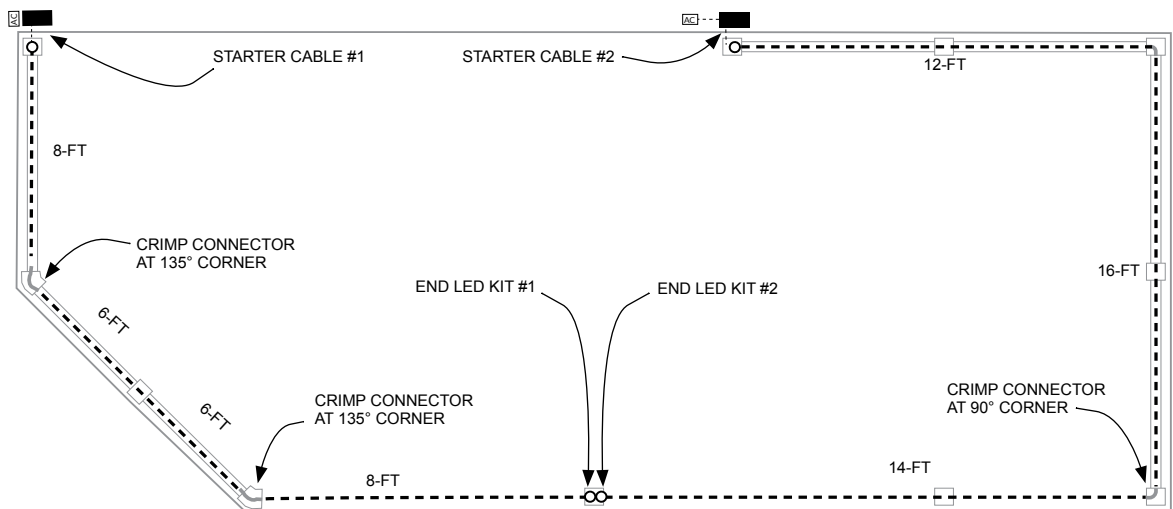
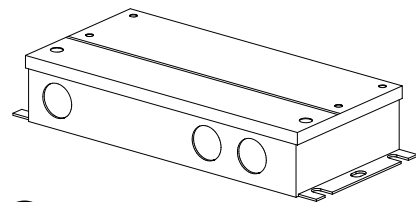
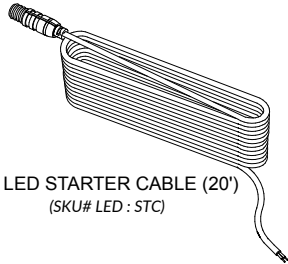


Figure 3 Two LED Lighting Kits, each starting at an end post

LED Lighting Components



A (1) 96W OMNIDRIVER X (DIMMABLE)
(SKU# LED : 96W-ODX)



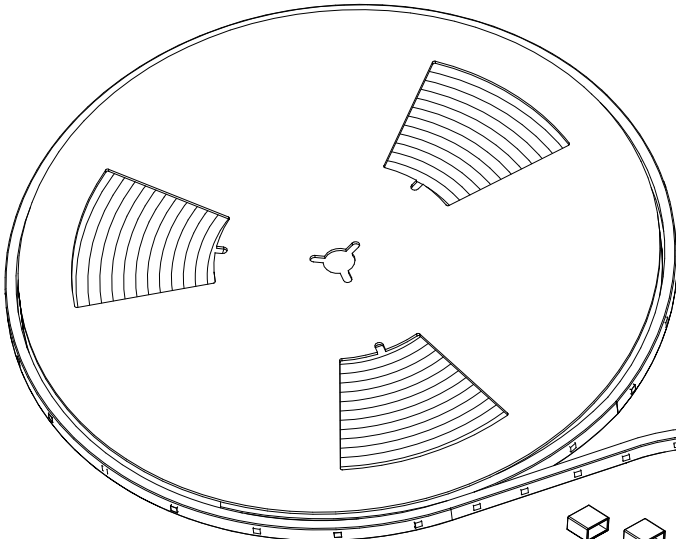
B (1) LED STARTER CABLE (20')
(SKU# LED : STC)



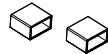
(2) WIRE NUTS
(SKU# 7670)



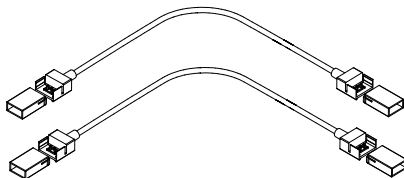
(1) ISOLATION BUSHING
(SKU# 1114)



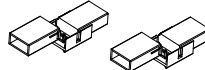
C (1) LED LIGHT STRIP - 25' OR 55'
(SKU# LED : 25 / LED : 55)



