

Fiberstep™ Continuous Step Light Installation Instructions & Field Cut Installation Instructions

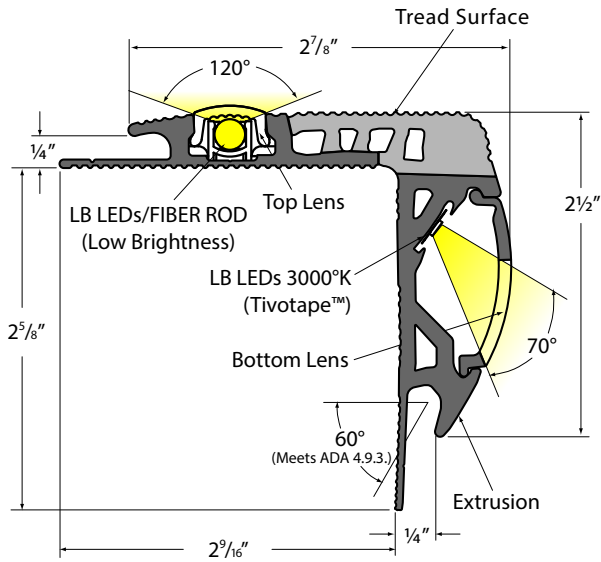


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Please verify the contents of the packages!

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: Fiberstep™ Continuous 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.

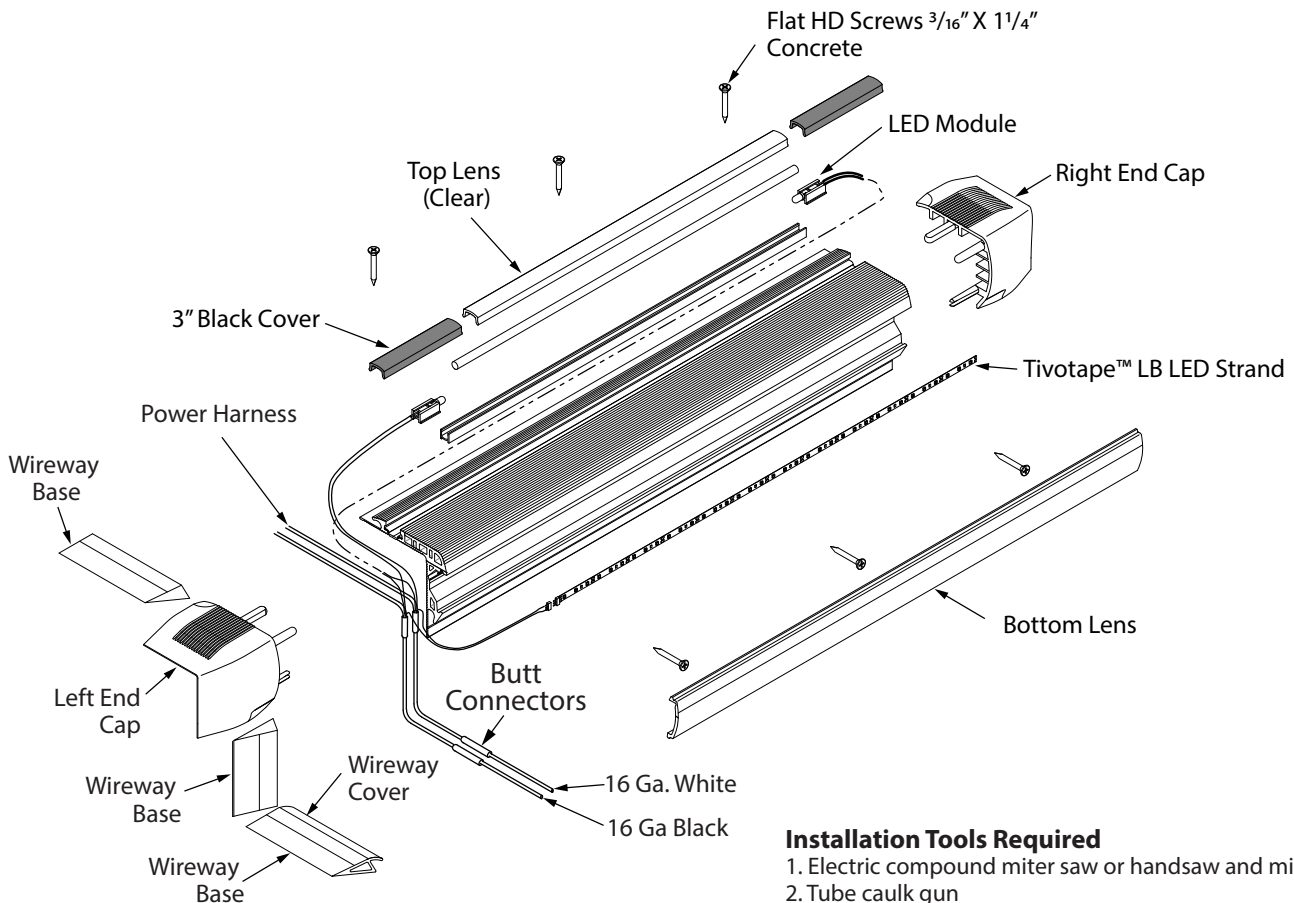
Consult any and all applicable local and national codes for installation.

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.



Installation Instructions



Installation Tools Required

1. Electric compound miter saw or handsaw and miter box
2. Tube caulk gun
3. Screws - Flat HD 3/16" x 1/4" concrete (Included)
4. Extrusion Adhesive **ADH-MB-75AM-10**
5. End Cap Adhesive **ADH-5-CA**

Installation Instructions

NOTE: Read all instructions entirely before installation. Call Tivoli, LLC with any questions. Install Softstep prior to carpet installation. Where there is no carpet, use optional Step Reducer to fill gap at back of tread. (See Specification Sheet for details)

Step 1: Be sure to clean all surfaces completely, using soap and water. Rinse and dry thoroughly.

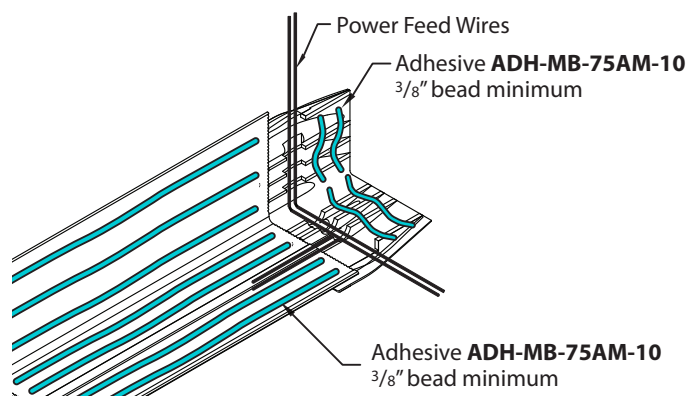
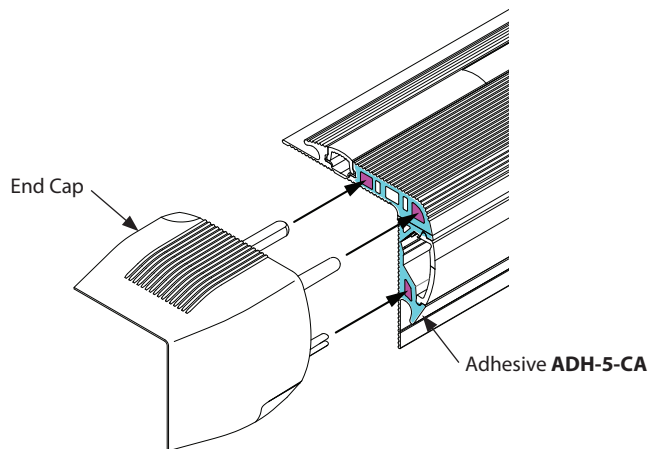
Step 2: Fiberstep™ Continuous is normally shipped with End Caps pre-assembled on step. However, in special circumstances the End Caps will need to be assembled on location. Apply adhesive **ADH-5-CA** to mounting surface and mounting holes and Insert male pins into cavities in Fiberstep™ as shown in diagram and install flush and tight to Fiberstep™.

Step 3: Apply required amount of adhesive **ADH-MB-75AM-10** to inside surface of Fiberstep™ and to the underside of End Caps, as shown.

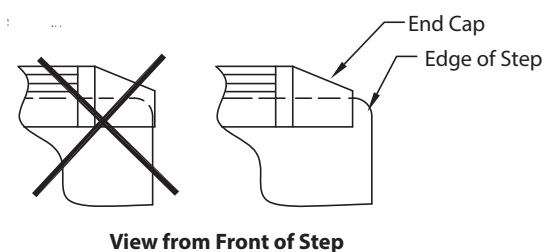
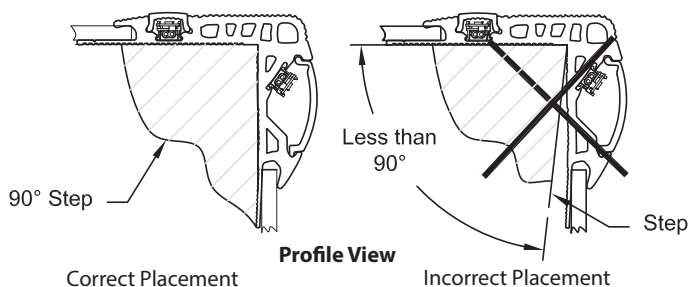
Step 4: Power feed wires should be positioned within the open wireway on the underside of the End Cap when Fiberstep™ Continuous is installed.

Step 5: Make certain that Fiberstep™ Continuous is held tight to the tread and riser surfaces (See “Required Field Conditions” below.)

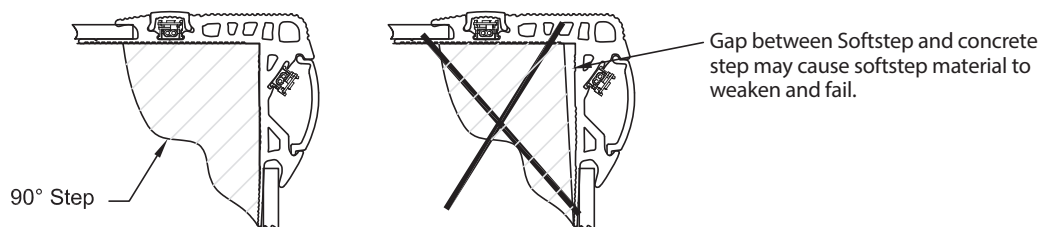
⚠ WARNING! Risk of Product Damage.
This Step Light must be mounted on a 90° riser only. See “Required Field Conditions” below.



