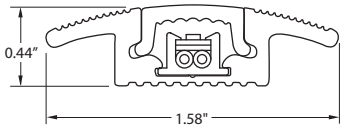
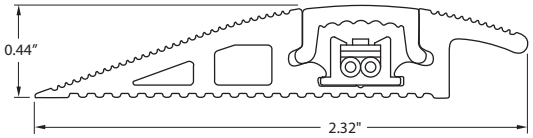
12V | Soft Aisle ™ Aisle Edge light

Tivoli's Soft Aisle is used for guide lighting. To design the best and most attractive system, first determine lamp spacing and accessories needed.

PROFILE





Please verify the contents of the packages!
Please read instructions entirely before starting installation.
Be sure power is turned off before installing or modifying the system.
Call Tivoli, LLC tech support with questions.
Caution: Soft Aisle™ is designed to work with listed Class 2 12V DC transformers only. Use of any other power source will cause damage, shorten the life of the fixture and void the warranty.
Consult any and all applicable local and national codes for installation.
Do not conceal or extend exposed conductors through a building wall as per local electrical code.

Warning: With any luminaire for any application, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injuries. This lighting system should be installed by a certified professional.

Part 1 - Installation Instructions

Table of Contents

Part 1 - Installation

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3. Install End Caps	Page 3
4. LED Module String Installation	Page 3
5. Row Indicator Installation	Page 4
6. Determine Wire Sizes	Page 5
7. Wire the System	Page 5
8. Lens Installation	Page 6
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Part 2 - Maintenance

1. Remove and Replace Lens	Page 7
2. Remove and Replace LED PCBs	Page 7
3. Remove and Replace LED Modules	Page 8

Junction Box, Conduit and Feedpoint locations

Step 1: For best results, plan out the locations for power supply, junctions boxes, conduit and feedpoints before starting installation.

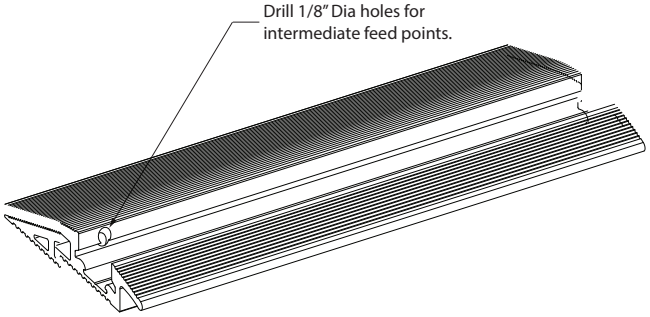
Step 2: Install Junction boxes and conduit before concrete is poured. Typical locations for Junction Boxes are in the floor or in the wall near the intended location of the Soft Aisle™ run. See "Wiring the System" on Page 4.

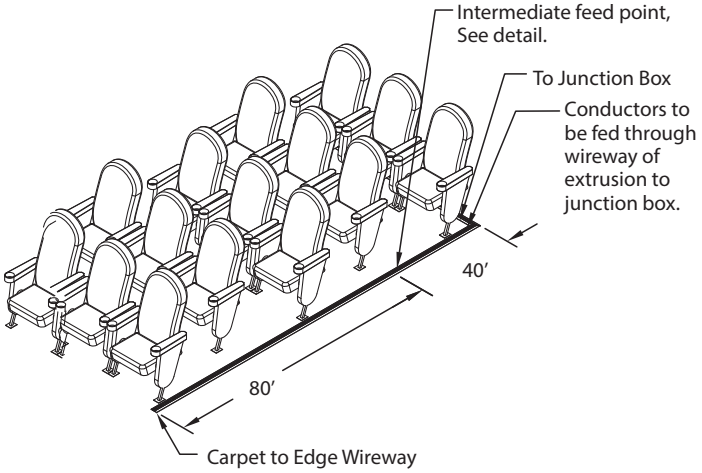
Base Extrusion Installation

Note: For best results, install Soft Aisle™ before carpet is installed. Tivoli's Soft Aisle™ is designed for the carpet to fit under the raised edge of the extrusion. Be sure the light string is not in the extrusion when it is installed.

Step 1: Begin by snapping a chalk line along the entire length of the aisle. Use this line to maintain a straight edge as the extrusion is being secured to the floor.

