Installation Instructions

The following instructions are general guidelines. Installation should be performed by a qualified electrician in accordance with the National Electrical Code and any applicable local codes. Read through the entire instructions before beginning installation. Contact Celestial Lighting for further assistance.

GEM-1800 step light stairnoses are shipped in pre-cut,pre-assembled sections. Obtaining accurate cut lenghts for the stairnoses is crucial. However, the Step light bull nose can be field cut to length if necessary. The material needed for installation depends on the layout of the steps.

Stairways Between two Walls

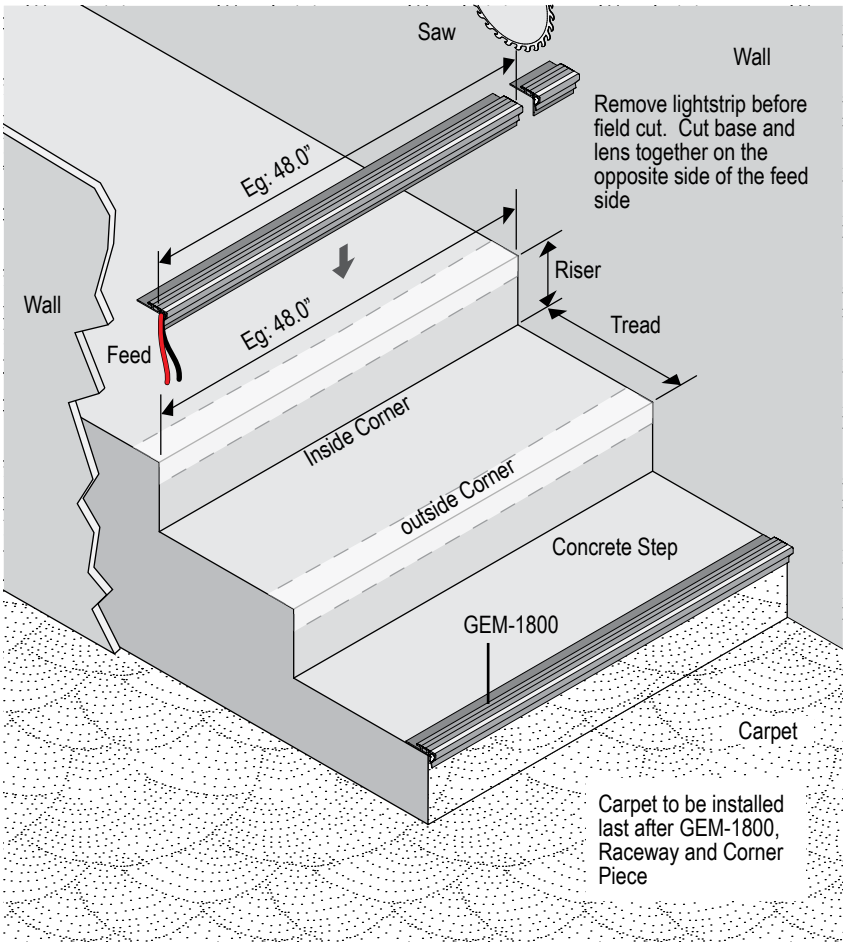
There are two different ways to install step light between two walls. The most common and easiest way is to follow the same procedures as installing step light adjacent to one wall. The second way is described below with illustrations to the right. This will require feeds into each step through the bottom of each step stairnose.

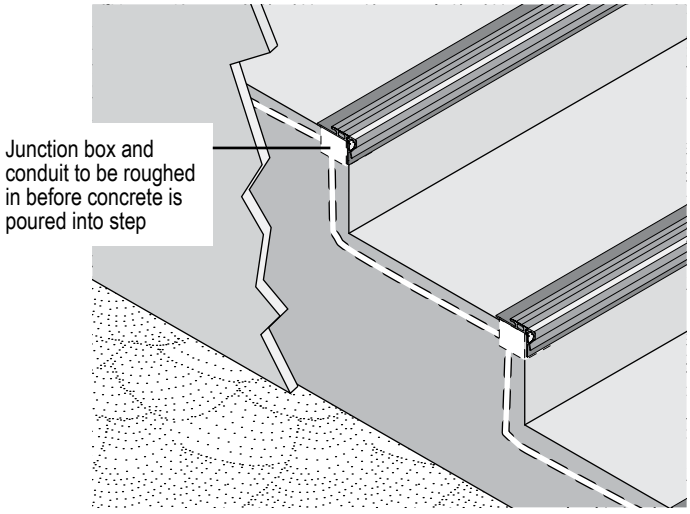
GEM-1800
For stairways between two walls, the stairnose is installed throughout the entire length of each step from wall to wall. Field cut base and lens together with miter saw on the opposite side of feed wire. Be sure to remove the lightstrip inside before cutting.