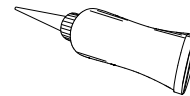
(2) LED END CAPS
(SKU# LED : EC)



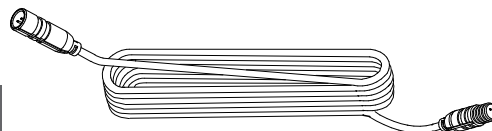
D (2) LED CRIMP CONNECTORS - 8"
(SKU# LED : CC8)



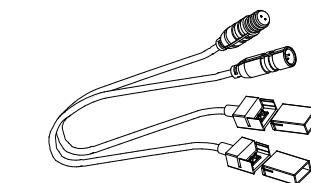
E (2) LED SPLICE CONNECTORS
(SKU# LED : SPL)



(1) SILICONE TUBE



EXTENSION CABLE (132")
SKU# LED : EXT-132-PKG



KIT INCLUDES (2) MALE-FEMALE CRIMP CONNECTORS,
(2) PLASTIC SLEEVES, (1) TUBE OF SILICONE

LIGHTING KIT CONTENTS (SKU #LED : 25KIT-PKG / LED : 55KIT-PKG)

- 1 x OmniDrive 96W Driver (LED : 96W-ODX)
- 1 x Starter Cable, 20' (LED : STC)
- 1 x Isolation Bushing (1114)
- 2x Wire Nuts (7670)
- 1 Light Strip on Spool (25' or 55')
w/ barrel connector pre-soldered + 2 End Caps
- 2 x Crimp Connectors (LED : CC8)
- 2 x Splice Connectors (LED : SPL-2), Tube of Silicone

Additional Components

- REQUIRED:** Diffuser Lenses
2-pack (LED : LENS-2-PKG)
10-pack (LED : LENS-10-PKG)

OPTIONAL: 132" Extension Kit (LED : EXT132KIT-PKG)

DIFFUSER LENS (36")
2-PACK (SKU# LED : LENS-2-PKG)
10-PACK (SKU# LED : LENS-10-PKG)
See page 9 for more details.

Note: Each 6-ft Rail Kit will require two lenses; each 8-ft Rail Kit will require 3 lenses, sold separately.

These instructions are designed to be used with the DesignRail® Modern Kits Installation Instructions. Be sure to have **BOTH SETS OF INSTRUCTIONS HANDY** before you begin installation.

See page 8 for more extension cable usage.

Step 1 - Install Driver(s)

When you have all the LED Lighting Kits you need, mount each OmniDrive 96W Driver **A**. Route exterior rated wiring from the AC power source or a compatible dimmer switch to the location of each driver (see Figure 1.1 and 1.2).

ON/OFF Standard System Diagram or Two-Wire Dimming

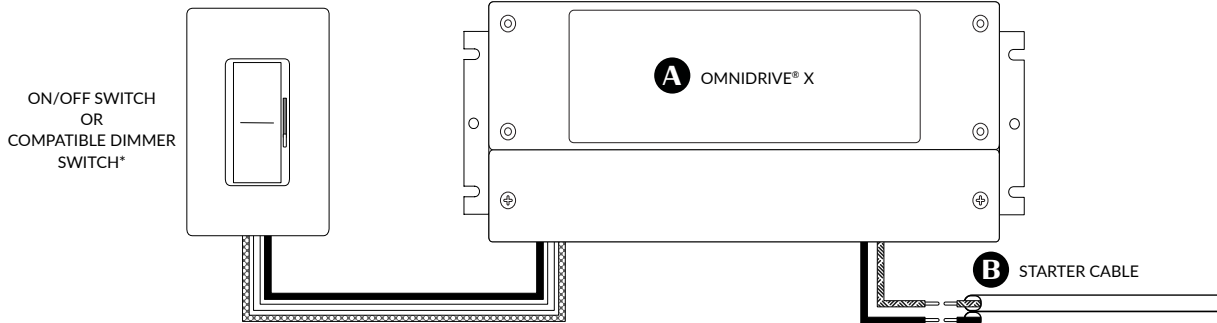
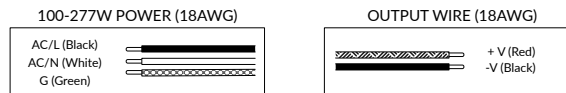