Step 2: Drill a $^{5}/_{16}$" dia. hole into wireway extrusion that is aligned with the flex conduit to allow wire to be fed through conduit to connect light string to transformer. Drill holes along the base extrusion wherever a feedpoint is required. See "Wiring The System" (Page 4) for more information regarding orientation of feed point holes.





Warnings:

1. Do not use Soft Aisle™ if damaged, such as broken globe, loose connections, or frayed wire insulation. Inspect all components periodically.
2. Do not submerge Soft Aisle™ in liquid.
3. Do not secure Soft Aisle™ base extrusion with staples, nails or any means that might damage the wire insulation. Secure it by using screws through the base (by others).
4. Do not run Soft Aisle at an operating temperature exceeding 65°C or 149°F.

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Installation Instruction: Installing the Base Extrusion (Continued)

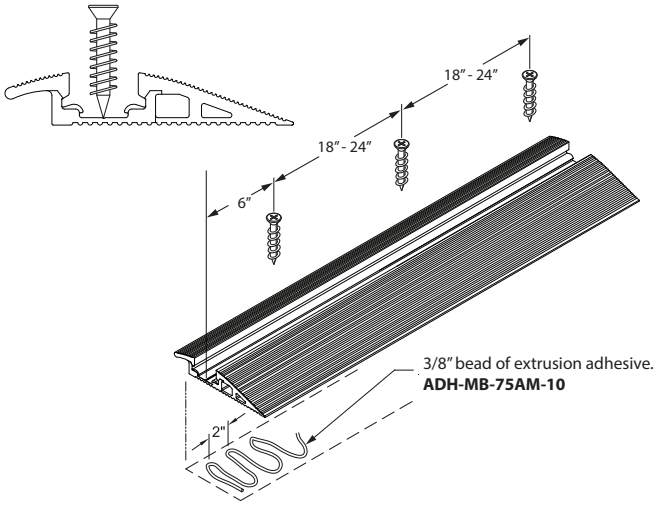
Step 3: Place 3/8" bead of adhesive along the chalk line, as shown.

Step 4: Position base extrusion on surface, on top of adhesive.

Step 5: To prevent extrusion from cracking, drill pilot holes using 5/32" x 3½" carbide masonry drill bit. Secure base extrusion with Tapcon or Tapmark flat head phillips screws (3/16" x 1 1/4"). Install screws every 18" to 24" inside channel. Use denatured alcohol to clean up any excessive adhesive.

CAUTION: Do not use concrete nails or ramsets. The direct impact of a hammer or ramset fastener will damage the base extrusion. Improper installation will void warranty.

Note on miter cuts: To insure proper fit, make miter cuts with lens installed in base extrusion.



Installing The Base Extrusion on A Curve

OVERVIEW: Soft Aisle™ may be installed on a curve. The Carpet to Carpet Extrusion can be installed on a minimum radius of 4' or larger. and the Carpet to Edge Extrusion can be installed on a mimimum radius of 7' or larger.

Step 1: Mark an arc on the floor where the Soft Aisle™ wil be installed.

Step 2: Place a 1/8" bead of adhesive along the line.

Step 3: Position base extrusion on the surface, on top of adhesive.

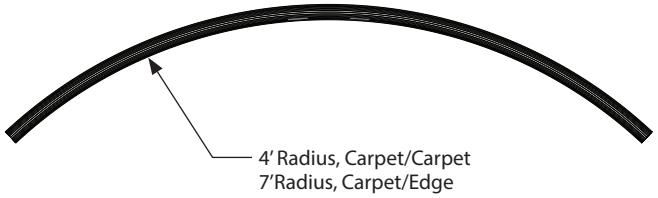
Step 4: Drill the first pilot hole 3" from end using a 5/32" x 3½" carbide masonry drill bit.

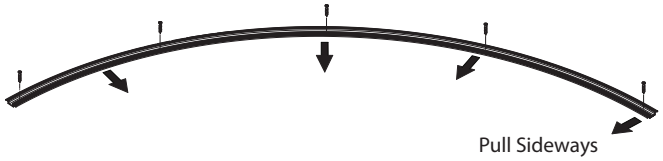
Step 5: Secure base extrusion with a Tapcon or Tapmark flat head phillips screws (3/16" x 1 1/4").

Step 6: Pull the Soft Aisle™ Extrusion with a sideways force to align it with the inscribed arc and drill the next hole 18"-24" from the first hole.

Step 7: Pull the free end of the extrusion to the side to align with the arc and drill the next hole 18'-24' from the last hole and install screw.

