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Warning



Note

Micro Star™ LED Light Bar Installation Instructions

The Micro Star LED Light Bar is an easy to install lighting solution for your railing system. They come in three (3) lengths and four (4) popular finish options to compliment your railing system. Being completely water resistant and encased in an aluminum channel and plastic lens cover, these lights are able to stand up to the most demanding environments. The Micro Star LED Light Bar is both a functional and creative lighting alternative.

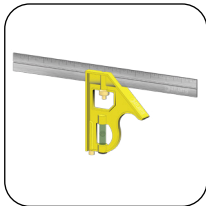
The following guide will take you step-by-step through the process of installing the Micro Star LED Light Bar.

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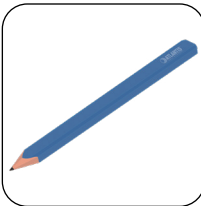
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Tools

Required & Recommended



Carpenter's Square



Pencil



Work Gloves



Safety Glasses



Power Drill



1/16" & 13/32"
Drill Bit



Tape Measure



Phillips Head
Screwdriver

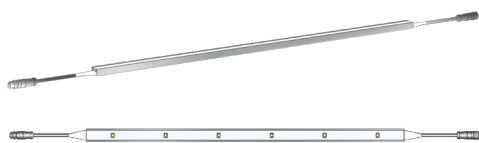
Tips for a Successful Installation

- Read the instructions completely before beginning the installation.
- Check carton(s) to determine part count is complete.



ALWAYS USE WORK GLOVES AND WEAR SAFETY GLASSES TO PROTECT YOUR HANDS AND EYES.

Micro Star LED Light Bar Components



S0825-0018* Micro Star LED Light Bar 18" (6 LED's - 60 LM, 12v DC, 50 mA)
 S0825-0030* Micro Star LED Light Bar 30" (10 LED's - 100 LM, 12v DC, 100 mA)
 S0825-0042* Micro Star LED Light Bar 42" (14 LED's - 140 LM, 12v DC, 150 mA)

* Add the suffix -BK (Black), -WH (White), -BZ (Bronze) and -MT (Metallic Silver)

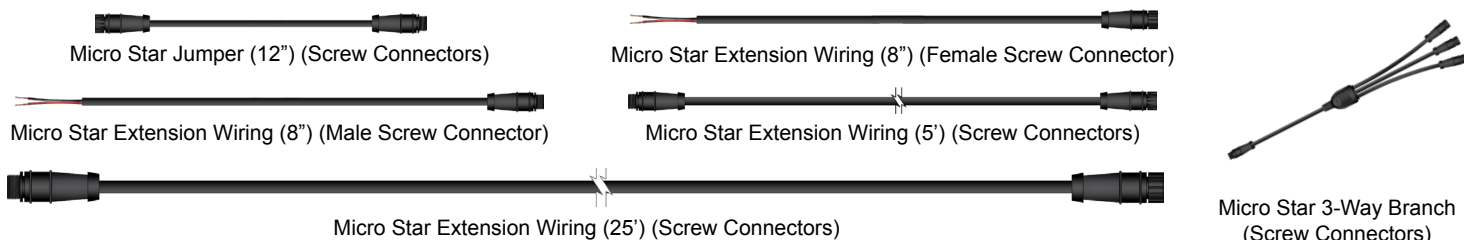


S0832-0001 Micro Star Transformer (1 Amp)
 S0825-TF160 Transformer (Screw Lugs) to Wiring Harness (1 Amp)



S0832-0005 Micro Star Transformer (5 Amps)
 S0825-TW560 Transformer to Wiring Harness (5 Amps)

Additional Components



Micro Star Transformer Calculator

You may use 1 or more 1 Amp or 5 Amp transformers in any combination as long as the total "mA" count is equal to or less than the maximum mA of the transformer(s) you choose. Do not exceed the maximum distance of the mA. If sections are spaced greater than 10 feet, it is recommended to install an additional transformer. When lighting will be a continuous string, use the least number of transformers. mA count determines which transformer to use. Generally 5 Amp is recommended.