Figure 1.1



0-10V Dimmer

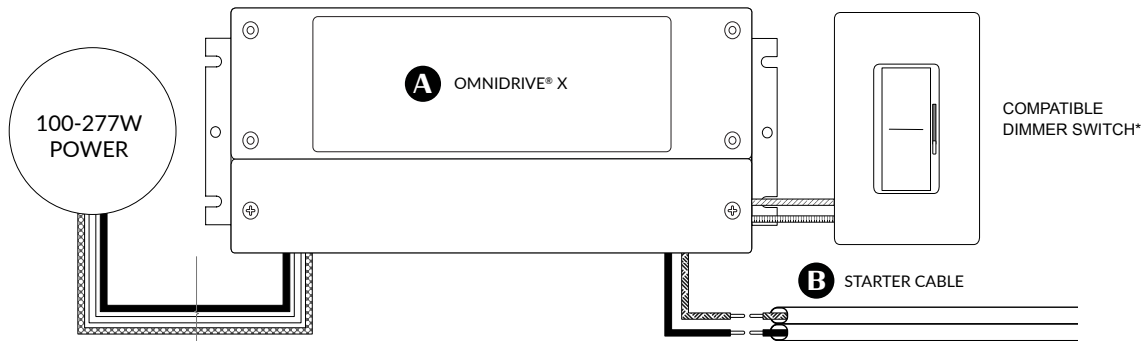
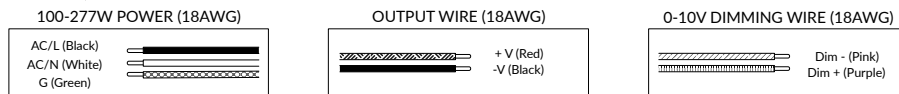


Figure 1.2



Connect OmniDriver® **A** to LED Starter Cable **B** using the supplied wire nuts. Route the cable to the starting post.

*Note: Refer to the compatible dimmer switch chart on our website: feeneyinc.com

WARNING:

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ELECTRICAL SHORTS CAN ALSO CAUSE FIRES AND PROPERTY DAMAGE. ALWAYS MAKE SURE THE ELECTRICAL OUTLET YOU ARE PLUGGING INTO IS GROUNDED.

Step 2 - Route Starter Cable

STARTER CABLE LOCATION

Determine where LED Starter Cable **B** will enter the starting post. There are two options (see Figure 2.1).

Note: Installing the starter cable through the post is easiest when done prior to mounting the post.

Drill 1/2" diameter hole in post at desired starter cable entrance location and insert supplied isolation bushing (#1114).

If you are using an LED Extension Cable, you will need to drill holes in those posts as well. See page 8 for more details on Extension Cable installation.

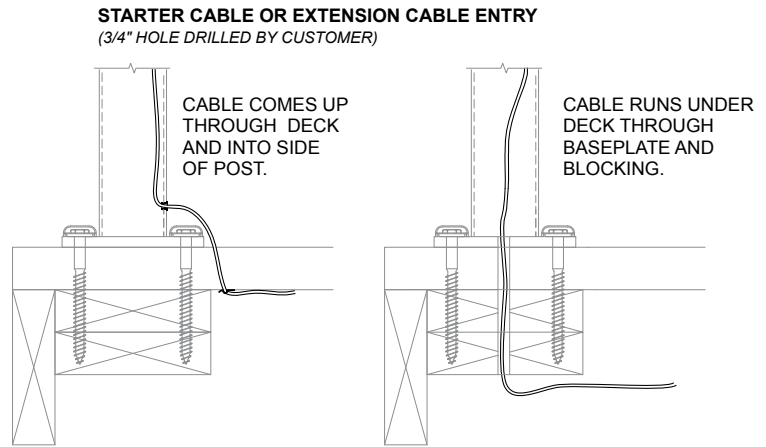


Figure 2.1

STARTER CABLE CONNECTION

Insert the free end of the LED Starter Cable into the starting post, route it up the post and out through the rectangular cutout. This should be done prior to installing the RCB (Rail Connecting Bracket) on this post (see Figure 2.2).

Use masking tape to temporarily secure starter cable to the outside of the post to prevent cable retraction.

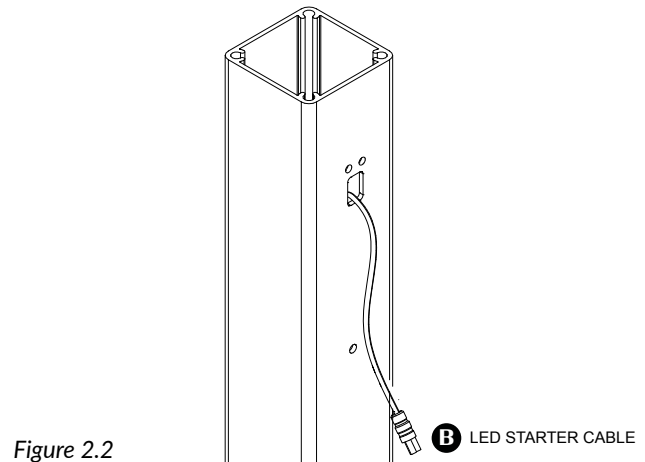


Figure 2.2

Step 3 - Install Posts and Sub Rails

After all drivers are installed and starter cables are routed, proceed with Post Kit Installation, found on page 6 (LEVEL) and page 10 (STAIR) of the DesignRail® Modern Installation Instructions (See Figure 3.1).