Required Field Conditions



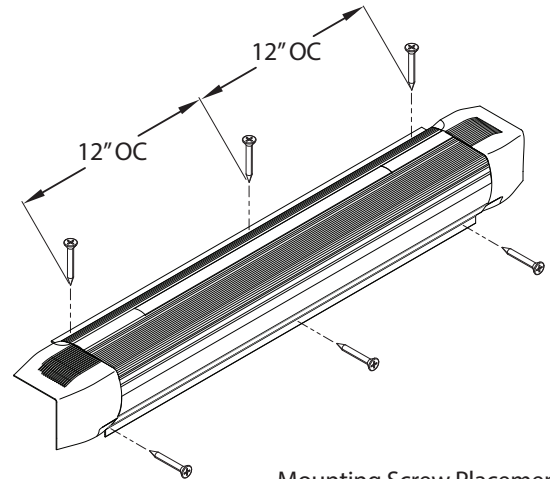
Note: If step riser is not 90°, consult factory.



Installation Instructions (Continued)

Step 6: Apply screws (supplied) every 12" through the lip at the rear of the top of the step and through the lip at the bottom front of the step to allow adhesive to cure for at least 24 hours or as per manufacturer's instructions.

Caution: Do not overtighten screws. Overtightening the screws will damage the Fiber0step™.



Mounting Screw Placement

Wire Size Selection

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

12V Class 2 Lighting System	
Wire Gauge	Max. Linear Length Wire
18	90
16	95
14	100
12	105

Install Wireway

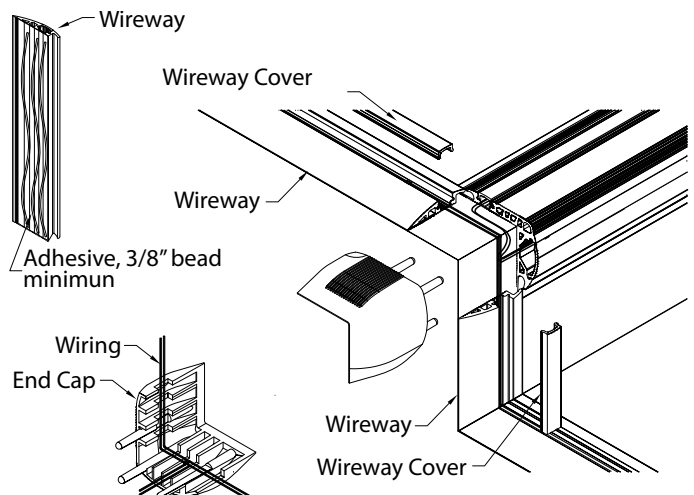
Step 1: Cut and miter wireway to desired length with wireway cover in place. After cutting, remove cover and use adhesive **ADH-MB-75AM-10** to glue wireway to floor surface. Tapcon 3/16" x 1 1/4" flat head screws to secure wireway is optional. Clean any excessive glue with denatured alcohol.

Step 2: Run power feed through wireway and make wiring connections, as shown. Be sure connection polarity is correct.

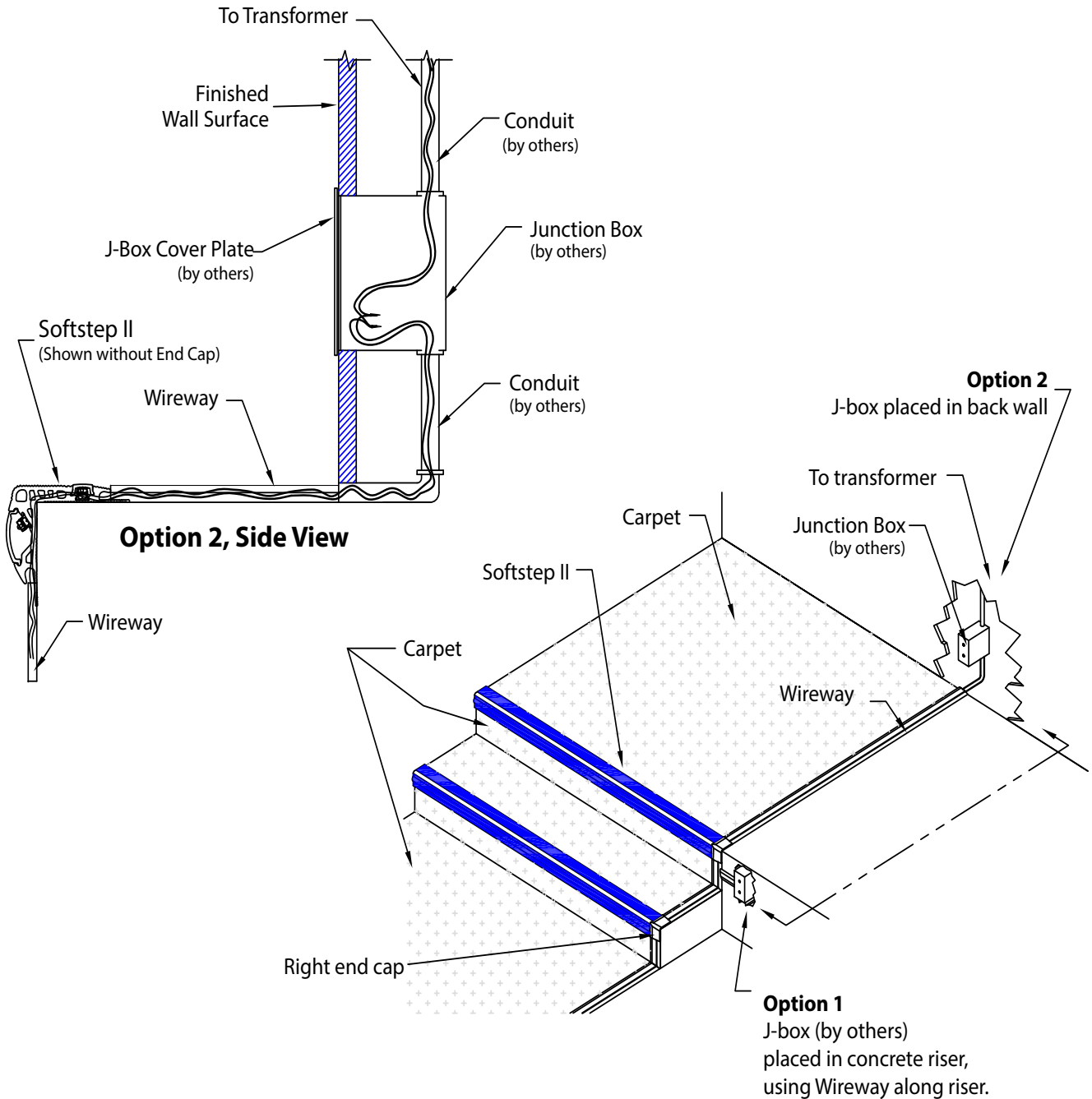
Step 3: Snap wireway into place.

Step 4: Connect to power source. Be sure wire is sized to compensate for voltage drop over distance and color coded for polarity accuracy. White wire is positive, Black wire is negative.

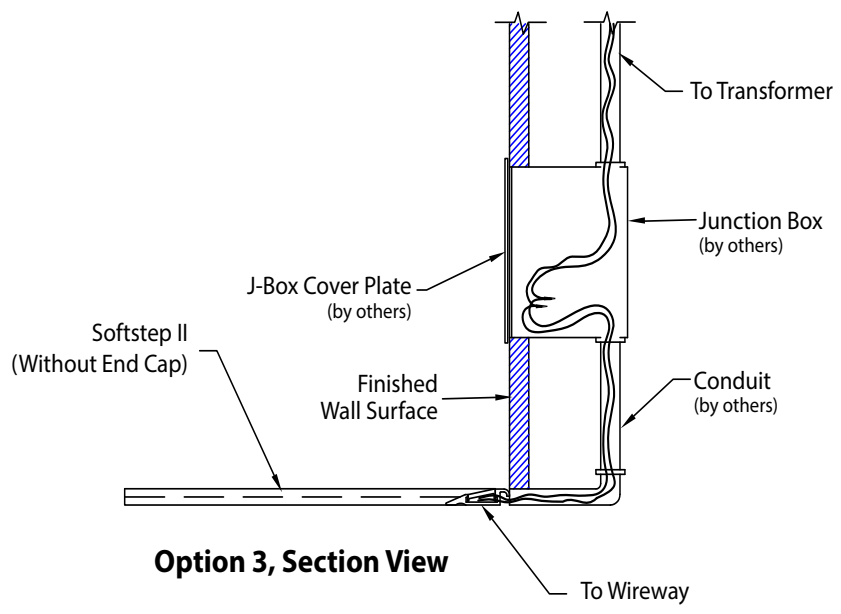
NOTE: LED lamps require Class 2 12V DC transformer. Be sure polarity is correct.