Step 8: Repeat steps until the Soft Aisle™ extrusion is fully secured.





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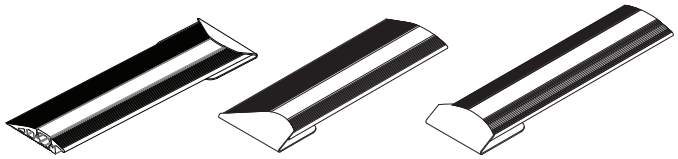
Install End Caps

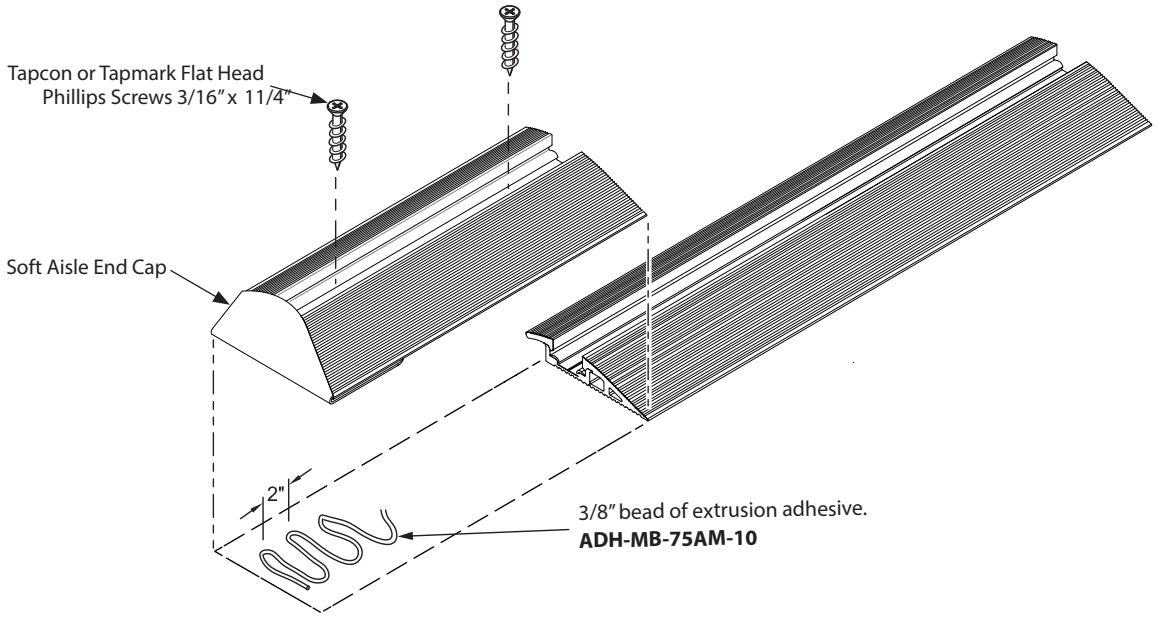
Use an End Cap Assembly to end a run that does not terminate at a wall for a clean, finished look. End Caps install in the same manner as longer runs of Soft Aisle.

Step 1: Place a 3/8" bead of adhesive along the chalk line and position the End Cap on mounting surface. Butt the rear edge of the End cap against the face of the next section of Soft Aisle, as shown.

Step 2: To prevent extrusion from cracking, drill pilot holes using 5/32" x 3 1/2" carbide masonry drill bit. Secure base extrusion with two Tapcon or Tapmark flat head phillips screws (3/16" x 1 1/4"). Use denatured alcohol to clean up any excessive adhesive.

Soft Aisle End Cap Options





LED Module Installation

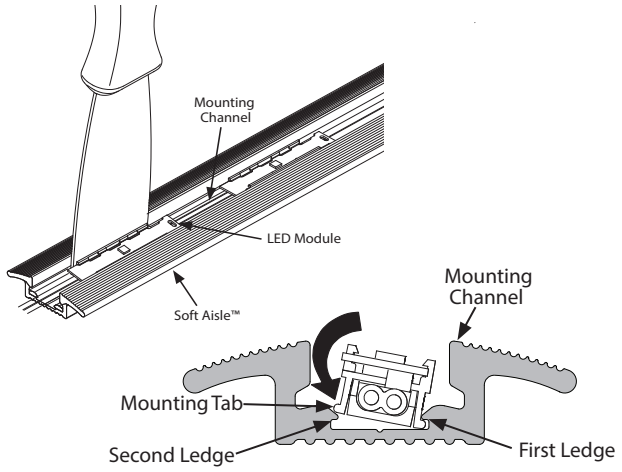
Step 1: Measure length of Soft Aisle channel where light string is to be installed.

