



INSTALLATION GUIDE

Mounting Aluminum Channels + Diffusers w/Low Profile LED strips

OVERVIEW

Our **Low Profile Aluminum Channels** (<https://www.boogeylights.com/mini-t12-aluminum-led-strip-channel/>) are designed to work with Boogey Lights® RGB and 3 diode Single Color LOW PROFILE LED light strips. They will not work with our HEAVY DUTY LED strips. You can also fit the RGBx and REDx 4 diode LOW PROFILE LED strips into the channel too but it is tight (more info on this below). These aluminum channels and the optional opaque and smoke diffuser make for a clean and professional look in situations where the LED strips are in plain view. Also helps protect the LED strip from damage. The diffuser gives off a nice glow lighting effect too. Note that the smoke diffuser will reduce the light by about 33%.

The Mini T12 aluminum channel is a low profile design that can be mounted just about anywhere. We have used them in a wide variety of applications including: RV awnings, RV tail-turn-brake lights, RV roof lighting, food trailer roof perimeter lighting, under low-clearance sports cars, on the side of wreckers, on pontoon boats, on the bottom of RV slide-outs, inside of cargo trailers and even under semi-trailers.

These channels work exceptionally well if you install them properly. We urge you to take the time to read the information presented here before starting your installation. If you don't follow these instructions, you're likely to have problems with your LED strips failing prematurely which is not covered under warranty.

PRODUCT INFO

The Mini T12 has an anodized finish (electrostatic sprayed) which provides maximum protection against the elements. The aluminum channel acts as a heat sink too. They're ideal for harsh indoor or outdoor use to protect the LEDs. The channel can be mounted any number of ways including adhesive tape, rivets or screws. For most applications we prefer riveting (details below). Then, our Low Profile LED strips fit nicely into the channel using the 3M tape already affixed to the back of Boogey Lights® LED rolls. The diffuser completes the installation by snapping into the channel. Available in standard ALUMINUM finish

and BLACK finish. Diffusers are OPAQUE and SMOKE. They come in two sizes: 1M (~39") and 2M (~78"). Note that we only offer the Black Aluminum channels and diffusers in the 78" lengths. There are no end caps. On outdoor installations we advise adding some Lexel on the ends and on the diffuser sides to seal them (photos below). While the diffuser snaps in, it does not make a watertight seal. This is especially important on channels that are mounted facing up (e.g. roof lighting) or on the side of an RV or trailer facing straight out. Only when the channel is mounted underneath the vehicle (led strip pointing straight down) can you get away with not adding the Lexel. More about this issue below.

MOUNTING CONSIDERATIONS

Use Rivets if You Can

Whenever possible we like to use large flange pop rivets to secure the aluminum channel to the mounting surface. Why? Because they hold up well (won't easily break off or back out) and with the large flange, it's easy to mount the Low Profile LED strip on top of it without being concerned with the head of the rivet eventually working its way into the back of the LED strip's PCB board and shorting it out. For stationary applications it's not a big concern but when mounting these channels on vehicles that move, flex, contract and expand, if you use screws, our experience is they will eventually work their way into the back of the LED strip and short it out. Not a matter of if, but when. With large flange rivets, that isn't a concern. If you are going to use screws/bolts, they need to have a countersunk head so they sit flat. Even round head screws will cause issues.

Using 3M Tape

For some applications, using rivets, screws or bolts isn't practical. RV roof lighting is one of those applications. No one wants to drill holes into the roof of their RV for roof lighting. In those cases we recommend using 3M VHB Tape + 3M Adhesion Primer. Yes – you have to use 3M Adhesion Primer if you want to make sure the channel doesn't fly off. We sell the 3M tape (and 3M adhesion primer) but you can also buy it online or at any automotive repair or paint center. It's widely used for those applications.

CUTTING THE CHANNELS & DIFFUSERS

We ship these channels (and diffusers) in lengths of 39" or 78". In almost all cases you will have to cut them. No way around it. They are easy enough to cut with a band saw or hack saw but be sure to use a fine tooth blade. The plastic diffuser can chip if you're not careful.