Raceway
The raceway will not be needed in this type of configuration as the step stairnose will run the entire length of the step from wall to wall.

Wire Harness
The Wire Harness will not be provided for this type of installation as wiring will be entirely provided by the contractor.

Corner Piece
The corner piece will also not be used as there will be no raceway for the step stairnose to mate into.





Stairways Adjacent to Wall

GEM-1800

For stairways adjacent to a wall, the stairnose is typically installed with one end directly against the wall with the other end mating with the raceway and corner piece. The length of each GEM-1800 step light should be the same width of the step including one corner piece. Field cut base and lens together with miter saw on the side that will be installed against the wall. Be sure to remove the lightstrip inside before cutting.

Raceway

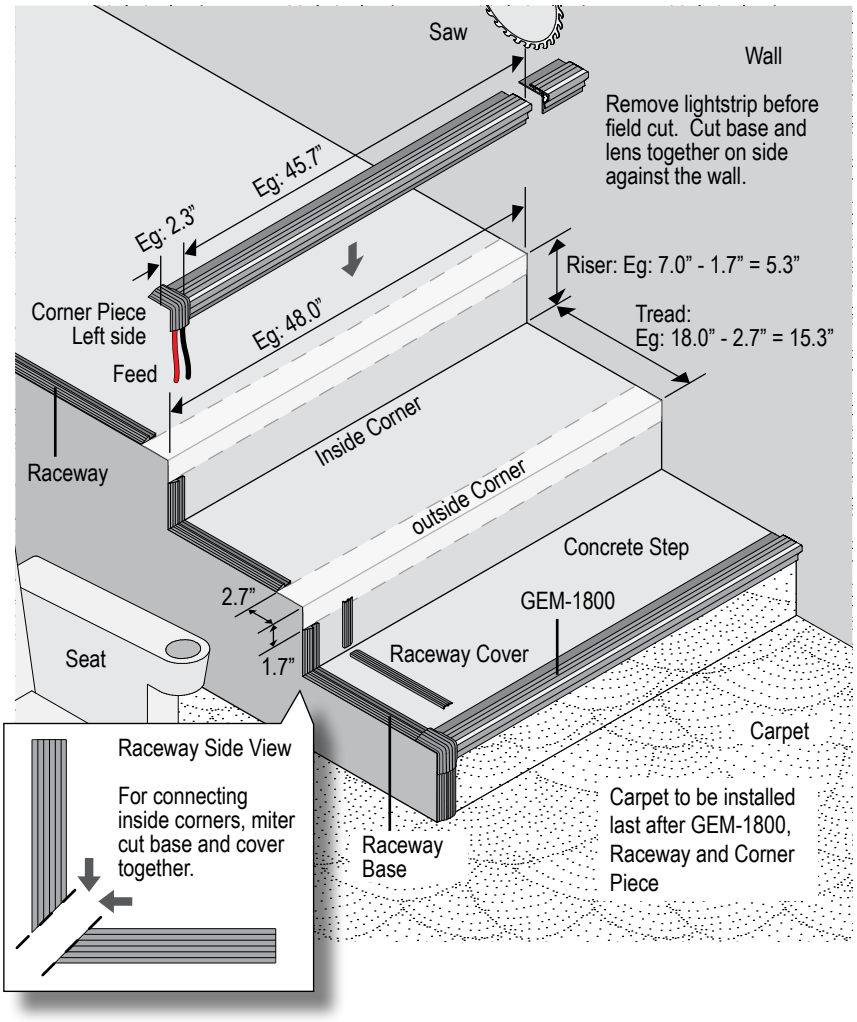
The raceway provides transition from carpet to bare floor and houses the wire harness to power to each dual step light. Raceway consists of the base and cover and are shipped in 10 feet length to be field cut to length. The raceway are required on both the tread and the riser of each step. To calculate the lengths needed, measure the length of the tread and subtract 2.7 inches and measure the height of the riser and subtract 1.7 inches. The gaps on the outside corner allows for the raceway to mate directly with the corner piece and the GEM-1800 step light. On the inside corner, the tread and riser raceway require miter cut in order for the two parts to mate seamlessly. Cut both the base and the cover together to ensure alignment.