1 Amp Transformer = Max 900 mA

5 Amp Transformer = Max 4000 mA

Micro Star Transformer Specifications

| PART NUMBER | AMP(S) | MAX mA | MAX DISTANCE | MAX 18" LIGHT BARS | MAX 30" LIGHT BARS | MAX 42" LIGHT BARS |
|-------------|--------|--------|--------------|--------------------|--------------------|--------------------|
| S0832-0001 | 1 | 900 | 40 feet | 15 | 10 | 6 |
| S0832-0005 | 5 | 4000 | 100 feet | 50 | 25 | 20 |

Micro Star Lighting Milliamps (mA)

| PART NUMBER | DESCRIPTION | # OF LIGHTS | mA EACH | * = "X" mA |
|------------------|------------------------------|-------------|---------|------------|
| S0825-0018-XX** | Micro Star LED Light Bar 18" | | 50 | |
| S0825-0030-XX** | Micro Star LED Light Bar 30" | | 100 | |
| S0825-0042-XX** | Micro Star LED Light Bar 42" | | 150 | |
| Total mA Needed: | | | | |

* NOTE: In the part number is the color designation. Replace with "BK" for black, "BZ" for bronze, "MT" for silver metallic and "WH" for white.

Micro Star Transformer Milliamp Distance Adjustment (Increase)

| PART NUMBER | AMP(S) | NO ADJUSTMENT | DISTANCE ADJUSTMENT | TOTAL FEET | mA ADJUSTMENT |
|--------------|--------|-------------------|----------------------------|------------|---------------|
| S0832-0001 | 1 | less than 20 feet | 10% per additional 10 feet | | |
| S0832-0005 | 5 | less than 40 feet | 10% per additional 20 feet | | |
| Adjusted mA: | | | | | |

* NOTE: When the mA and distance value both exceed 80% of maximum, you must add a transformer or increase to a larger size transformer.

Installing Micro Star LED Light Bar

Micro Star LED Lighting

The Micro Star LED Light Bar is an easy to install lighting solution for your railing system. All it takes is a few easy steps. The light bars are offered in 18", 30" and 42" lengths. They come in the following finishes.

Color Selection

Black, White, Bronze & Metallic Silver



For a component breakdown of the Micro Star LED Light Bar (See Figure A). The LED's emit a natural white light.

Install the Transformer

Mount the Micro Star transformer near a 110v, power outlet but leave transformer unplugged until it is needed (See Figure B). Select the end post closest to the outlet in order to connect to the transformer. You will need to run the low voltage wire down this post so plan accordingly. You may need to drill an additional hole in the decking beneath this post to run the low-voltage wire to keep it hidden. The transformers are available in 1 Amp and 5 Amps models.



USE DC TRANSFORMER ONLY!



IT IS A GOOD IDEA TO ATTACH POWER TO EACH SECTION OF LIGHTING TO MAKE SURE IT WORKS BEFORE FASTENING THE ALUMINUM CHANNEL.

Find the Center of the Top Rail

Use a square and a tape measure to mark the center of the underside of the top rail (See Figure C). Locate the center of the channel of the LED light bar and place up against the underside of the top rail (See Figure D).

With a pencil mark the pre-drilled screw holes in the channel to the underside of the top rail (See Figure E). Putting the channel off to the side; with a cordless drill use a 1/16" drill bit and drill pilot holes into the underside of the top rail at each hole previously marked (See Figure F).



THE LED LIGHT BAR HAS BEEN DESIGNED TO MOUNT TO FLAT SURFACES ONLY!

Installing the Aluminum Channel

Use a Phillips head screwdriver and screw in the channel to the underside of the top rail (See Figure G) with the #4 x 3/8" flathead Phillips screws (fasteners supplied).