LED STRIP WIDTH CONCERNS

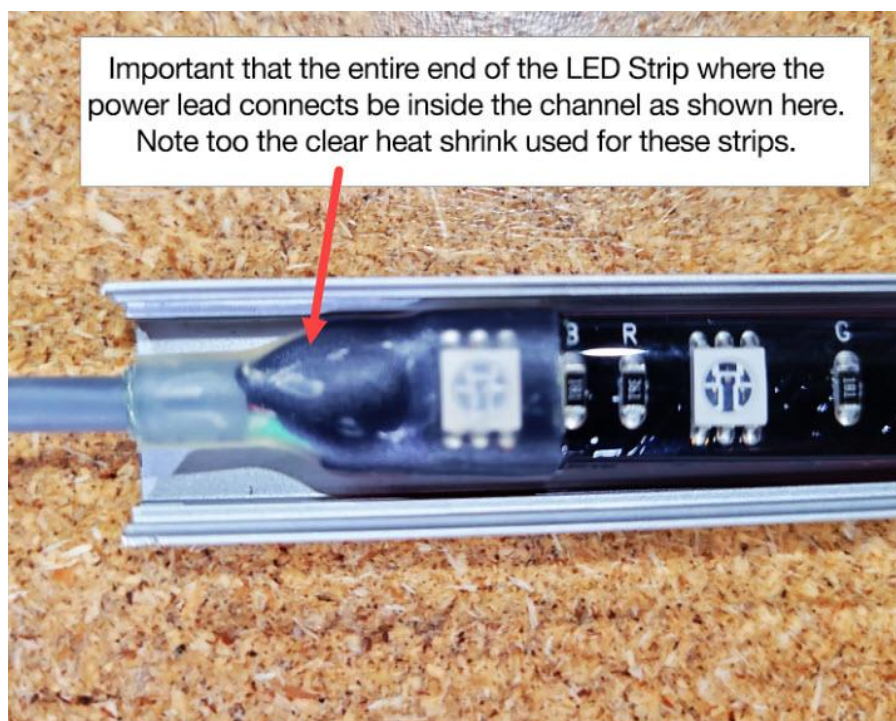
Our RGB and 3 diode Single Color Low Profile LED strips are 10mm wide and will fit easily into the aluminum channel with plenty of room left over for the plastic diffuser to snap on top. Our RGBx and REDx low profile LED strips however are all 12mm wide. So while they will fit, it's tight. You need to be careful when pushing the RGBx/REDx led strips into the channel as you can potentially damage the LED strip.

LED STRIP POWER LEAD CONNECTION MUST BE INSIDE THE CHANNEL

All of our Low Profile LED strips have a power lead hard wired to the end of the LED strip. Doesn't matter which color configuration. They all are the same in this regard. It is super important to make sure the connection between that power lead and the LED strip is safely inside the channel. DO NOT allow that connection to hang outside of the channel. If you do, it will almost certainly fail (not covered under warranty). See photo below of what we are referring to.