Step 2: Lay the Soft Aisle™ LED module string along channel to determine cut lengths.

Step 3: Soft Aisle™ is easily cuttable for desired applications. Simply cut wires and re-connect using wire nuts. Do not cut while system is powered!

Step 4: If Row Indicators will be installed, see "Row Indicator Installation" instructions below.

Step 5: Place the module string in the channel and snap each module into place individually. Position the module mounting tab on the first module housing under the ledge in the channel on one side. Using a 1" putty knife, press down on the opposite ledge of the module until it snaps into place in the channel, as shown. Repeat procedure for all modules in the string.



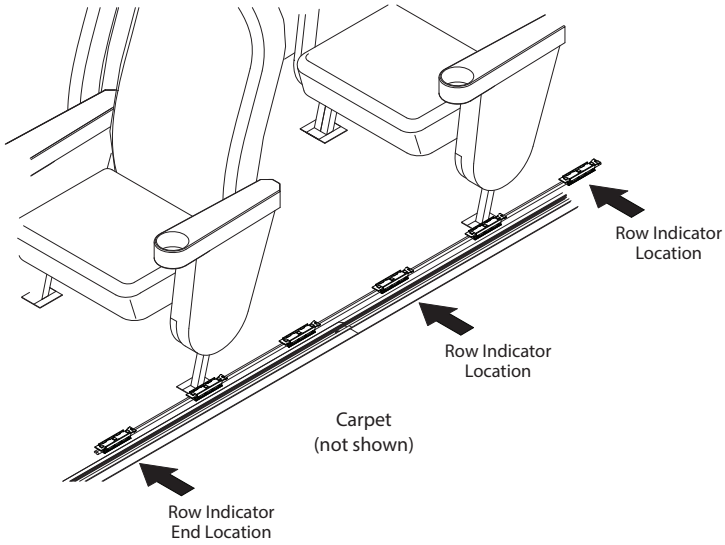
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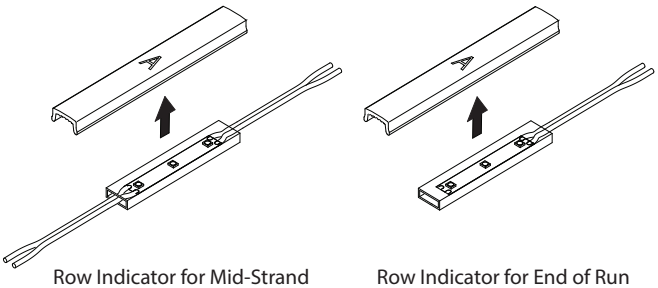
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Row Indicator Installation

Step 1: Lay out the light strand along side the Soft Aisle Channel and determine where the Row Indicators will need to be located.
Cut the wires to the LED module at that location and remove module.



Step 2: Press Row Indicator Light Assembly up into Row Indicator Lens, making sure to center the Indicator numeral over the LED. Start at one end and work the silicone sleeve up into the lens as you press it along from one end to the other.



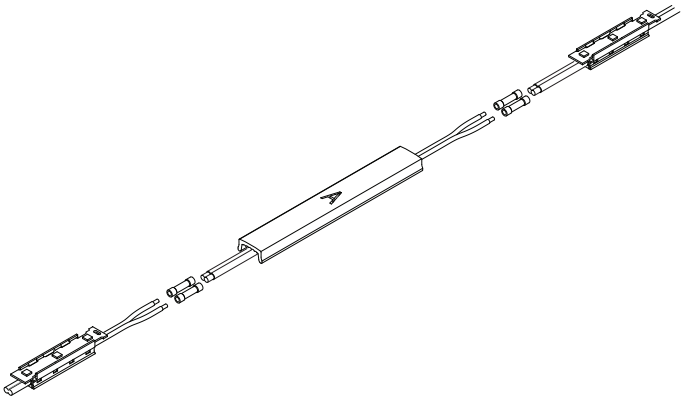
Row Indicator for Mid-Strand
(2 Wires)

Row Indicator for End of Run
(1 Wire)

Step 3: Insert Row Indicator assembly into strand, as shown, and cut wire length to fit. Connect to strand using 19-22ga Butt Connectors.