Drill Holes Through Posts for Jumpers

Find the centers of the post in the same fashion as finding the centers of the top rail. At the centers, drill a hole with a 13/32" drill bit 2/3 of the way through the post from both sides (See Figure H). It is important that these holes meet in the center

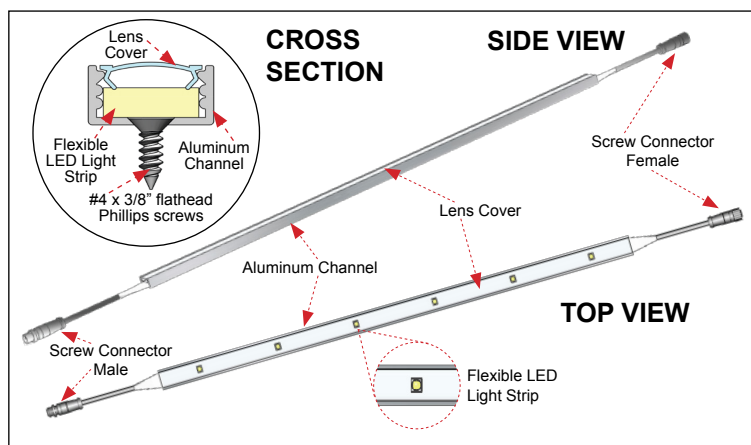


Figure A. Micro Star LED light bar.



Figure B. DC transformers are comprised of heavy-duty water resistant material.

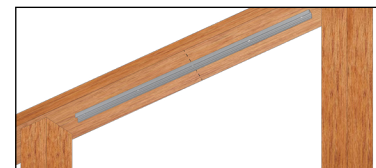
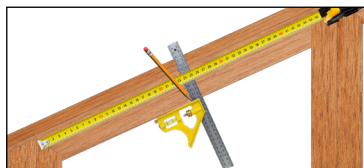


Figure C. (LEFT) Mark the center of the underside of the top rail.

Figure D. (RIGHT) Place the channel up against the underside of the top rail at the mark previously made.

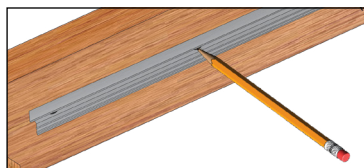


Figure E. (LEFT) Mark the pre-drilled screw holes in the channel to the underside of the top rail.

Figure F. (RIGHT) Use a 1/16" drill bit and drill pilot holes into the underside of the top rail.

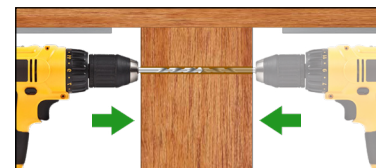


Figure G. (LEFT) Use a Phillips head screwdriver and screw in the channel to the underside of the top rail.

Figure H. (RIGHT) Drill a hole with a 13/32" drill bit 2/3 of the way through the post from both sides.

of the post so care should be taken in locating the centers. Install the jumper (S0825-JMPR-SC) through each post (See Figure I).

Installing Flexible LED Light Strip

Starting at one end of each of the aluminum channels press and fit into place the flexible LED light strip into the channel (See Figure J).



IT IS A GOOD IDEA TO CHECK THE LIGHTS ON-SITE TO BE SURE THAT NO WIRING CAME LOOSE IN TRANSIT.

Connect each set of flexible LED light strip to the jumper previously installed in each post (See Figure K). Once all of the flexible LED light strip connections are made; make the final connection to the transformer and plug it in to test.

Installing Lens Cover

Starting at one end of each of the aluminum channels, press and fit the lens cover into place (See Figure L). When installing the lens cover you will feel it being pressed into place.



12 VOLT DC POWER SOURCE ONLY. MICRO STAR LED LIGHT BARS ARE USED WITH DIRECT CURRENT TRANSFORMERS ONLY. USING AN ALTERNATING CURRENT TRANSFORMER OR A TRANSFORMER OVER 12 VOLTS WILL CANCEL ALL WARRANTY CLAIMS AND CAUSE THE LIGHTS TO BURN OUT PREMATURELY.