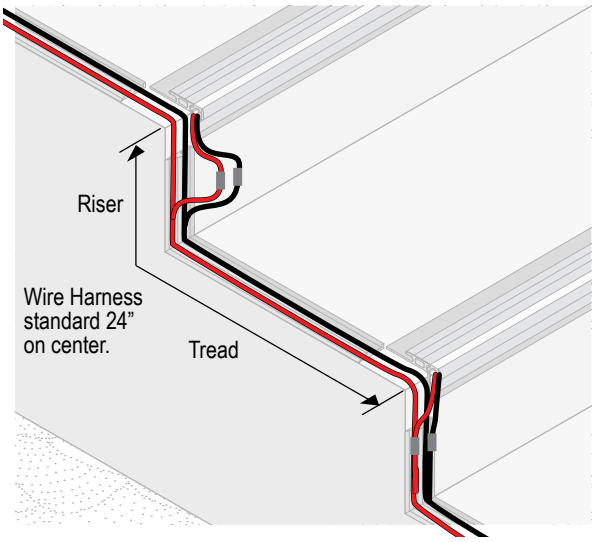
Wire Harness

Wire Harness connects the main wire to each step. The spacing between the wire harness is the distance between each step which is the length of the tread and riser combined.
Standard spacing is 24 inches on center. Fold extra cable and tuck inside the the raceway riser before snapping in Raceway cover.

Corner Piece

The corner piece is used to to connect the GEM-1800 step light and the raceway together. Left and Right side must be specified for each step. Orientation is determined by looking at the steps from the stage or screen.





Stairways Between Seating Areas

GEM-1800

For stairways between seats, the stairnose is installed on stairs that require mating the raceway and corner piece on both sides of each step. The length of each GEM-1800 step light should be the same width of the step including two corner pieces. Field cut base and lens together with miter saw on the opposite side of feed wire. Be sure to remove the lightstrip inside before cutting.