LED STRIP POWER LEAD HEAT SHRINK

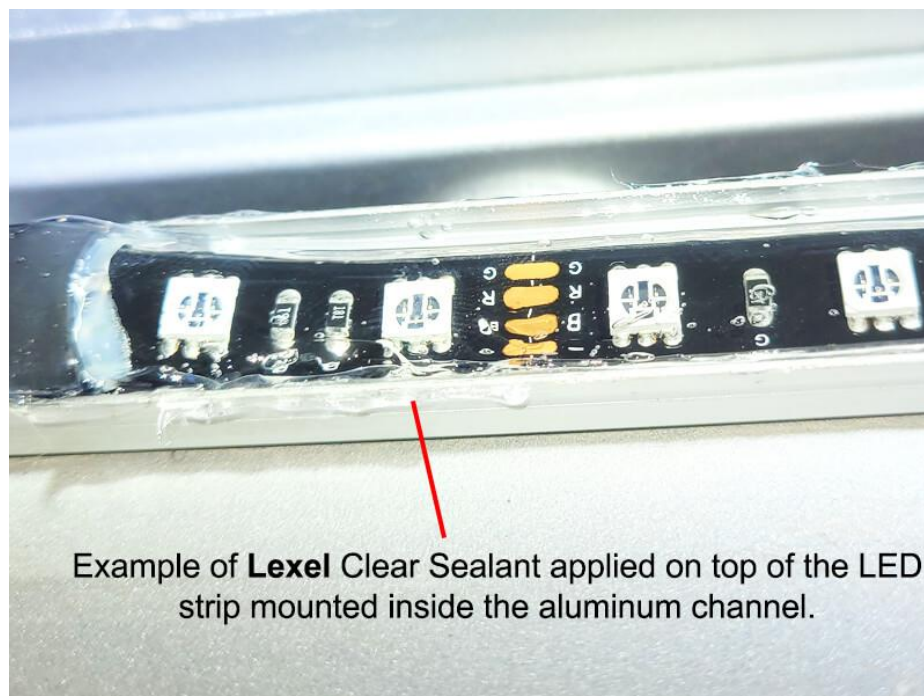
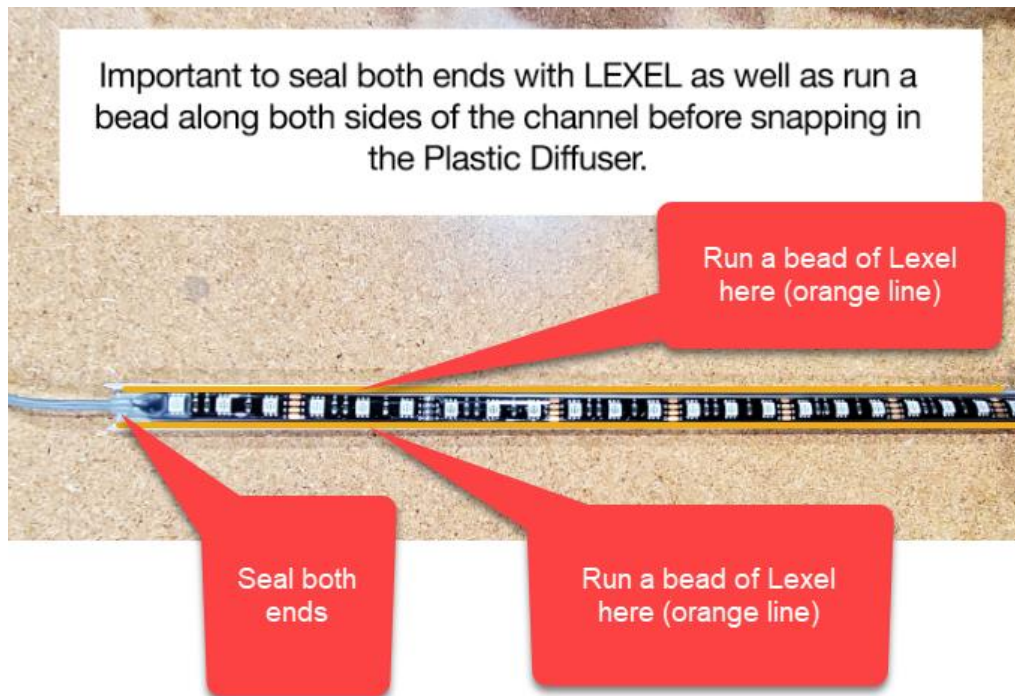
When we know the Aluminum Channels are being used with our Low Profile LED strips we only add one layer of clear heat shrink at the point where the power lead attaches to the LED strip. Why? Because the connection is less bulky (easier to seal inside the channel) plus the clear heat shrink allows the first diode to be seen. We normally will use two layers of heat shrink but it makes the connection bulkier and the second layer uses black adhesive heat shrink which covers up the first diode.