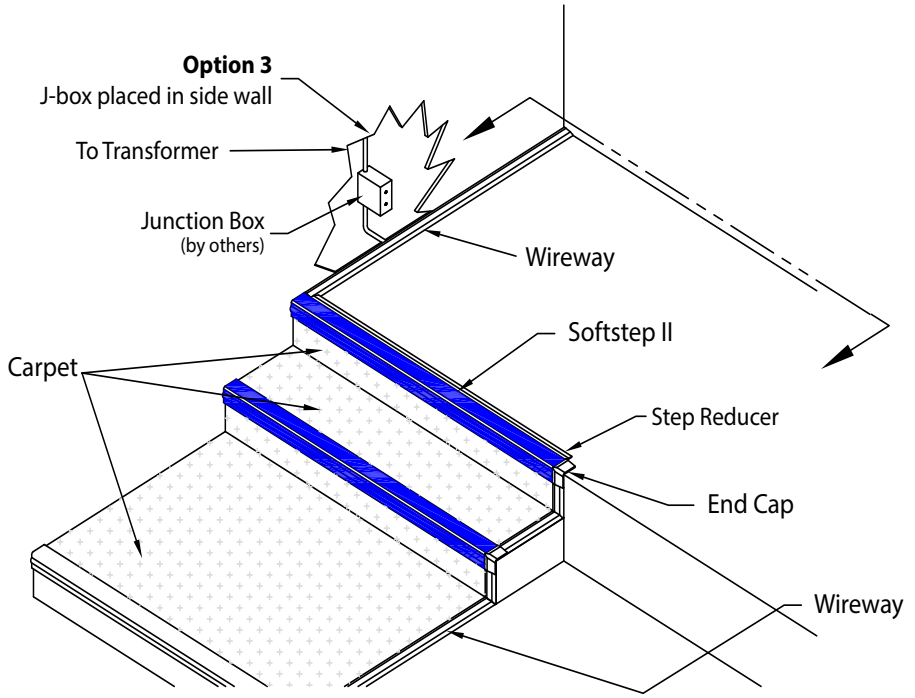
Power Feed Connections



Power Feed Connections



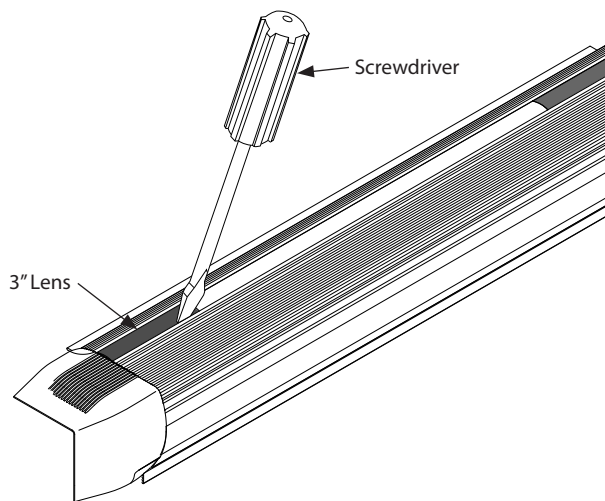
Option 3, Section View



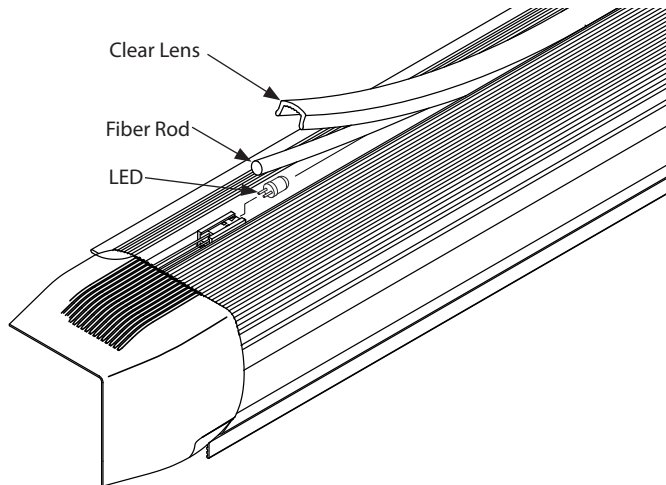
Maintenance: Removing and Installing the Upper LED

⚠ WARNING! Danger of Electrical Shock. Be sure power is turned off before proceeding.

Step 1: Remove the 3" Black Lens. Use a thin blade screwdriver or a small Putty Knife to pry up the lens, as shown.



Step 2: Pull up the clear lens and pull up the Fiber Rod to make room to remove the LED. Pull the LED straight out of the socket, as shown.



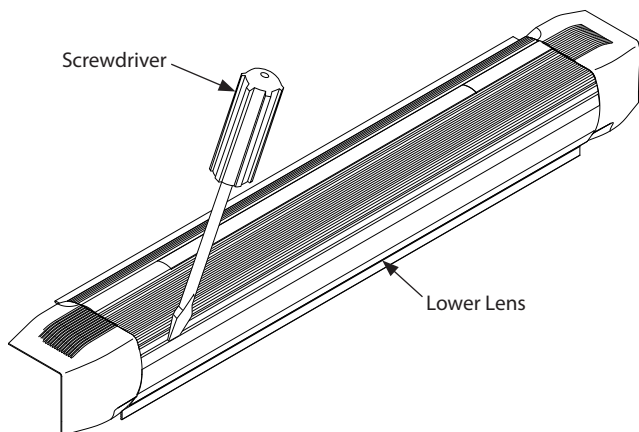
Step 3: Install replacement LED by plugging lead wires directly into slots in Socket. Press Fiber Rod back down into position in the holder and press Lens down into position. Position 3" Lens over opening and press down into position.

Step 4: Restore power to the system.

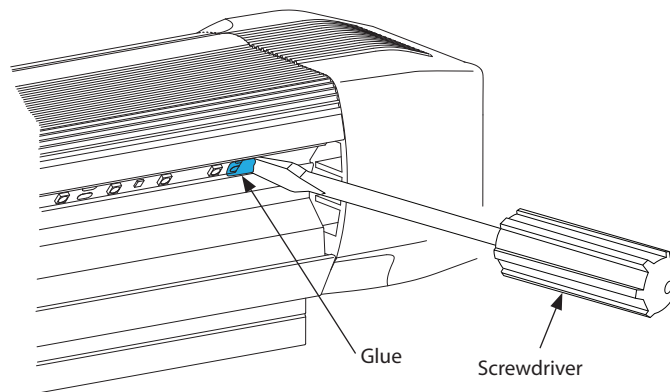
Maintenance: Replacing Tivotape™ in Lower Cavity

⚠ WARNING! Danger of Electrical Shock. Be sure power is turned off before proceeding.

Step 1: Remove the lower lens. Use a thin blade screwdriver or a small Putty Knife to pry up the lens, as shown.

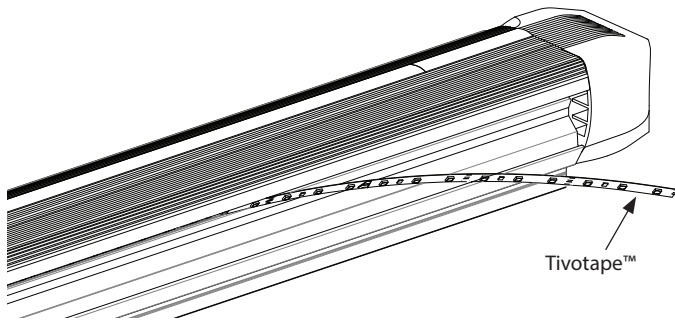


Step 2: Use a flat blade screwdriver to peel the Glue away from the trail end of the Tivotape™ Strand.

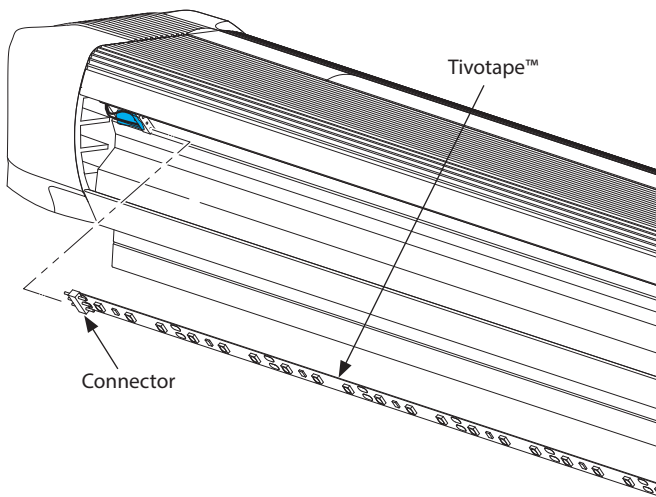


Replacing Tivotape™ in Lower Cavity (Continued)

Step 3: Start at one end and peel the Strand of Tivotape™ away from the step surface.



Step 4: Once the Tivotape strand is loose, unplug the connector at the end of the Strand.™

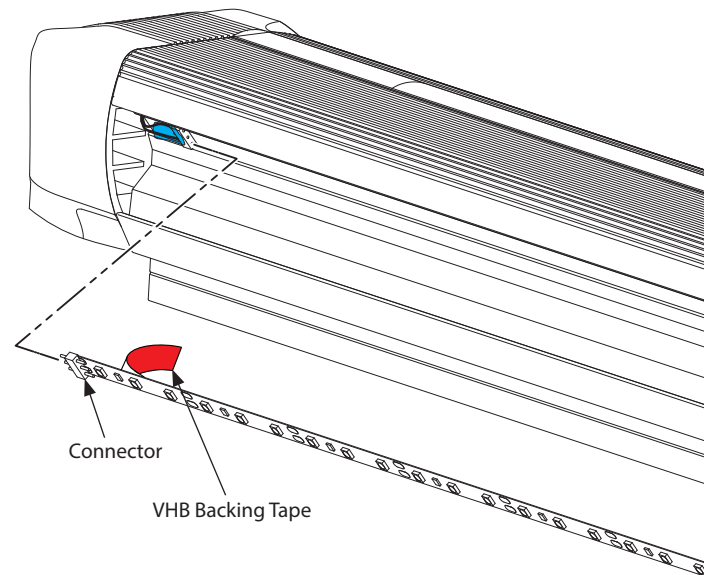


Step 5: Use alcohol to remove any adhesive that remains on the Step surface.

Step 6: Starting at the connector end of the replacement Tivotape™, begin peeling away the 3M VHB backing tape.

Step 7: Plug the Tivotape connector into the mating connector on the Step.

Note: Apply Tivotape to clean, smooth step surface.



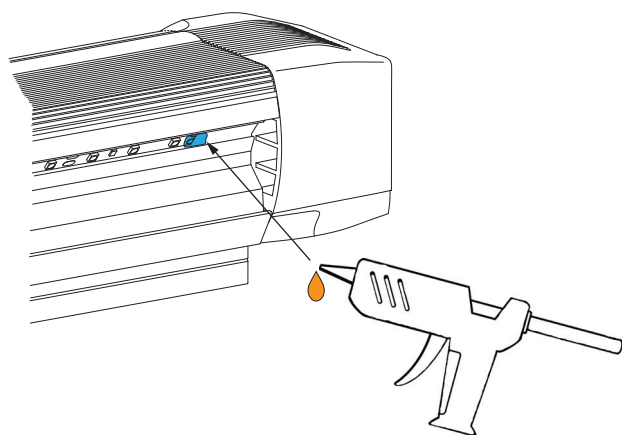
Step 8: Continue to pull the backing tape away and press down along the length of the Tivotape until the entire strand is stuck down on the Step.

CAUTION! Risk of Damage.