Raceway

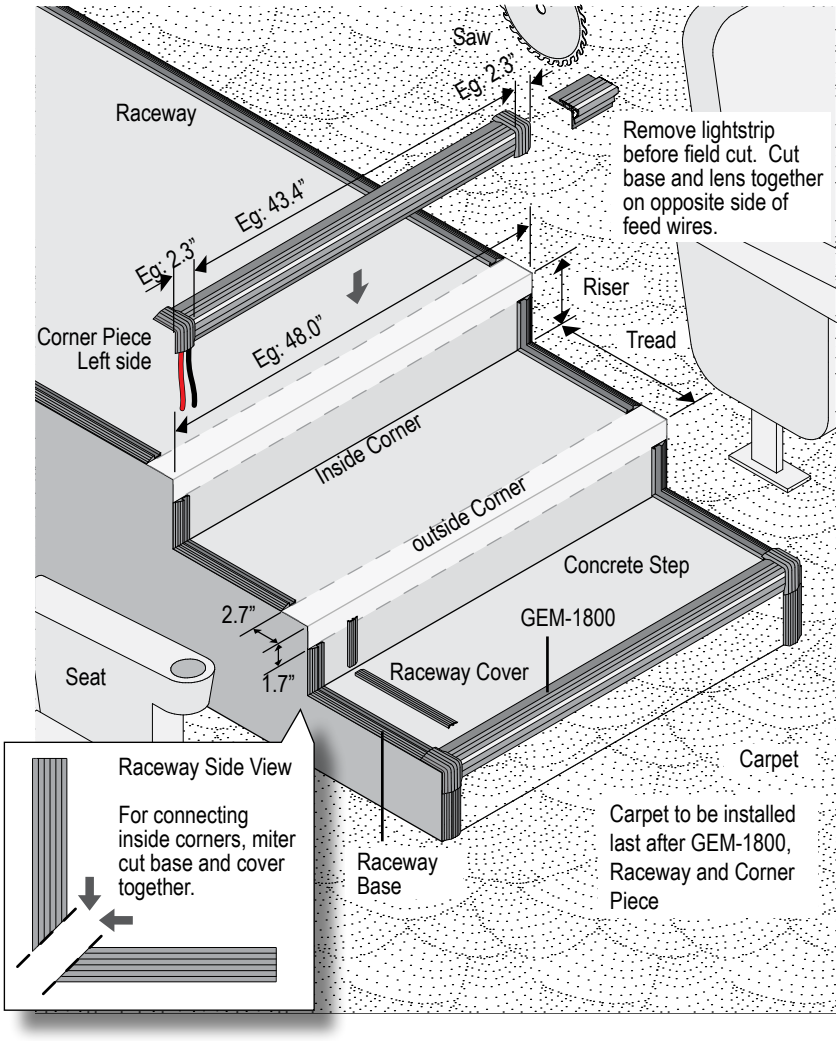
The raceway provides transition from carpet to bare floor and houses the wire harness to power to each dual step light. Raceway consists of the base and cover and are shipped in 10 feet length to be field cut to length. The raceway are required on both the tread and the riser of each step. To calculate the lengths needed, measure the length of the tread and subtract 2.7 inches and measure the height of the riser and subtract 1.7 inches. The gaps on the outside corner allows for the raceway to mate directly with the corner piece and the GEM-1800 step light. On the inside corner, the tread and riser raceway require miter cut in order for the two parts to mate seamlessly. Cut both the base and the cover together to ensure alignment.

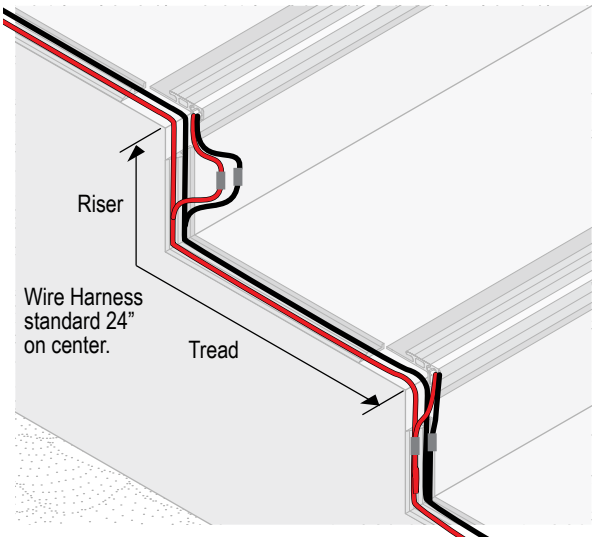
Wire Harness

Wire Harness connects the main wire to each step. The spacing between the wire harness is the distance between each step which is the length of the tread and riser combined.
Standard spacing is 24 inches on center. Fold extra cable and tuck inside the the raceway riser before snapping in Raceway cover.

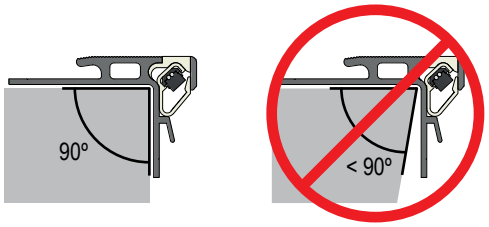
Corner Piece

The corner piece is used to to connect the GEM-1800 step light and the raceway together. Left and Right will be required to allow transition between the step stairnose and the raceway.