Step 4: Install LED modules incrementally into channel as described in "LED Module Installation" and press Row Indicator assembly with lens into Soft Aisle channel when its placement point is reached.

Step 5: At the time lenses are installed, It is possible to lift up the end of the Row Indicator lens to allow the placement of a Lens Seam Seal. Refer to section titled "Install Lens and Seam Seals". However, this step is optional.



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Wire Size Selection

In order to operate a Class 2 lighting system properly, it is important to select wires with the right gauge to minimize significant voltage drop. The following chart provides a reference for determining the wire size according to the maximum connecting wire length from power supply to lighting fixtures.

Wire Guide For Class 2 Lighting System

Wire Gauge	Max Linear Wire Length
18	90ft
16	95ft
14	100ft
12	105ft

Maximum Linear Run Length

SPACING	WATTS/FT	LENGTH	LED'S
4" OC	0.0036W	120'	360
6" OC	0.0024W	120'	240
12" OC	0.0012W	120'	120
18" OC	0.008W	120'	80

Wiring Size

In order for low voltage circuits to operate properly, care must be taken in sizing the wire from the transformer to the light strings.

Tivoli recommends locating the transformer as close to the lighting system as possible. Use 12 gauge wire and keep the transformer within the maximum allowable linear wire length of the fixture.

Wiring the System

Preparation:

1.Junction boxes and flex conduit (by others) should have been placed before concrete was poured. (See Page 1)

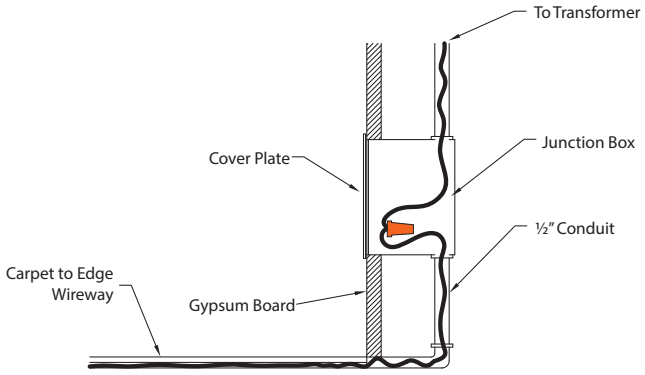
2.Location of feedpoints should have beed determined and drilled.

3.Base extrusions and LED module strings should be in place.

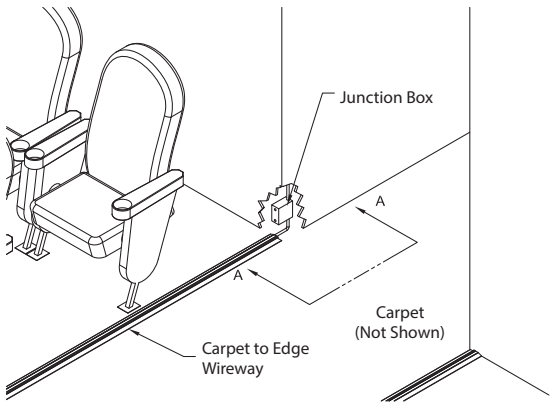
Step 1: Feed wires from Junction Box through flex conduit to the aisle light extrusion and make wire connections using wire nuts. Refer to example installations that follow.

Step 2: Gather wire and wire nuts into extrusion to prepare for lens installation.