You can either install all RCBs and Sub Rails next, OR you may install these concurrently with the LED light strips.

At corner posts, it may be easier to install the lighting before installing RCBs and Sub Rails.

Note: If you are adding lighting to an existing DesignRail® Modern installation, follow the instructions on page 20 to dismantle the Top Rail so that only the Sub Rail remains. Remove Sub Rails and RCBs where necessary to accommodate lighting strips.

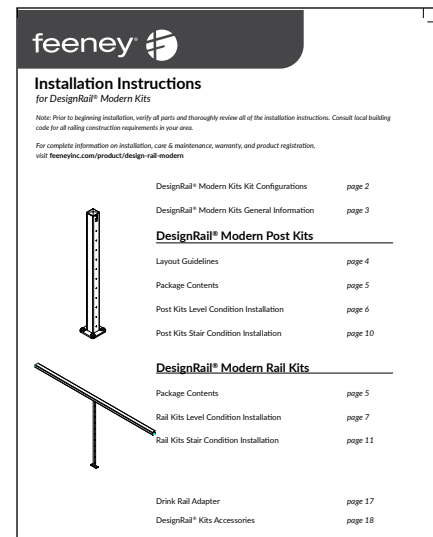


Figure 3.1

Step 4 - Install LED Light Strips

ATTACH STARTER CABLE

At the starting post, connect the LED Light Strip **C** to the LED Starter Cable **B** (see Figure 4.1).

Important Note: Keep the straight line on the outside of each connector aligned.

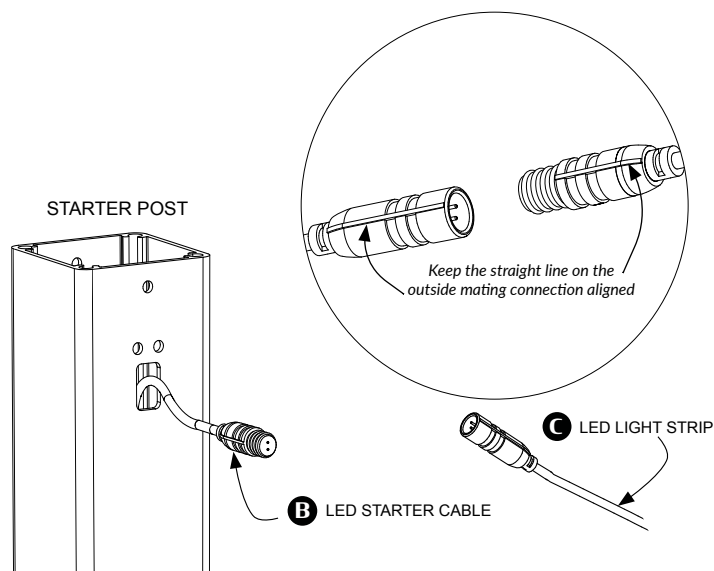


Figure 4.1

ATTACH LIGHT STRIP

Feed the LED Starter Cable back into the post so that the LED Light Strip starts at the inside post face.

Remove the adhesive tape off the back of the LED Light Strip and affix it to the inside top of the Sub Rail (see Figure 4.2).

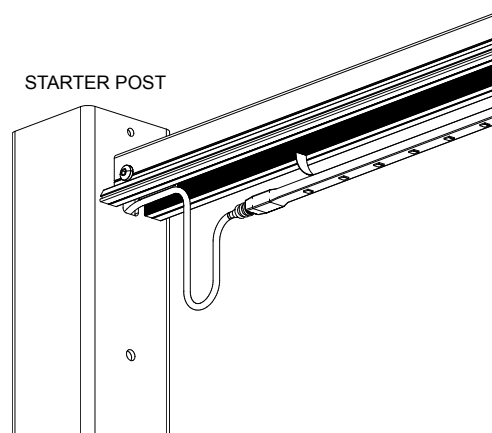


Figure 4.2

INTERMEDIATE/PASS-THROUGH POSTS

LED Light Strips may pass continuously through each Intermediate post in a straight run (level or stairs). You may also run Light Strips through a Newel Pass-through (NP) post to transition from level to stairs (see Figure 4.3).