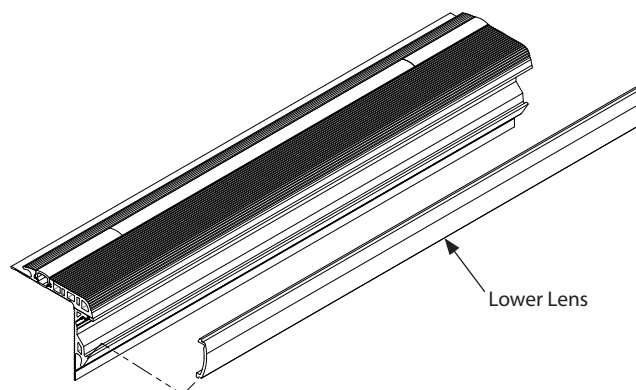
Do not attempt to remove Tivotape™ once it has been adhered to surface. Stick down only once to avoid damage to the product. If there is misapplication, remove the Tivotape™, clean off all adhesive from the mounting surface and start over with a new strip of Tivotape™ on a clean surface.

Replacing Tivotape™ in Lower Cavity (Continued)

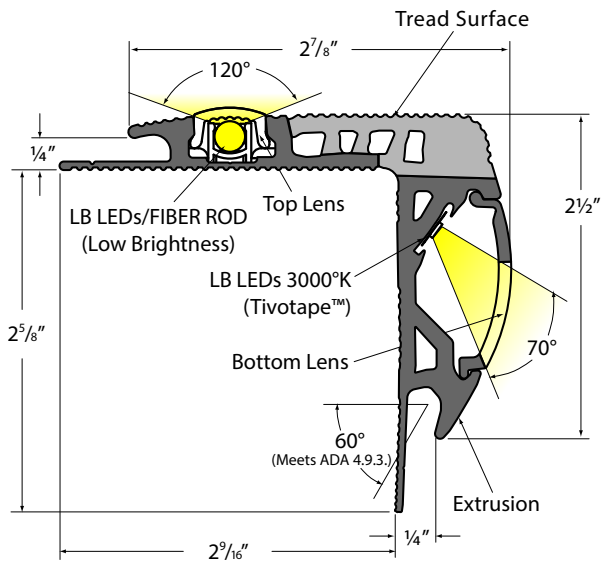
Step 9: It is recommended that you apply hot glue over the end of the Tivotape™ in order to prevent the tape light from lifting away from the step over time. Apply the glue to cover the edge of the tape and about 1/2" of the Step channel to ensure a solid bond.



Step 10: Insert Lens into lower cavity. Insert the lower edge first, then snap the top edge into position starting at one end and press along the lens to the other end.



Step 11: Restore power to the system.



Please verify the contents of the packages!

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Be sure power is turned off before installing or modifying the system.

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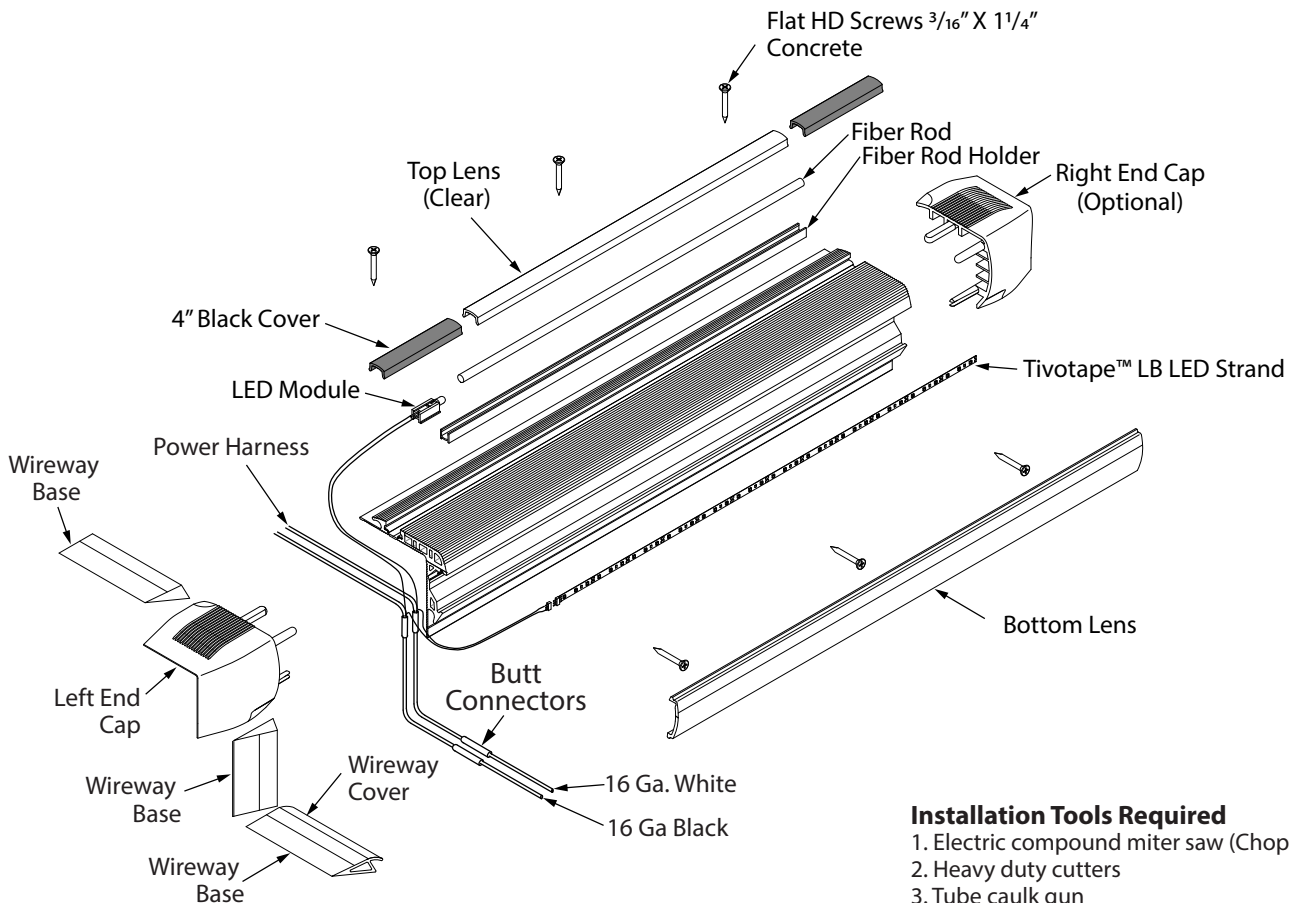
Consult any and all applicable local and national codes for installation.

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Installation Instructions



Installation Tools Required

1. Electric compound miter saw (Chop Saw)
2. Heavy duty cutters
3. Tube caulk gun
4. Screws - Flat HD 3/16" x 1 1/4" concrete (Included)
5. Extrusion Adhesive **ADH-MB-75AM-10**
6. End Cap Adhesive **ADH-5-CA**

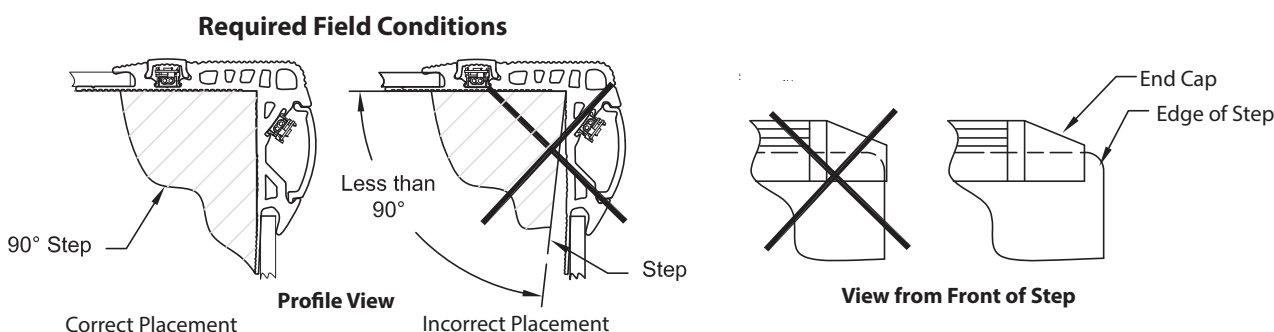
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Installation Instructions: Cut Step to Size

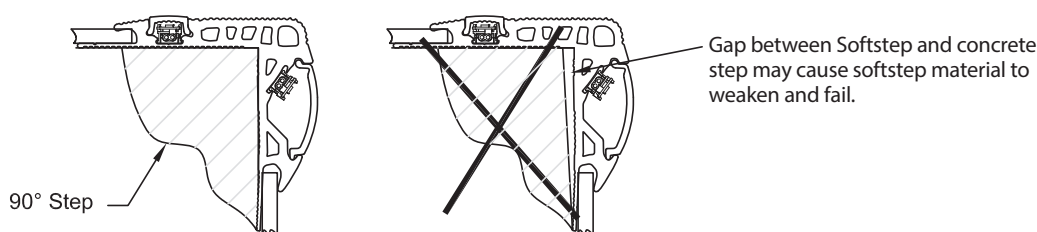
NOTE: Read all instructions entirely before installation. Call Tivoli, LLC with any questions. Install Fiberstep™ prior to carpet installation. Where there is no carpet, use optional Step Reducer to fill gap at back of tread. (See Specification Sheet for details)

⚠ WARNING! Risk of Product Damage.
This Step Light must be mounted on a 90° riser only.
See "Required Field Conditions" below.

Step 1: Measure width of step while noting the conditions below. Fiberstep™ should not be mounted on the curved edge of the step. Measure the square surface to determine the final length of the Fiberstep.



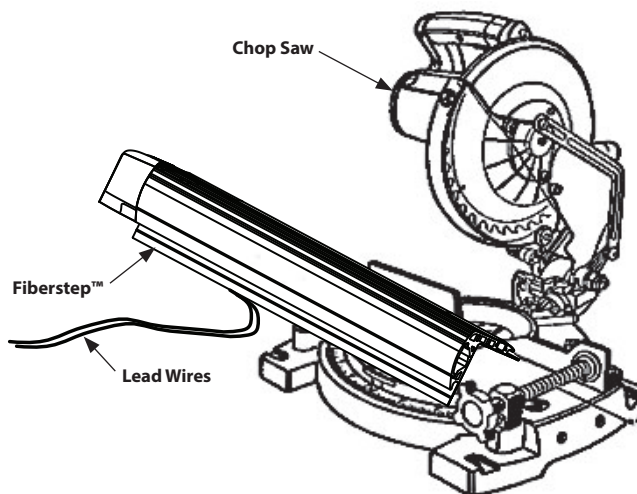
Note: If step riser is not 90°, consult factory.