In Wall Junction Box to Carpet to Edge Wireway

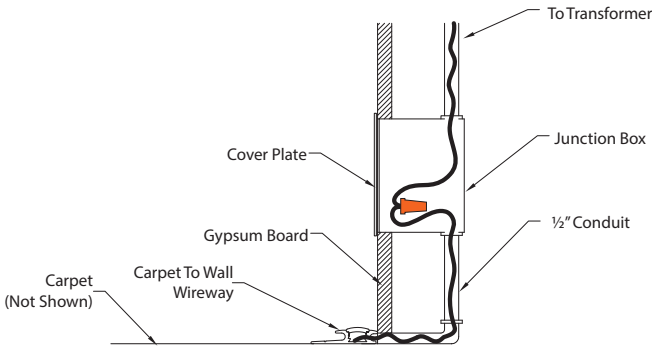


Section View

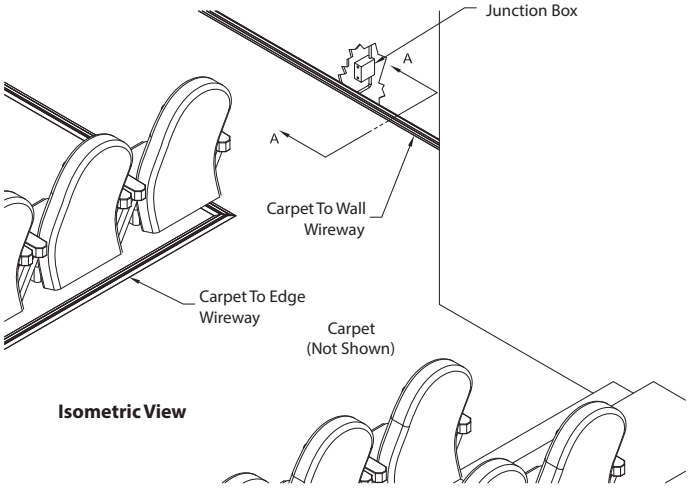


Isometric View

In Wall Junction Box to Carpet to Wall Wireway



Section View



Isometric View

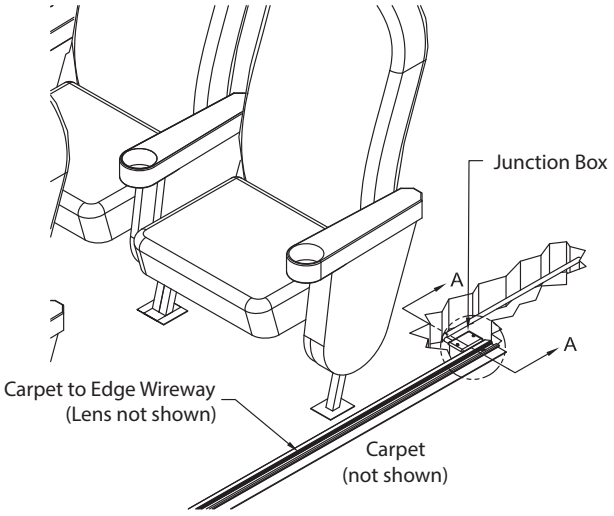
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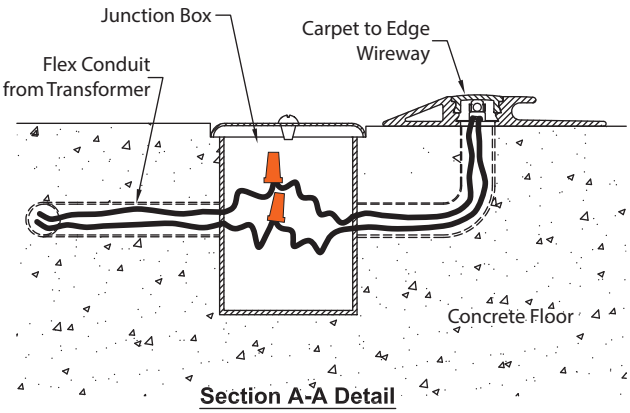
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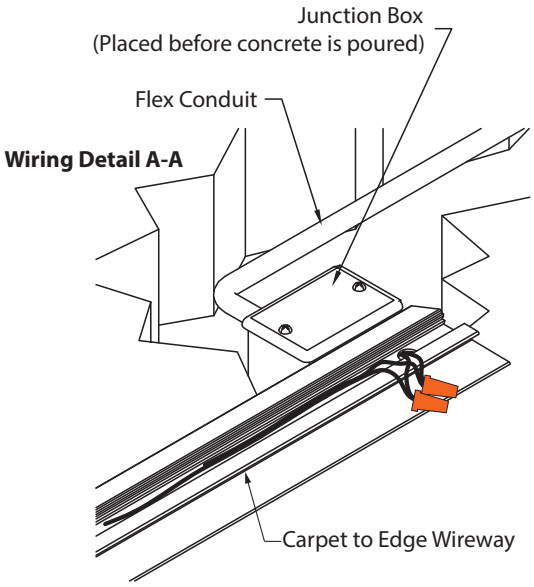
Wiring the System (Continued)

In Floor Junction Box to Carpet to Edge Wireway





Section A-A Detail



SECTION VIEW A-A

Install Lens and Seam Seals

Preparation: Be sure all LED Modules are properly installed in the Base Extrusion and all wires are inside the channel before attempting to insert the Lenses.