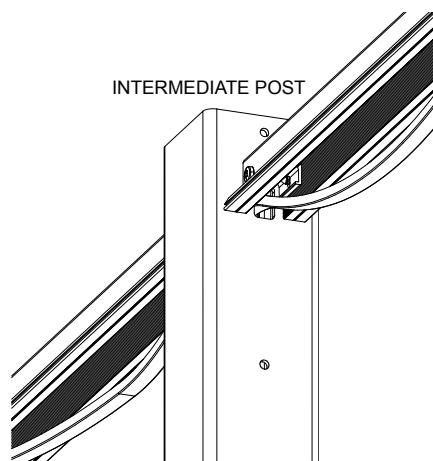


Figure 4.3

Step 4 - Continued

CORNER CONNECTIONS

LED Light Strips are not designed to bend around corners; they must be cut at the designated cut marks (located approximately every 4-inches) and joined using the supplied 8" LED Crimp Connectors **D** (see Figure 4.4).

Crimp Connectors are used at Single Corner posts, Newel Termination posts (L/R), and 45 Degree posts.

IMPORTANT: Bending the LED Light Strip will VOID the warranty; strips must be cut at corner posts and connected using Crimp Connectors.

When you get to a corner post, find the nearest cut mark on the LED Light Strip such that the strip will end inside the post. Cut the strip between the 4 copper dots using scissors (see Figure 4.5).

CRITICAL STEP: This must be a clean, straight cut so that the connector prongs come in full contact the copper connection points on the strip.

Roll back the adhesive tape just enough to be out of the way. Insert the end of the light strip into the clear plastic sleeve. Be sure the copper dots are visible through the window opening on the plastic sleeve.

Using the provided silicone, affix the clear plastic sleeve to the light strip (see Figure 4.6). Repeat for the other cut end.

Snap the end of the first light strip into the LED Crimp Connector (see Figure 4.7) making sure the positive symbols are aligned.

CRITICAL STEP: You must have a firm, secure connection with clear plastic sleeve fully engaged/seated into crimp connector.

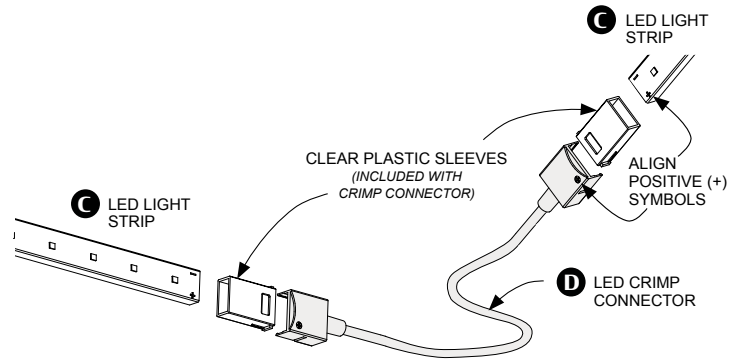


Figure 4.4

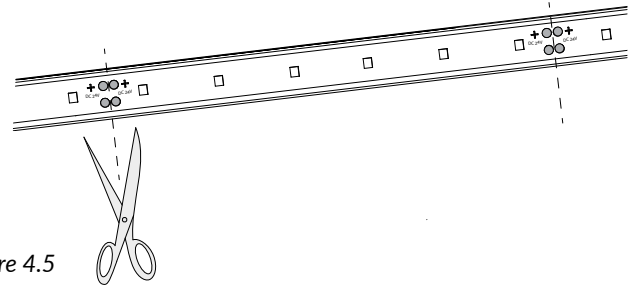


Figure 4.5

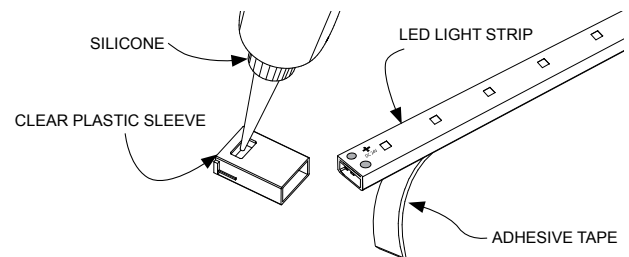


Figure 4.6

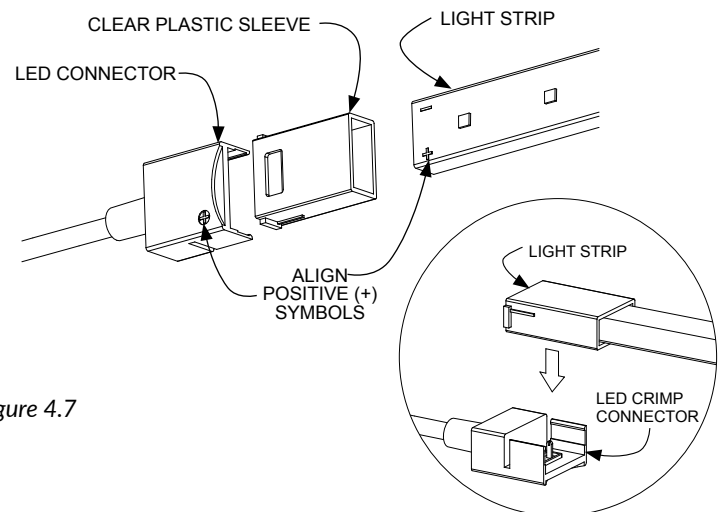


Figure 4.7

Step 4 - Install LED Light Strips *(continued)*

Feed Crimp Connector into corner post and out through other side (through the rectangular window), then connect it to the other LED Light Strip (see Figure 4.8) using the same method as on page 7.