Step 2: With the End Cap in place on the Fiberstep™, measure the distance from Step 1 starting from the End Cap to determine where to make the cut on the Fiberstep™. Mark the step at the cutoff point.

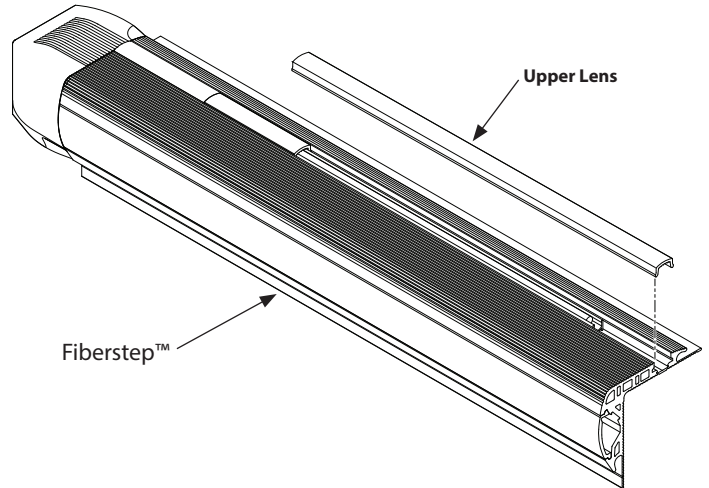
CAUTION: There are Lead Wires taped to the underside of the Fiberstep. Make sure to move them out of the way before cutting step.

Step 3: Leaving the complete Fiberstep™ intact with all lenses in place, use a Table saw or Chop Saw to cut off the end of the step.



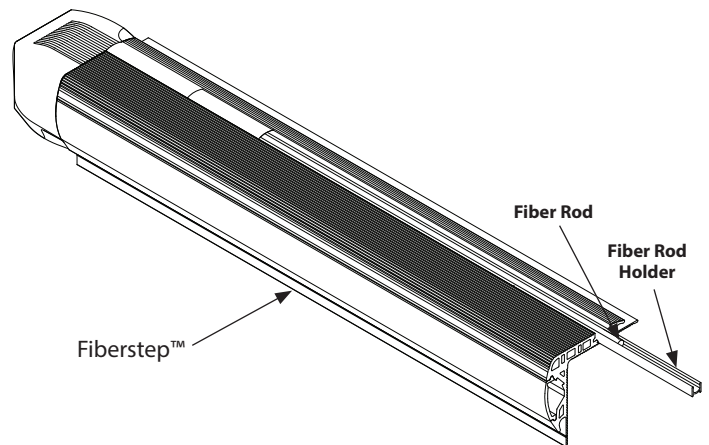
Installation Instructions: Field Cutting the Fiber Rod and Holder

Step 1: Pull up on the end of the Upper Lens to remove it.

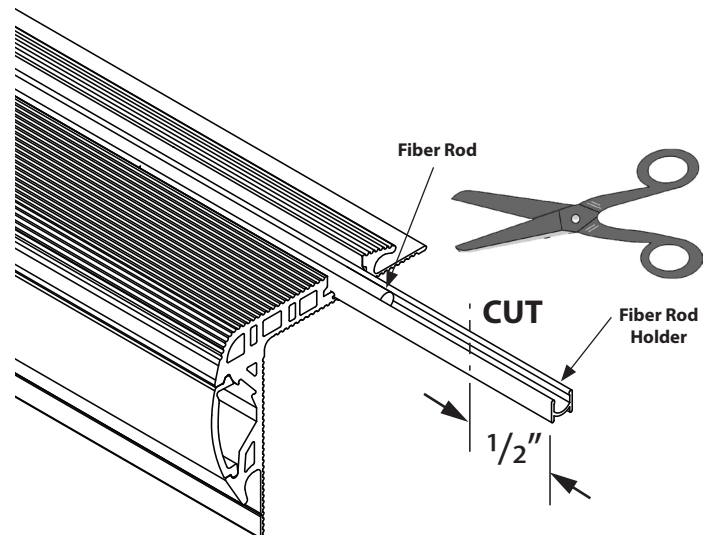


Step 2: Slide Fiber Rod Holder out of Step about 2".

Step 3: Be sure the Fiber Rod remains inside the edge of the Step.



Step 4: Cut off 1/2" from the end of the Fiber Rod Holder using a pair of heavy duty cutters. Using the saw is not recommended.



Installation Instructions: Field Cutting the Fiber Rod and Holder (Continued)

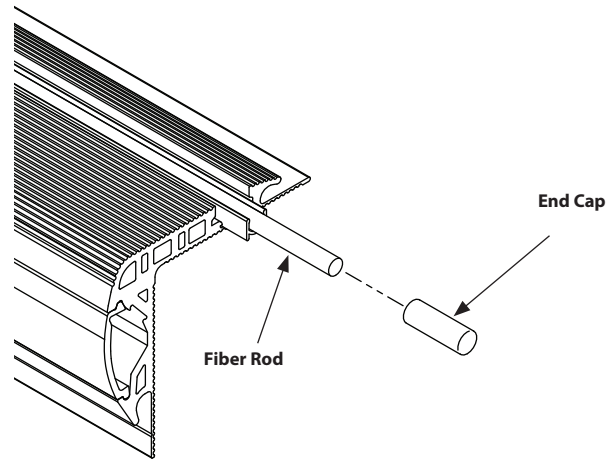
Step 5: Slide the Fiber Rod out about an inch past the Holder and press the end cap over the end of the Rod until it is pressed on all the way.

Step 6: Push the Rod and Holder all the way back into the Step.

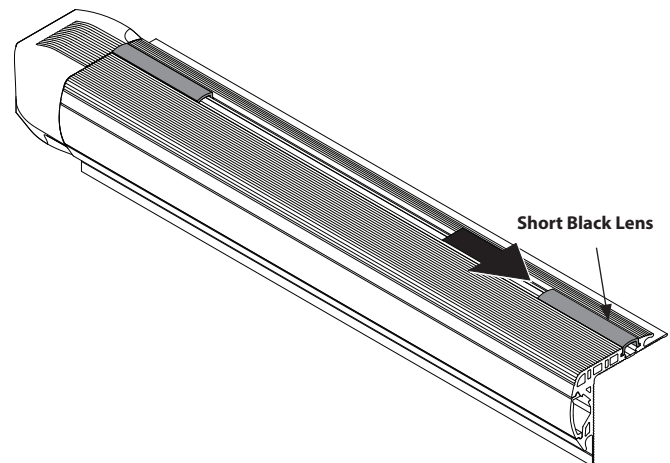
Step 7: Remove all flashing and dust from the Upper Channel using a soft cloth and compressed air.

Caution! Potential Damage.
Do not scratch the Fiber Rod.

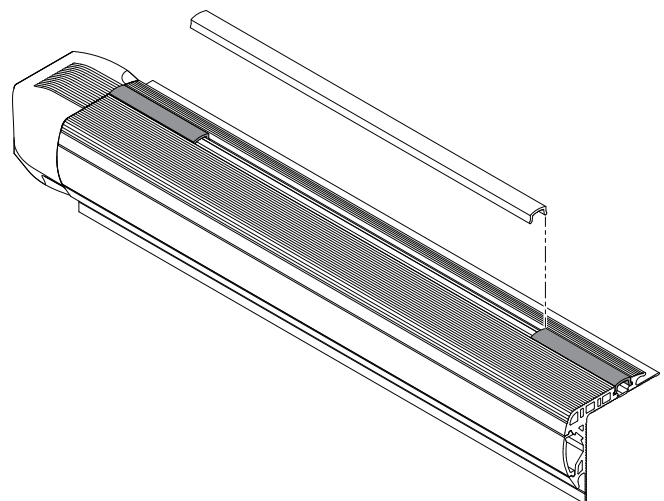
Important! All dust and debris must be cleaned out of The Fiber Channel before proceeding.



Step 8: Slide the Short Black Lens all the way over to the end of the Step.



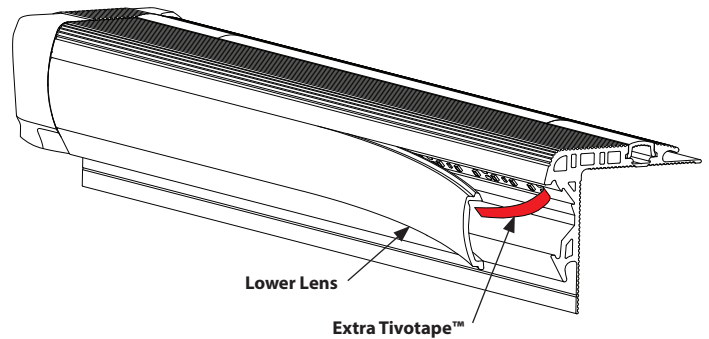
Step 9: Press the Upper Lens into place between the two short black Lenses.



Installation Instructions: Field Cutting the Tivotape™

Step 1: Pull the end of the lower Lens away from the Fiberstep™, as shown.

Step 2: Unfold the unattached end of the Tivotape™ and lay it out straight.

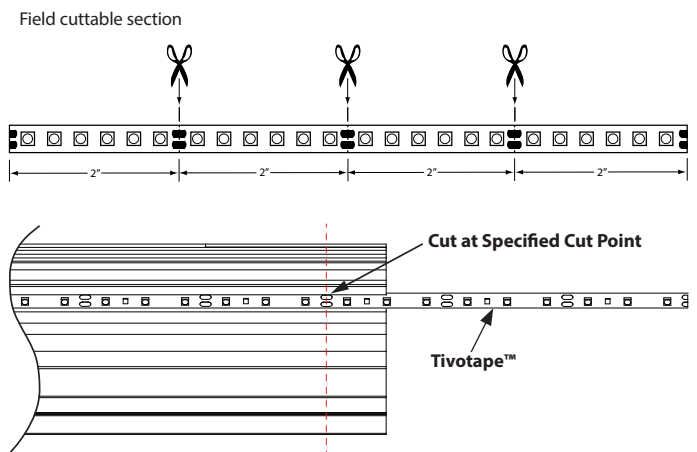


Warning: Tivotape™ must only be cut at the designated cutoff points, otherwise damage will result. LB Tivotape™ has cut intervals every 2 inches.