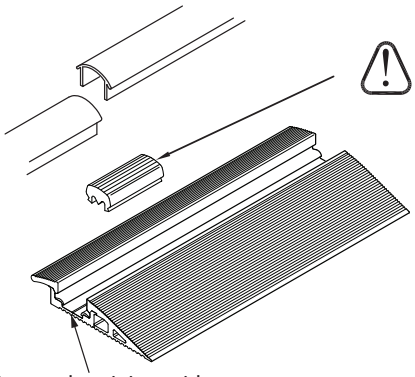
Note: Do not pound or try to force the lens into the grooves. The fit will be snug.

Step 1: Install Lens Seam Seals (**SATT-LNS-SEALS**) where the lens covers butt together and at the start and end of the run to prevent liquids from getting inside base extrusion and damaging the lighting system.

Step 2: To start the lens into the groove, begin as close as possible to the end of the base. Insert one leg of the lens first, followed by the second leg of the lens.

Step 3: Keeping the remainder of the lens bowed, push the cover into the groove by sliding your hand down along the extrusion, pushing the lens cover into place.

Step 4: Moderate pressure will be needed. Starting at the top of the aisle extrusion, install a five foot length of lens first followed by a ten foot piece. This will stagger the lens across the joints of the base extrusion. Cut the final piece of the lens to fit and the installation is complete.



Lens Seam Seal must be used at lens seam to prevent seepage of liquid into lighting system!

Also, use Lens Seam Seal at start and end of run.

Stagger lens joints with Base Extrusion joints.

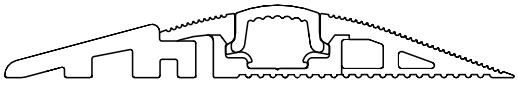
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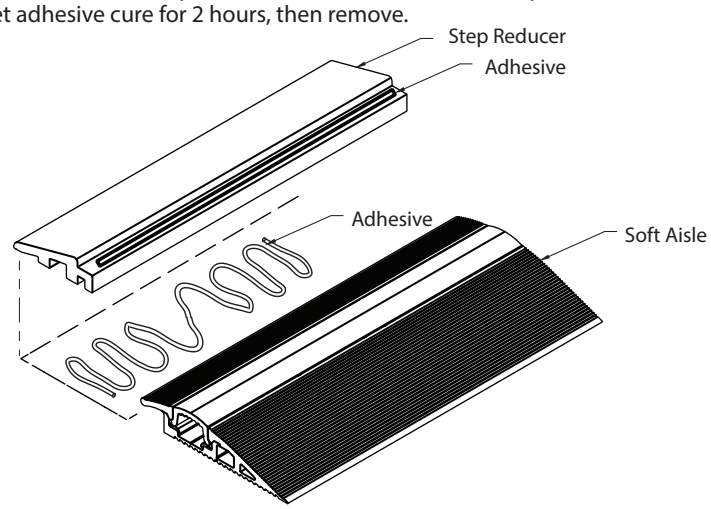
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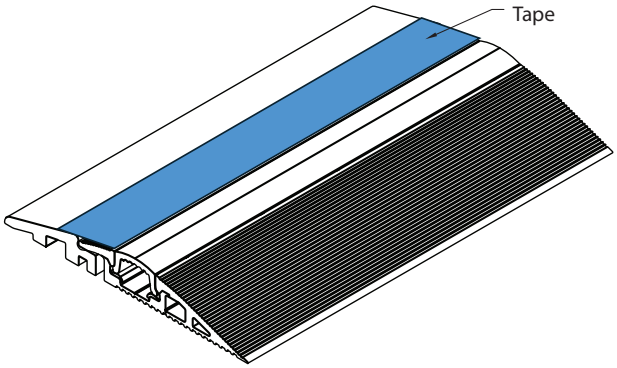
Install Step Reducer

Step 1: Apply a bead of adhesive onto the mounting surface to secure the Step Reducer. Similarly, apply adhesive onto the Step Reducer to secure the Soft Aisle on it.



Step 2: Secure the Step Reducer into the Soft Aisle and tape down to let adhesive cure for 2 hours, then remove.



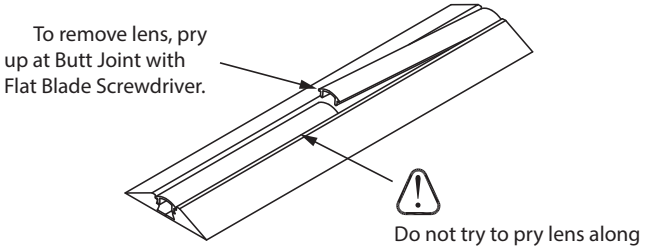


Part 2 Replacement Procedures

Remove Lens Cover

Step 1: Remove lens cover from extrusion by lifting lens up at start of run or at a seam between lenses using a small flat blade screw driver.