Remove the adhesive tape from the LED Light Strip and affix strip to the inside of the Sub Rail.

IMPORTANT NOTE: Maintaining the polarity at all connection points is critical. Constant alignment verification of the positive and negative signs will guarantee less problems and prevent rework.

IT IS CRITICAL to make clean, straight cuts in the light strip and seat the end firmly in the plastic sleeve - with copper dots visible in the window - to fully engage the prongs on the connector.

LED EXTENSION KITS

You may need to connect light strips across a larger gap in your railing. The most common example of this is a set of stairs with rail lighting on both sides. In this case, use an LED Extension Cable to connect light strips on either side, typically between bottom stair posts (see Figure 4.9).

The 132" LED Extension Cable is sold as a kit that includes extra plastic sleeves and silicone. This cable will accommodate a 6 foot gap between stair posts.

Drill a 1/2" diameter hole in the side or bottom of each post to allow the cable to exit/enter and route the cable (see Figure 2.1 on page 5).

Follow the instructions for Corner Connections on page 7 to prepare light strips to attach to the extension cable.

LIGHT STRIP END CAPS

At the exposed termination end of the light strip, where no more connections will be made, roll back the adhesive tape. Use the provided silicone and affix an end cap (see Figure 4.10).

Finish attaching the end of the LED Light Strip to the Sub Rail.