DO NOT EXCEED 5 AMPS FOR A POWER SOURCE. DO NOT USE AN AUTOMOTIVE, MARINE OR MOWER BATTERY AS THIS MAY DAMAGE THE LED LIGHT BARS. IF ANY ADDITIONAL WIRING AND CONNECTIONS ARE REQUIRED, WIRE USING A "PARALLEL" CIRCUIT. USING A "SERIES" CIRCUIT IS NOT RECOMMENDED.

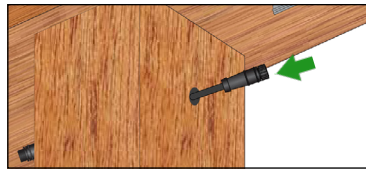


Figure I. (LEFT) Install the jumper (S0825-JMPR-SC) through each post.

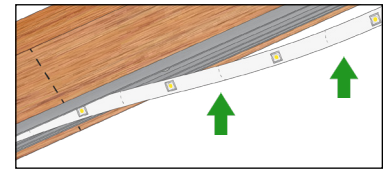


Figure J. (RIGHT) Press and fit into place the flexible LED light strip into the channel.

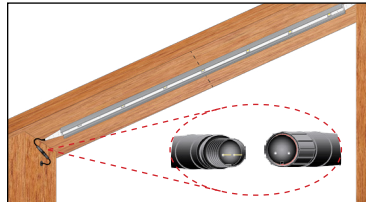


Figure K. (LEFT) Connect each set of flexible LED light strip to the jumper previously installed in each post.

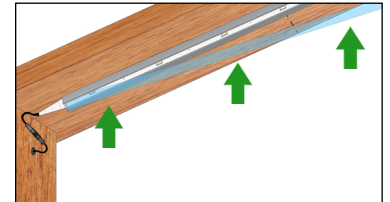


Figure L. (RIGHT) Starting at one end of each of the aluminum channels, press and fit the lens cover into place.

Additional Components

Micro Star Jumper (12") - (S0825-JMPR-SC)

Screw connector male / female to go through 4"x4" posts (See Figure M).

Micro Star Extension Wiring (8") - (S0825-JF08-SC)

Female extension wire for custom lengths and where jumpers won't fit through post holes (See Figure N).

Micro Star Extension Wiring (8") - (S0825-JM08-SC)

Male extension wire for custom lengths and where jumpers won't fit through post holes (See Figure O).



Figure M. Jumper to go through 4"x4" posts and connect wire harnesses and Micro Star lights.



Figure N. Female extension wiring for custom lengths and where jumper won't fit through post holes. Soldering or crimping required.



Figure O. Male extension wiring for custom lengths and where jumper won't fit through post holes. Soldering or crimping required.

Micro Star Extension (5') - (S0825-EX60-SC)

Screw connector male / female extension (See Figure P) used to connect wire harnesses and Micro Star lights.

Micro Star Extension (25') - (S0825-EX300-SC)

Screw connector male / female extension (See Figure Q) used to connect wire harnesses and Micro Star lights.

Micro Star 3-Way Branch - (S0825-3000-SC)

Screw connector male / female used to connect multiple wire harnesses and Micro Star lights (See Figure R).

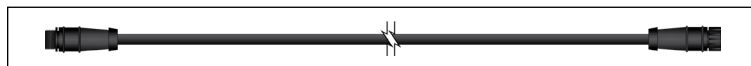


Figure P. 5' Extension used to connect wire harnesses and Micro Star lights.

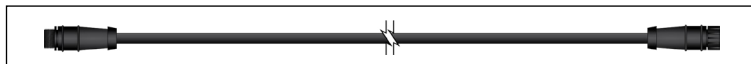


Figure Q. 25' Extension used to connect wire harnesses and Micro Star lights.