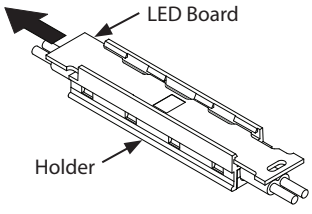
Step 2: Once started, continue to pry up until lens is free.



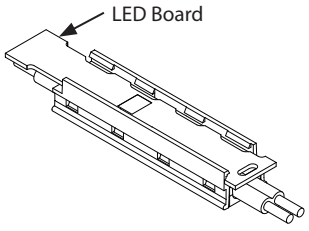
Removing and Installing the LED Board

Step 1: Slide board to the left as far as it will go. Insert a pointed object, such as a pen tip, into the slot at the end of the LED board to slide it more easily.

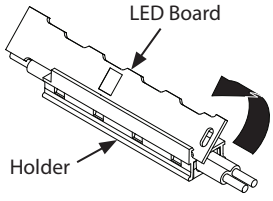
Step 2: Rotate top edge of board upward, as shown.
Step 3: Remove board.
Installation: Reverse steps to install.



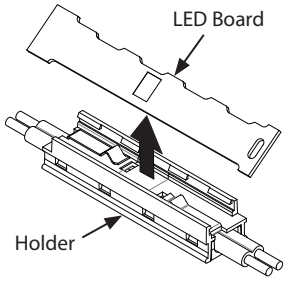
Step 1: Starting Position



Step 1: Final Position



Step 2



Step 3

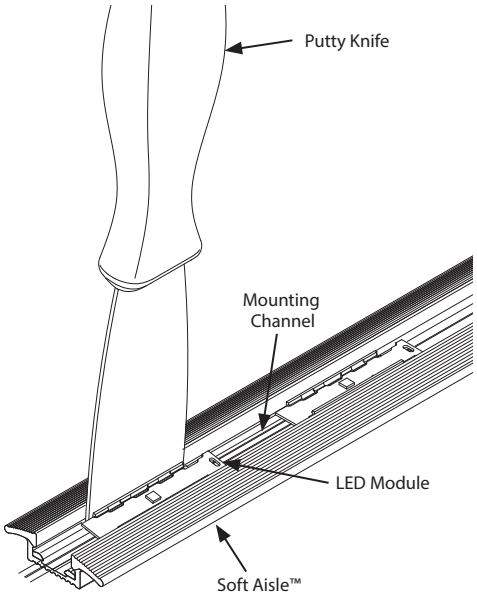
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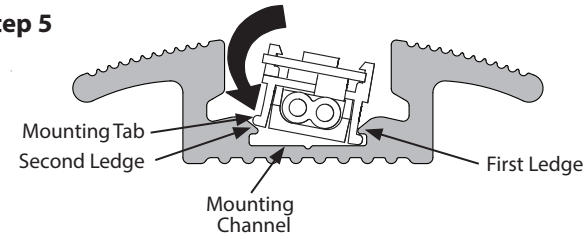
Replacing an LED Module

Step 1: Turn off power to Soft Aisle™.
Step 2: Remove Lens by prying up using a thin blade screwdriver.
Step 3: Cut the wires outside of the defective light strand on either end, as shown.
Step 4: Position replacement LED module strand in mounting channel with one mounting tab under the ledge of the channel on one side, as shown.

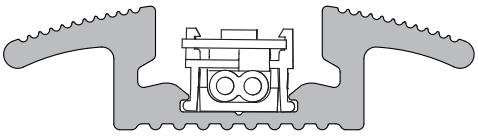


Step 5: Rotate the module down until it makes contact with the opposite ledge of the mounting channel.
Step 6: Position the Putty Knife on the mounting tab and press the module gently into the channel until the mounting tab snaps into place under the ledge of the mounting channel.
Step 7: Repeat installation process for all new modules in the strand.
Step 8: Use Butt Connectors for 18ga wire to connect the wiring on the replacement strand to the existing strand wiring.
Step 9: Replace the lens.
Step 10: Re-establish power to the lighting system.

Step 5



Step 6



LED Module in Final Position

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