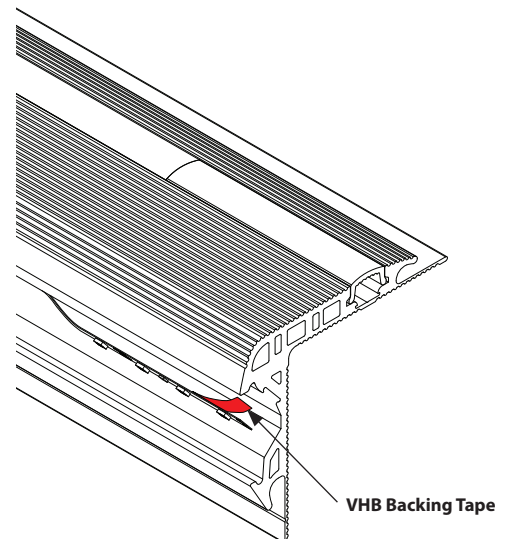
Step 3: Note the location of the last cutoff point closest to the edge of the step and cut off the excess Tivotape™.

Important: Make sure the channel where Tivotape™ is to be installed is smooth, clean, free of all dirt, oil and debris. Cleaning the mounting surface with alcohol is recommended.

Step 4: Clean the mounting surface where the loose portion of Tivotape™ is to be applied.

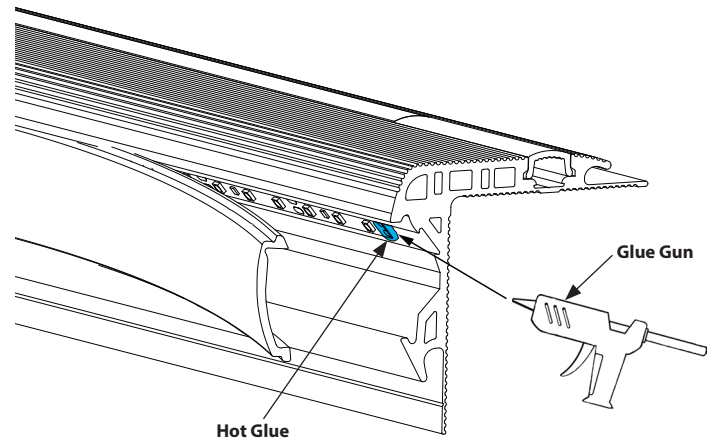


Step 5: Peel off the VHB Backing tape from the back side of the Tivotape and apply to the cleaned mounting surface of the Step.



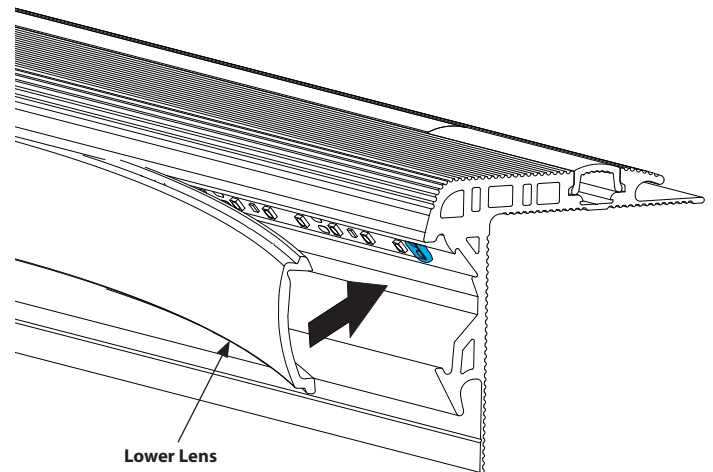
Installation Instructions: Field Cutting the Tivotape (Continued)

Step 6: In order to keep the Tivotape™ from pulling away from the mounting surface due to high traffic or extreme temperature changes, it is recommended that a dab of hot glue be applied over the top of the end of the Tivotape and mounting surface, as shown.



Step 7: Make sure the entire mounting channel is clean. Use a soft cloth and compressed air to ensure all dust and debris has been removed.

Step 8: Press the Lower Lens back into place by pressing the lens along the edges, working from the inner part of the Lens out to the edge.



Installation Instructions: Installing the Fiberstep™

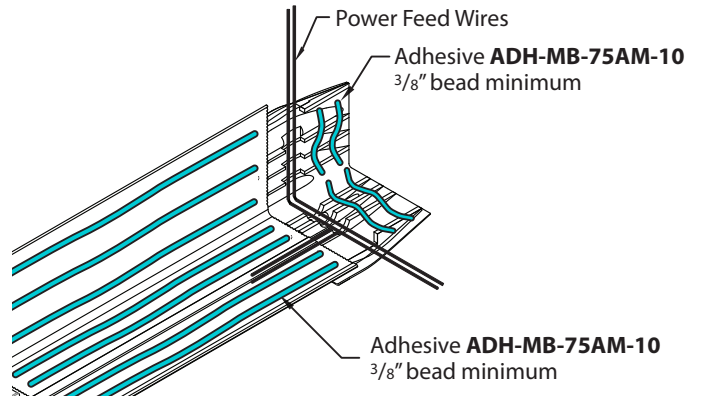
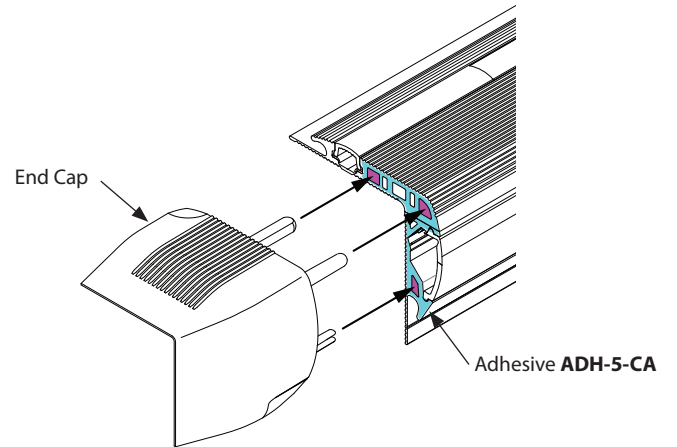
Step 1: Be sure to clean all mounting surfaces completely, using soap and water. Rinse and dry thoroughly.

Step 2: Fiberstep™ Continuous is normally shipped with End Caps pre-assembled on step. However, in special circumstances the End Caps will need to be assembled on location. Apply adhesive **ADH-5-CA** to mounting surface and mounting holes and insert male pins into cavities in Fiberstep™ as shown in diagram and install flush and tight to Fiberstep™.

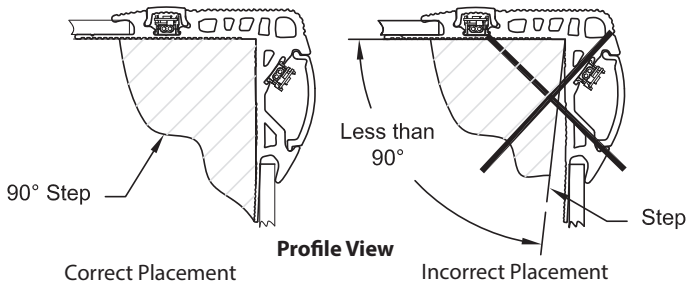
Step 3: Apply required amount of adhesive **ADH-MB-75AM-10** to inside surface of Fiberstep™ and to the underside of End Caps, as shown.

Step 4: Power feed wires should be positioned within the open wireway on the underside of the End Cap when Fiberstep™ Continuous is installed.

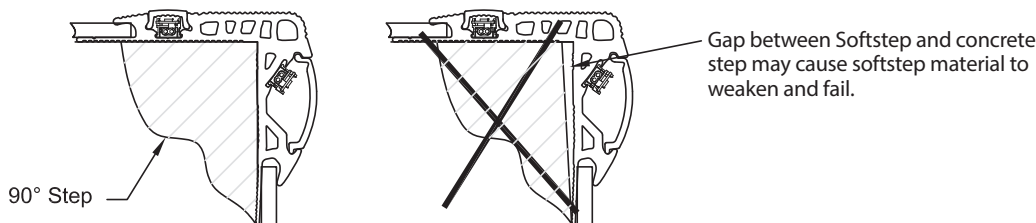
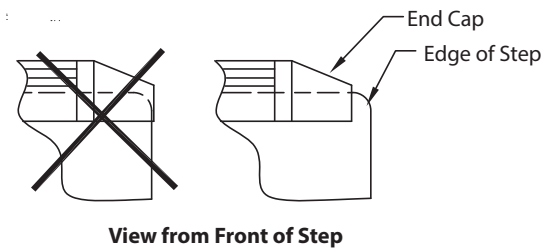
Step 5: Make certain that Fiberstep™ Continuous is held tight to the tread and riser surfaces (See "Required Field Conditions" below.)



Required Field Conditions



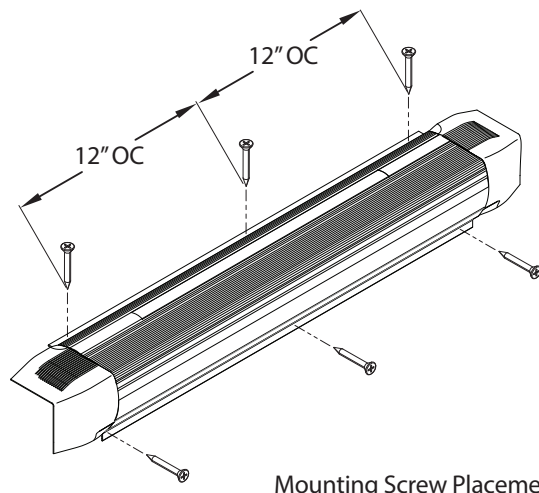
Note: If step riser is not 90°, consult factory.



Installation Instructions Installing the Fiberstep (Continued)

Step 6: Apply screws (supplied) every 12" through the lip at the rear of the top of the step and through the lip at the bottom front of the step to allow adhesive to cure for at least 24 hours or as per manufacturer's instructions.

Caution: Do not overtighten screws. Overtightening the screws will damage the Fiberstep™.