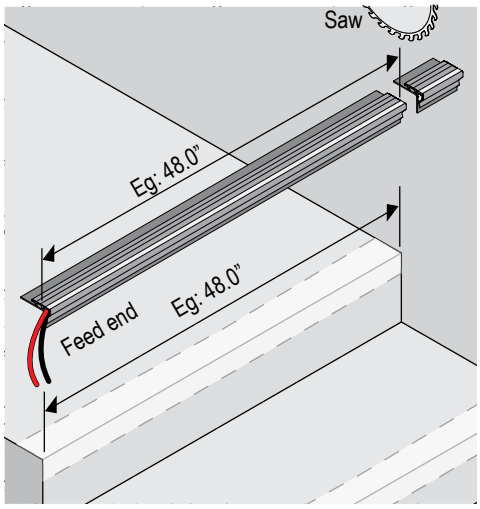
Step 1 Clean surface where the Step Stairnose will be installed making sure surface is free of dust and or debris.
Make sure the edge of each step is 90 degrees. Installing the GEM-1800 to steps that are not 90 degrees are not recommended.



Step 2 See applications below to determine the position of the GEM-1800 stairnose to the corner of the step and how to cut to length.

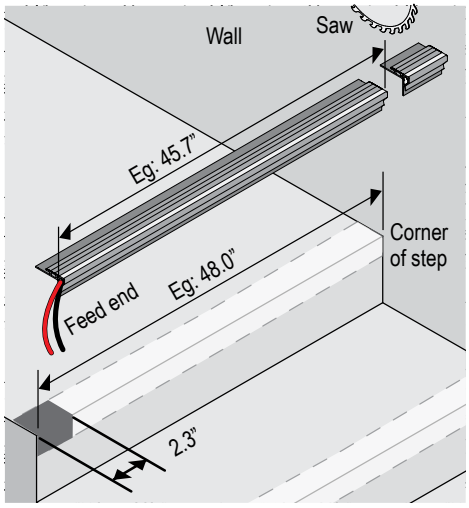
Stairways Between two Walls

Option1: Follow the stairway adjacent to wall
Option 2: If feeding each step with power, measure width of each step from wall to wall. Cut only if GEM-1800 length is longer than the step width.



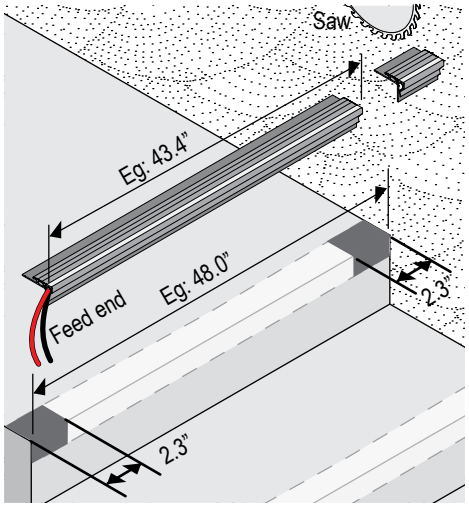
Stairways Adjacent to Wall

Measure the width of each step and cut GEM-1800 by 2.3 inches shorter than the measured unit. Cut the opposite side of the feed end with the base and lens together. Remove the lightstrip before cutting.

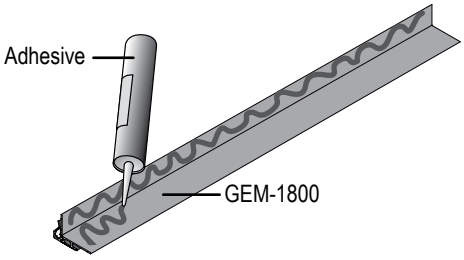


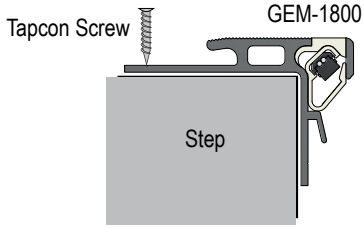
Stairways Between Seating Areas

Measure the width of each step and cut GEM-1800 by 4.6 inches shorter than the measured unit. Cut the opposite side of the feed end with the base and lens together. Remove the lightstrip before cutting.