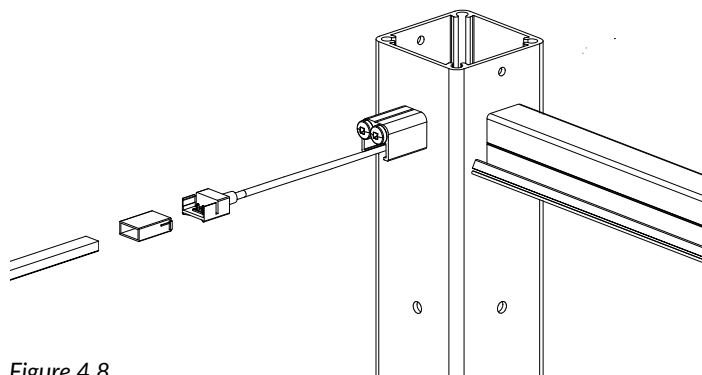


Figure 4.8

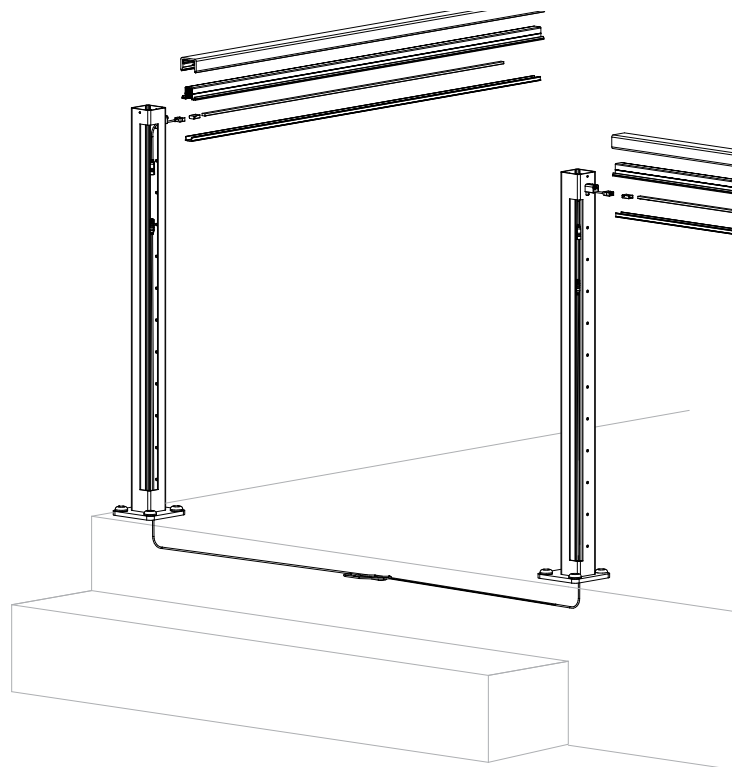


Figure 4.9

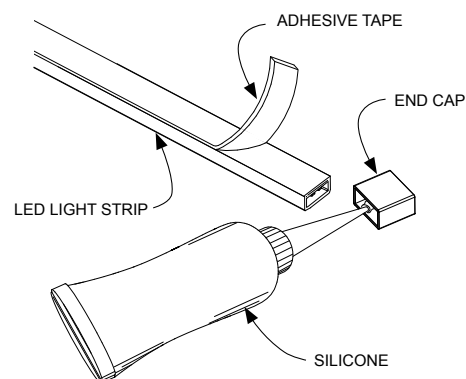


Figure 4.10

Step 5 - Install Intermediate Pickets

Proceed with the DesignRail Modern® Installation Instructions Step 3, "INSTALL INTERMEDIATE PICKETS". The intermediate pickets will rest just below the LED strip in the Sub Rail channel (see Figure 5.1).

IMPORTANT NOTE: DO NOT press top of picket against the light strip.

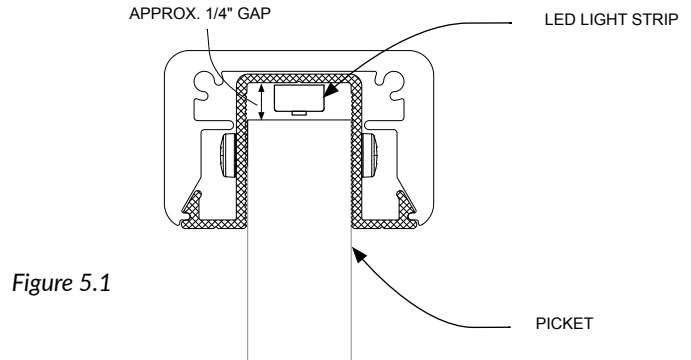


Figure 5.1

Step 6 - Install Diffuser Lens

Diffuser lenses are required between each post and picket, and are sold separately. Each 6-ft Rail Kit will require two lenses; each 8-ft Rail Kit will require 3 lenses.

Measure the opening between the post face and picket on each side (see Figure 6.1). These dimensions should be equal.

Cut diffuser lens to length to fit on each side of the picket, using a sharp utility knife, or heavy duty utility scissors/shears.

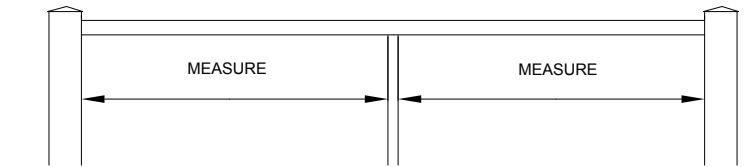


Figure 6.1

Insert diffuser lens into the Sub Rail, as shown (see Figure 6.2).

Tip: Start at one end of the diffuser lens and pinch the legs while inserting into the Sub Rail channel. Press upwards on the lens and progressively work towards the other end until the lens is fully engaged in the Sub Rail.