Mounting Screw Placement

Wire Size Selection

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

12V Class 2 Lighting System	
Wire Gauge	Max. Linear Length Wire
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Install Wireway

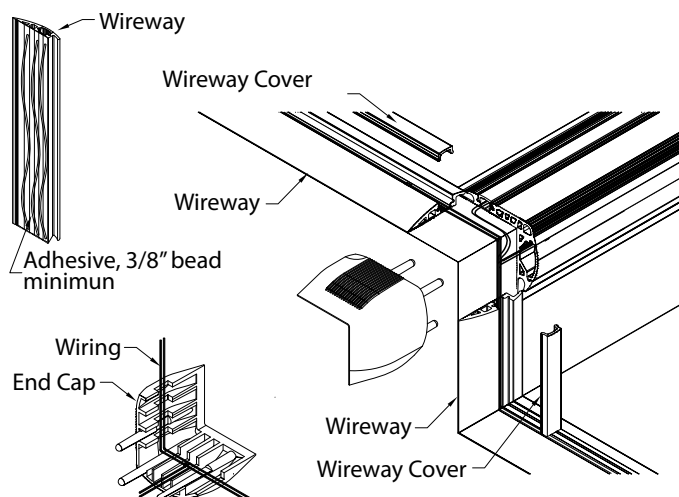
Step 1: Cut and miter wireway to desired length with wireway cover in place. After cutting, remove cover and use adhesive **ADH-MB-75AM-10** to glue wireway to floor surface. Tapcon 3/16" x 1 1/4" flat head screws to secure wireway is optional. Clean any excessive glue with denatured alcohol.

Step 2: Run power feed through wireway and make wiring connections, as shown. Be sure connection polarity is correct.

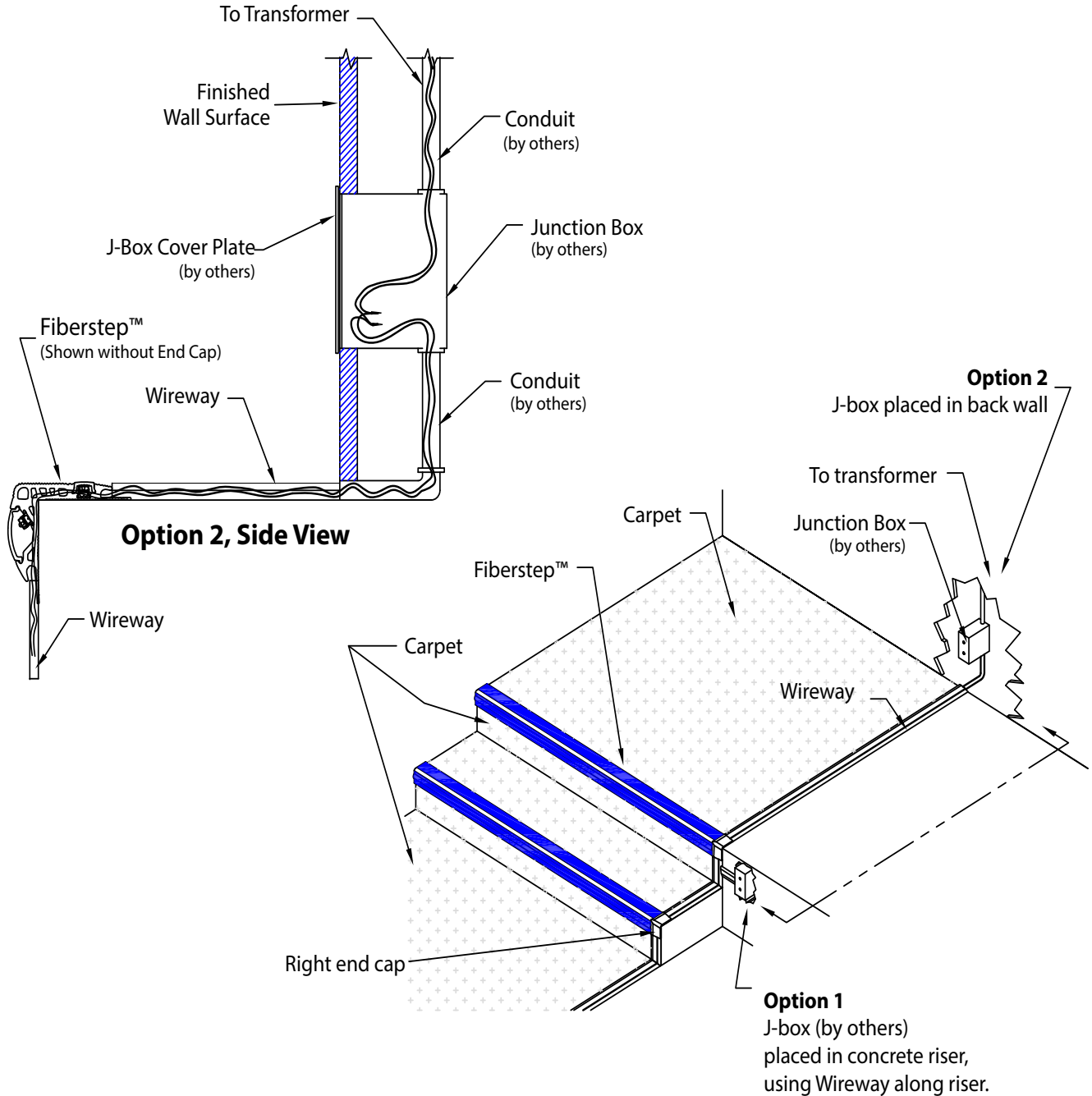
Step 3: Press the Wireway Cover into place.

Step 4: Connect to power source. Be sure wire is sized to compensate for voltage drop over distance and color coded for polarity accuracy. White wire is positive, Black wire is negative.

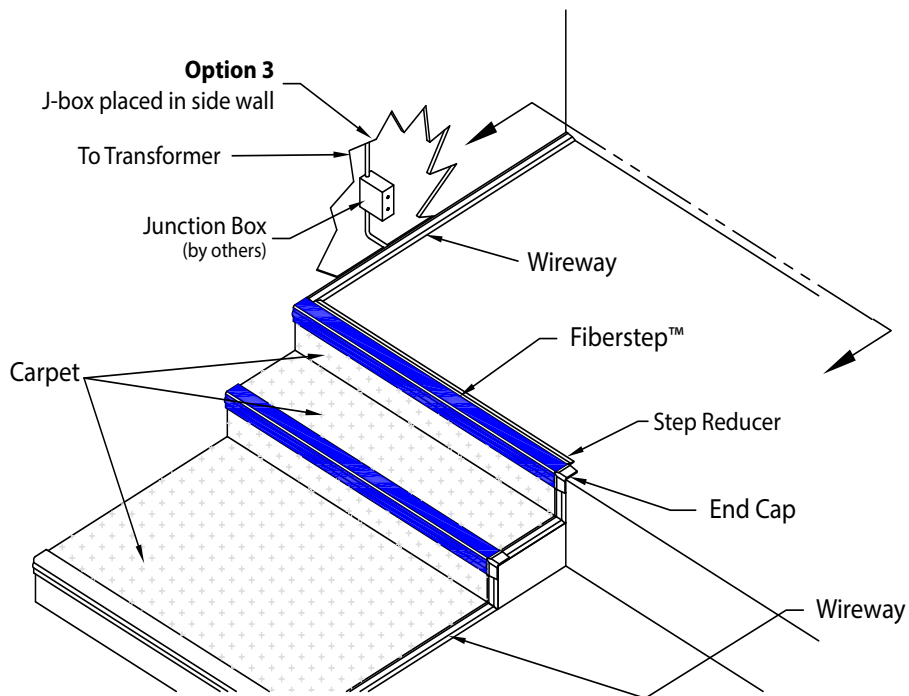
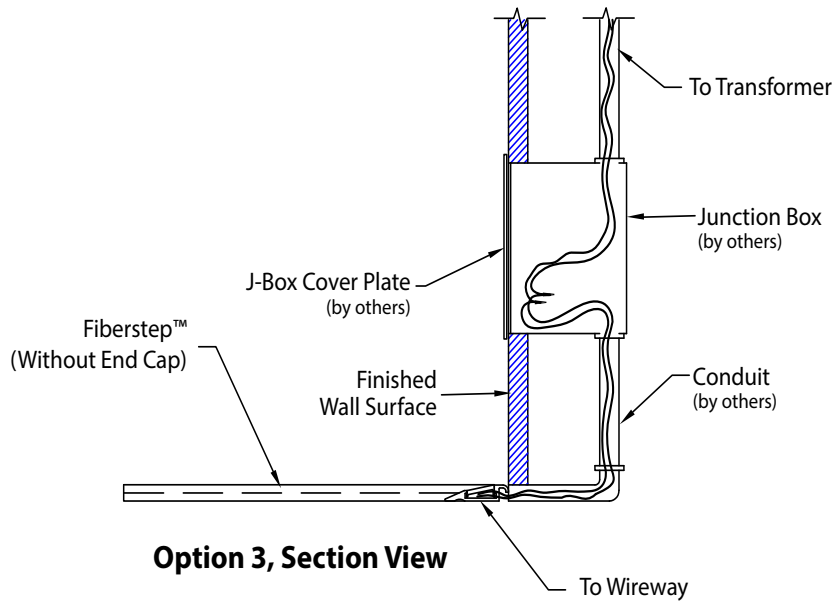
NOTE: LED lamps require Class 2 12V DC transformer. Be sure polarity is correct.



Power Feed Connections



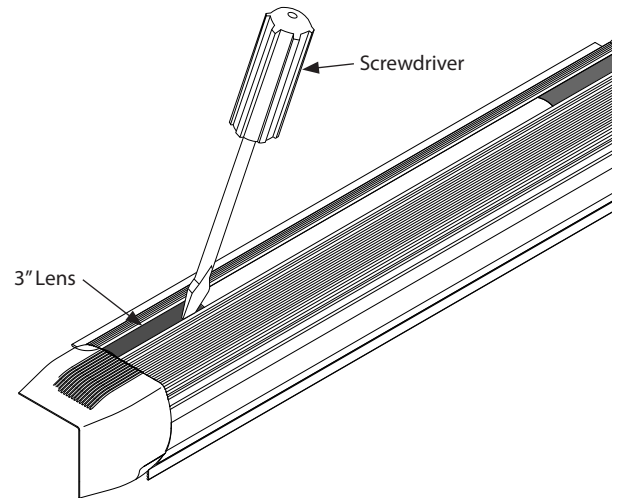
Power Feed Connections



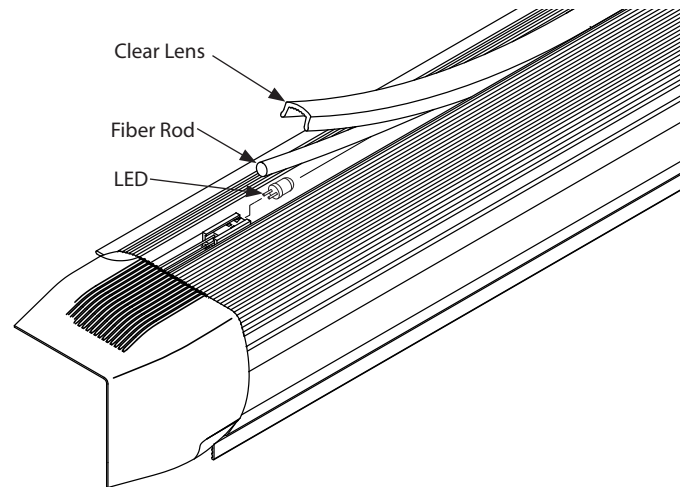
Maintenance: Removing and Installing the Upper LED

⚠ WARNING! Danger of Electrical Shock. Be sure power is turned off before proceeding.