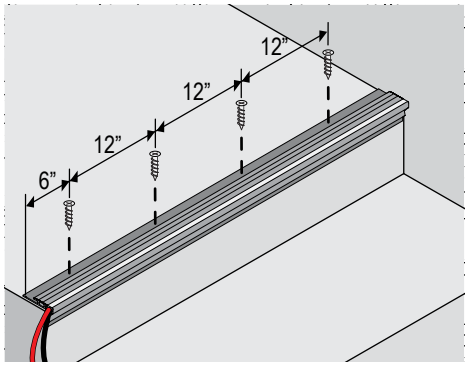


Step 3 After all of the GEM-1800 step stairnose have been cut to step length, apply adhesive to the underside of the base. Apply one 29 oz. tube up to 15 feet of GEM-1800 step stairnose. Mount to the corner of the step and secure with tapcon screw. One screw per foot recommended.

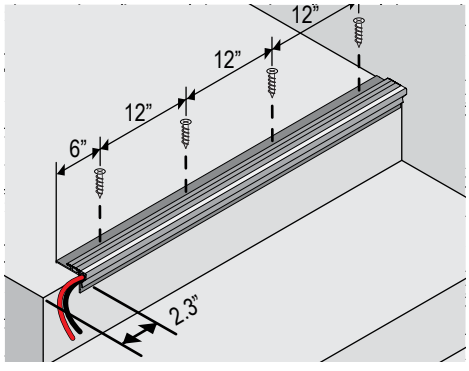




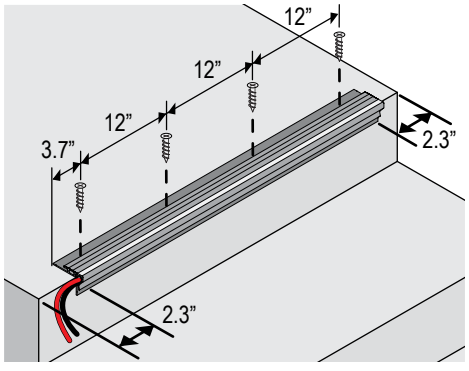
Stairways Between two Walls



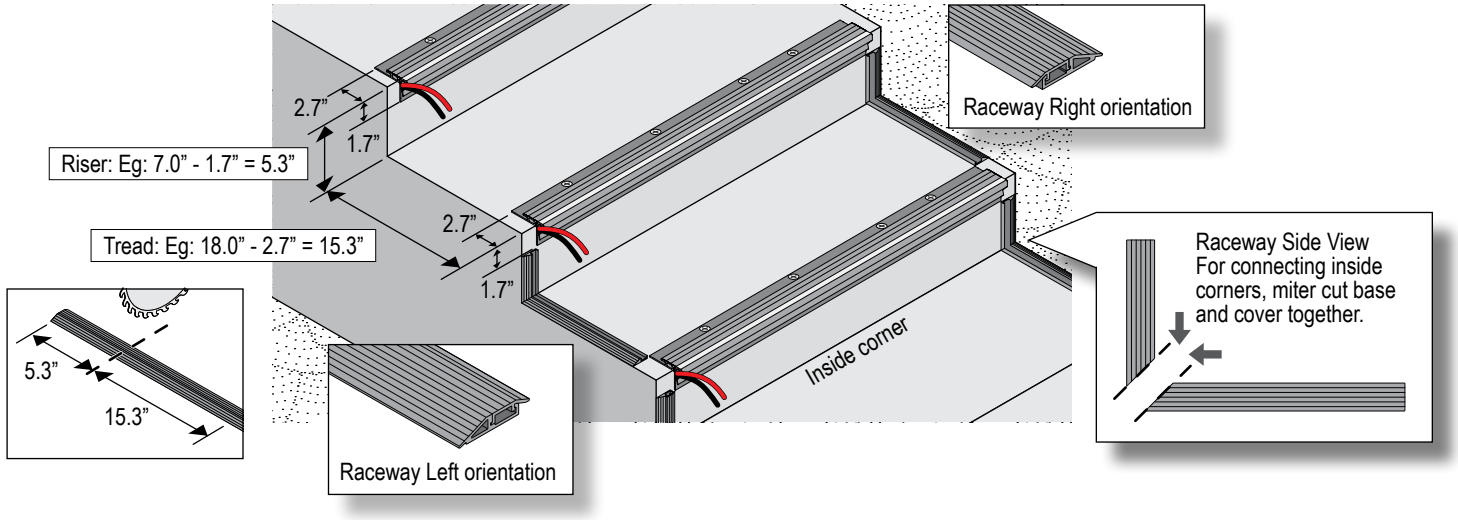
Stairways Adjacent to Wall



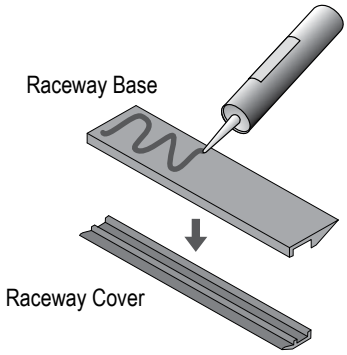
Stairways Between Seating Areas

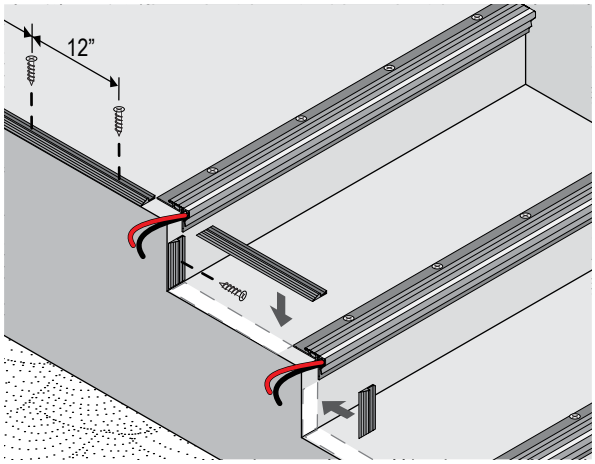


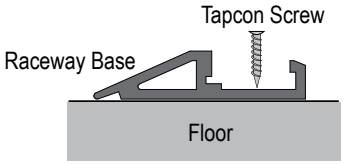