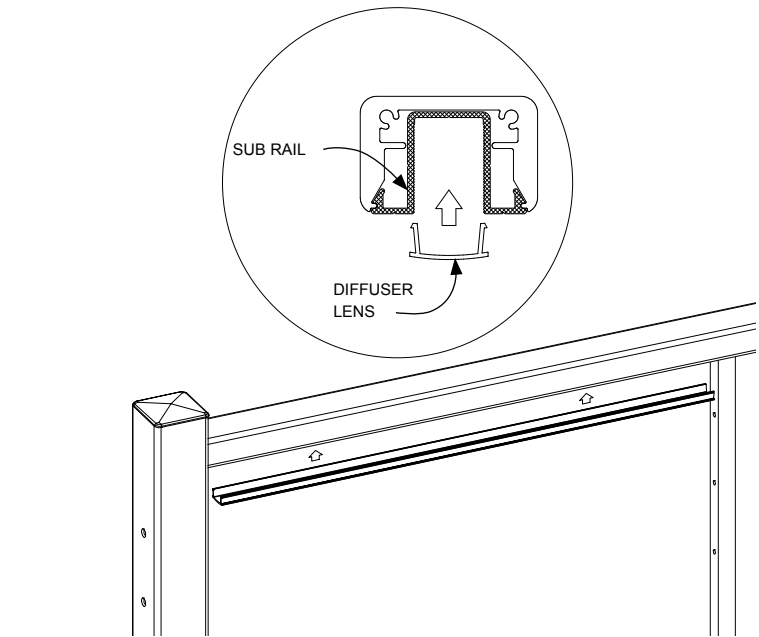


Figure 6.2

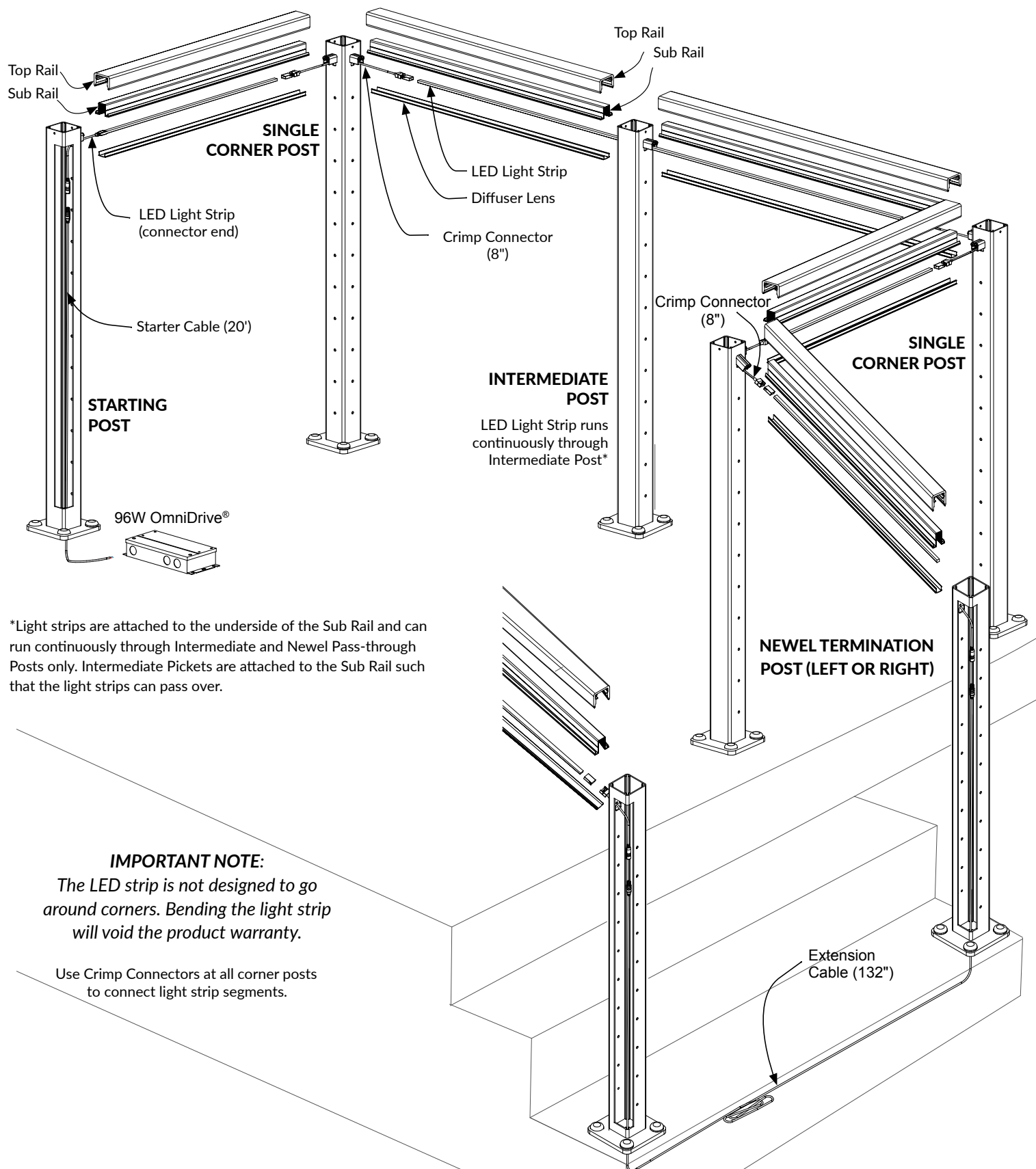
Next: Finish Railing Installation

Finish the DesignRail® Modern Rail Kit Installation instructions, continuing with Step 6: "INSTALL POST CAPS".

Follow the instructions on the CableRail Kits packaging to install the CableRail infill to complete your railing.

DesignRail® Modern with LED Lighting Kits

EXPLODED ISOMETRIC VIEW



LED Lighting - Troubleshooting

Scenario #1 - If all locations do not illuminate, there could be a polarity issue

1. Turn off AC circuit breaker prior to continuing the next procedure.
2. Swap the wires at the driver terminals
3. Replace cover on driver unit
4. Turn on AC circuit breaker
5. Power up the driver and check all LED locations for illumination

Scenario #2 - Some LED locations are illuminated but others are not

1. Note which locations are not illuminating
2. Turn off AC circuit breaker prior to continuing to next procedure
3. Rotate the connector 180 degrees at each noted location where the light strip is not illuminating
4. Repeat at all noted locations that did not illuminate
5. Turn on AC circuit breaker
6. Power up the driver and check all locations for illumination

Got questions?

Call us toll free to speak with one of our product experts: 1-800-888-2418.



feeneyinc.com
1-800-888-2418