Step 1: Remove the 3" Black Lens. Use a thin blade screwdriver or a small Putty Knife to pry up the lens, as shown.



Step 2: Pull up the clear lens and pull up the Fiber Rod to make room to remove the LED. Pull the LED straight out of the socket, as shown.



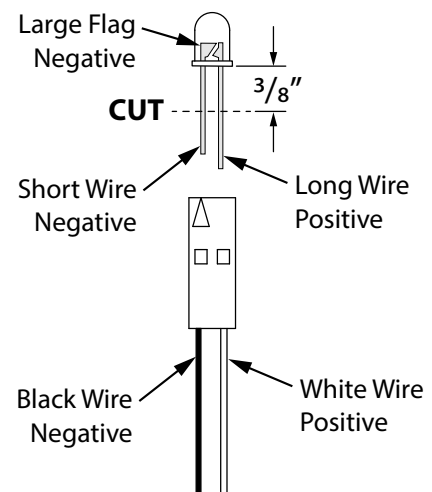
Step 3: The replacement LED module is polarity sensitive. Make note of the positive and negative leads. The negative lead wire is shorter and has a larger flag inside the clear dome. The positive lead wire is longer and has the short flag inside the clear dome.

Step 4: Use wire cutters to cut off the ends of the LED lead wires (stay mindful of polarity) so that the lead wires will be 3/8" from the bottom of the clear dome.

Step 5: Install the replacement LED by plugging the lead wires directly into the slots in the socket. The negative lead wire (large flag) should plug into the negative side of the socket which is identified by the black wire and the positive lead wire (small flag) should plug into the side of the socket with the white wire.

Step 6: Press Fiber Rod back down into position in the holder and press Lens down into position. Position 3" Lens over opening and press down into position.

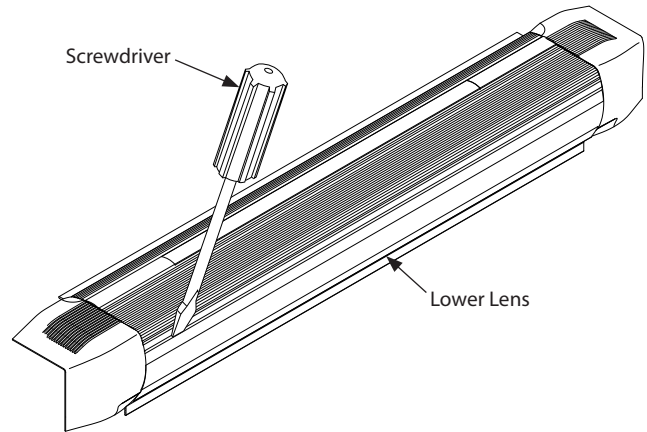
Step 7: Restore power to the system.



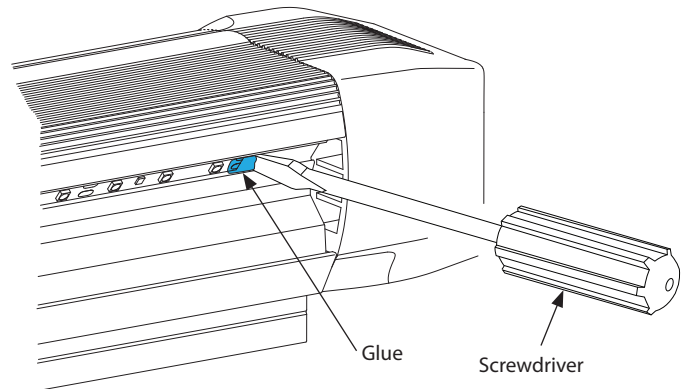
Maintenance: Replacing Tivotape™ in Lower Cavity

⚠ WARNING! Danger of Electrical Shock. Be sure power is turned off before proceeding.

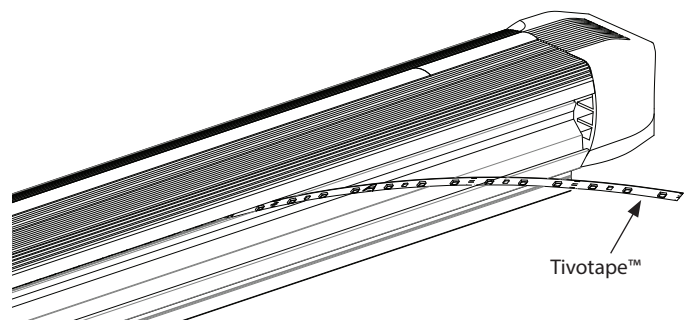
Step 1: Remove the lower lens. Use a thin blade screwdriver or a small Putty Knife to pry up the lens, as shown.



Step 2: Use a flat blade screwdriver to peel the Glue away from the trail end of the Tivotape™ Strand.

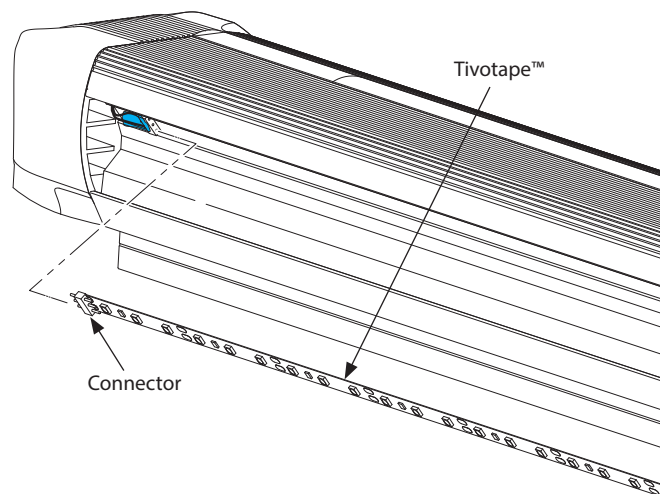


Step 3: Start at one end and peel the Strand of Tivotape™ away from the step surface.



Replacing Tivotape™ in Lower Cavity (Continued)

Step 4: Once the Tivotape strand is loose, unplug the connector at the end of the Strand.™



Step 5: Use alcohol to remove any adhesive that remains on the Step surface.

Step 6: Starting at the connector end of the replacement Tivotape™, begin peeling away the 3M VHB backing tape.

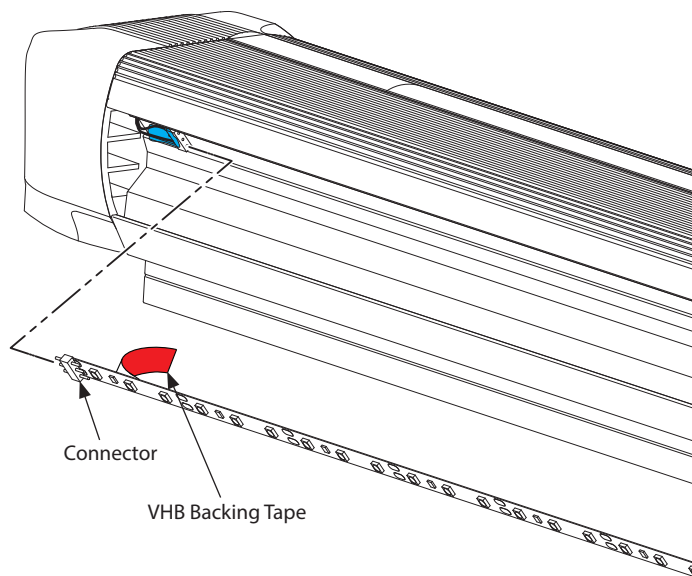
Step 7: Plug the Tivotape connector into the mating connector on the Step.

Note: Apply Tivotape to clean, smooth step surface.

Step 8: Continue to pull the backing tape away and press down along the length of the Tivotape until the entire strand is stuck down on the Step.

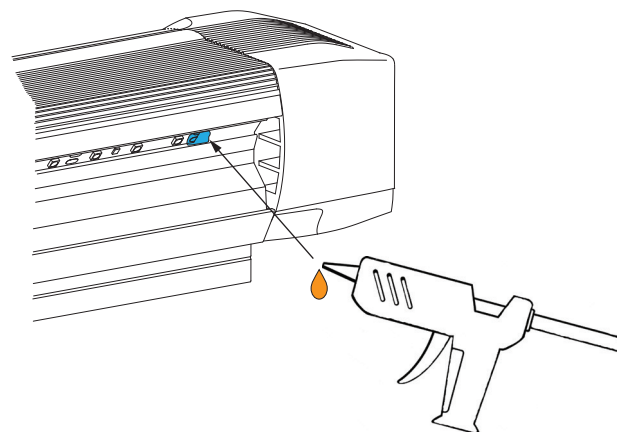
CAUTION! Risk of Damage.

Do not attempt to remove Tivotape™ once it has been adhered to surface. Stick down only once to avoid damage to the product. If there is misapplication, remove the Tivotape™, clean off all adhesive from the mounting surface and start over with a new strip of Tivotape™ on a clean surface.



Replacing Tivotape™ in Lower Cavity (Continued)

Step 9: It is recommended that you apply hot glue over the end of the Tivotape™ in order to prevent the tape light from lifting away from the step over time. Apply the glue to cover the edge of the tape and about 1/2" of the Step channel to ensure a solid bond.



Step 10: Insert Lens into lower cavity. Insert the lower edge first, then snap the top edge into position starting at one end and press along the lens to the other end.

Step 11: Restore power to the system.