Step 4 Raceway base and cover are shipped in 10 feet lengths and designed to fit on both right and left side of the step. (Interchangeable) Measure the riser for each step and reduce length by 1.7 inches. For the tread, measure and reduce length by 2.7 inches. Orient the raceway for the right and left side before cutting the raceway based on the reduced length.
On the inside corner where the raceway for tread and riser meet, miter cut the raceway. Alaways cut the raceway with the cover and base installed.



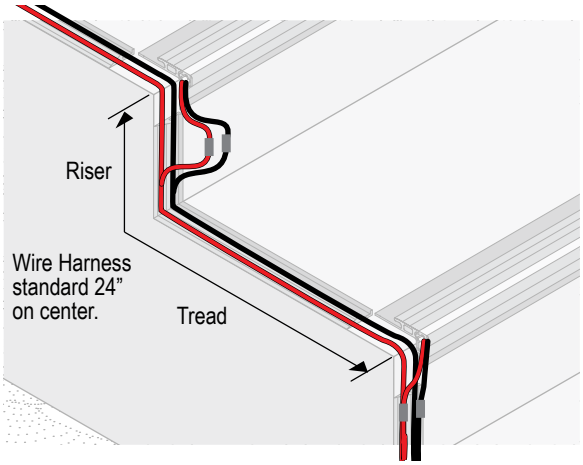
Step 5 After all of the raceway tread and riser sections has been cut and mitered for each step, remove raceway cover and apply adhesive to the underside of the base. One 29 oz. tube should fill up to 90 feet of raceway. Mount to surface without the cover and secure with tapcon screws. (1 screw per foot recommended)