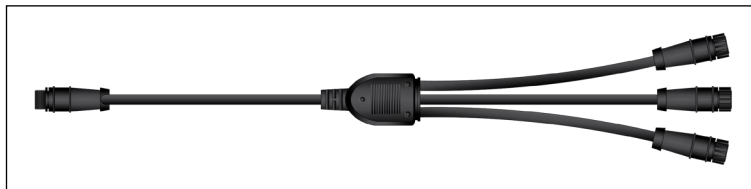


Figure R. 3-way branch used to connect multiple wire harnesses and Micro Star lights.

Micro Star LED Light Bar Specifications

The patented Micro Star series is a complete line of lighting options for railings, fencing, steps and many other indoor or outdoor applications.

Micro Star LED Light Bar Product Specifications

Components

| Product | Description | Dimensions | Fasteners | Notes |
|----------------|---|--------------------------|--------------------|--------------------------|
| S0832-0001 | Micro Star Transformer - 1 Amp | 100-240Vac - 50/60HZ | -- | -- |
| S0832-0005 | Micro Star Transformer - 5 Amps | 100-240Vac - 50/60HZ | -- | -- |
| S0825-0018-BK | Micro Star LED Light Bar 18" (6 LED's) | 60 LM - 12v DC - 50 mA | Fasteners included | Black (BK) |
| S0825-0030-BK | Micro Star LED Light Bar 30" (10 LED's) | 100 LM - 12v DC - 100 mA | Fasteners included | Black (BK) |
| S0825-0042-BK | Micro Star LED Light Bar 42" (14 LED's) | 140 LM - 12v DC - 150 mA | Fasteners included | Black (BK) |
| S0825-0018-WH | Micro Star LED Light Bar 18" (6 LED's) | 60 LM - 12v DC - 50 mA | Fasteners included | White (WH) |
| S0825-0030-WH | Micro Star LED Light Bar 30" (10 LED's) | 100 LM - 12v DC - 100 mA | Fasteners included | White (WH) |
| S0825-0042-WH | Micro Star LED Light Bar 42" (14 LED's) | 140 LM - 12v DC - 150 mA | Fasteners included | White (WH) |
| S0825-0018-BZ | Micro Star LED Light Bar 18" (6 LED's) | 60 LM - 12v DC - 50 mA | Fasteners included | Bronze (BZ) |
| S0825-0030-BZ | Micro Star LED Light Bar 30" (10 LED's) | 100 LM - 12v DC - 100 mA | Fasteners included | Bronze (BZ) |
| S0825-0042-BZ | Micro Star LED Light Bar 42" (14 LED's) | 140 LM - 12v DC - 150 mA | Fasteners included | Bronze (BZ) |
| S0825-0018-MT | Micro Star LED Light Bar 18" (6 LED's) | 60 LM - 12v DC - 50 mA | Fasteners included | Metallic Silver (MT) |
| S0825-0030-MT | Micro Star LED Light Bar 30" (10 LED's) | 100 LM - 12v DC - 100 mA | Fasteners included | Metallic Silver (MT) |
| S0825-0042-MT | Micro Star LED Light Bar 42" (14 LED's) | 140 LM - 12v DC - 150 mA | Fasteners included | Metallic Silver (MT) |
| S0825-JMPR | Micro Star Jumper | 12" | -- | Screw connectors (M/F) |
| S0825-JF08-SC | Micro Star Extension Wiring - Female | 8" | Soldering Required | Screw connector (Female) |
| S0825-JM08-SC | Micro Star Extension Wiring - Male | 8" | Soldering Required | Screw connector (Male) |
| S0825-EX60-SC | Micro Star Extension | 5' | -- | Screw connectors (M/F) |
| S0825-EX300-SC | Micro Star Extension | 25' | -- | Screw connectors (M/F) |
| S0825-3000-SC | Micro Star 3-Way Branch | -- | -- | Screw connectors (M/F) |

IP61: Screw Connectors are protected from total dust ingress and from condensation.