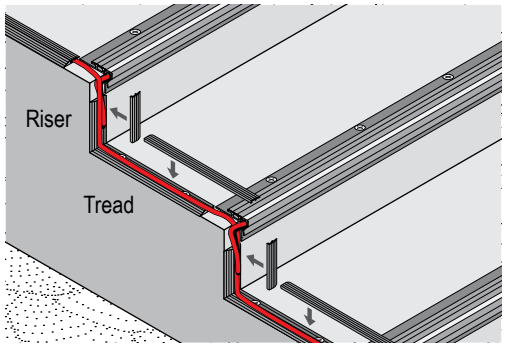




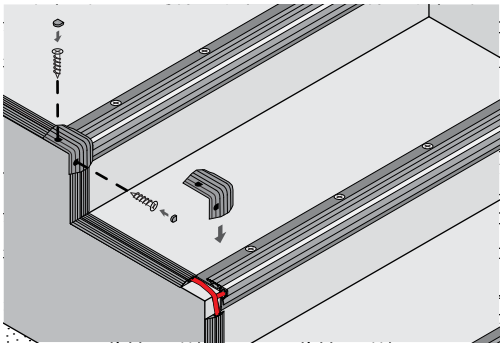
Step 6 After all of the raceway bases have been installed to the tread and riser of each step, lay down the wireharness and connect the power feed from each GEM-1800 step stairnose to the main wire harness cable.



Step 7 Tuck in extra cables into the riser and snap in cover. Snap in cover for the tread.

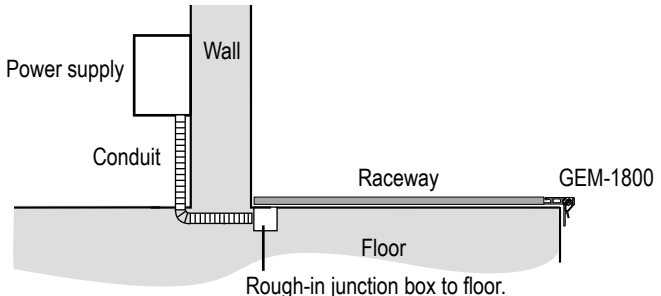


Step 8 Install corner piece onto the outside corner of the step where the raceway meets the GEM-1800 step stairnose. Screw down using tapcon screw on both the riser and the tread. Install the plastic button over the tapcon crews to conseat the screws.



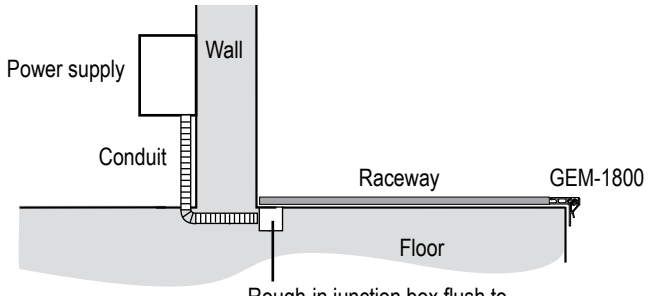
Step 9 Make connection from the power supply to the wire harness to power all the GEM-1800 step stairnose. Use the raceway to guide the cable to the junction box. Make sure that each power supply does not exceed the maximum run. Refer to chart below to determine maximum run based on the lamp spacing of the LEDs on the GEM-1800 step stairnose. For runs longer than the maximum run length, a new feed must fed separately from the power supply.

In floor junction box



Rough-in junction box to floor.
Open hole into bottom of base.
Feed lightstrip into junction box

In wall junction box



Rough-in junction box flush to
wall surface, 0.5" above floor.
Feed lightstrip into junction box.

	Max run based on 4" on center lamp spacing	Max run based on 6" on center lamp spacing
60W Power Supply Feeds up to 150 LEDs (per 5A output)	50ft maximum run 50ft max. 60W / 5A	75ft maximum run 75ft max. 60W / 5A
240W Power Supply Feeds up to 600 LEDs total (150 LEDs per 5A output)	200ft total (4 runs of 50ft per 5A output) 240W 50ft max. per 5A 60W / 5A 60W / 5A 60W / 5A 60W / 5A	300ft total (4 runs of 75ft per 5A output) 240W 75ft max. per 5A 60W / 5A 60W / 5A 60W / 5A 60W / 5A