SEALING THE ALUMINUM CHANNELS

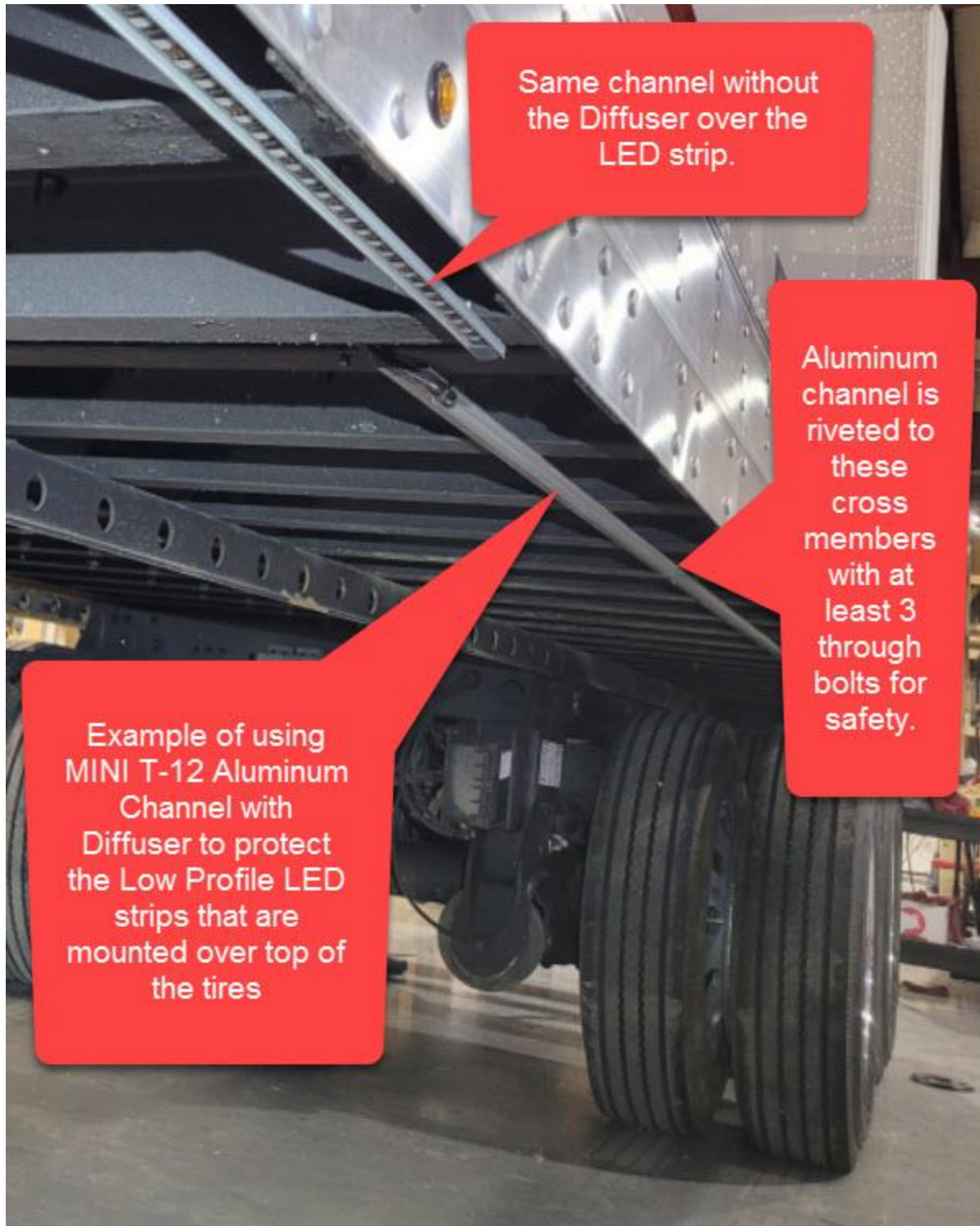
This is perhaps the most important thing to do. Why? Because our Low Profile LED strips cannot be submerged in water for long periods of time. Yes, they are waterproof. No, they are not submersible – which is considered marine grade – an entirely different classification of lighting. If water gets into the channel with the diffuser on top, the LED strip will not dry out (the diffuser traps the moisture inside) and eventually the LED strip will fail. Not a matter of if but when. Not something covered under warranty. If you're using the Aluminum Channel with Diffuser on top and the led strip is facing upward or to the side (vertically mounted), it's critical to seal the entire LED strip with Lexel Clear Sealant (made by

Sashco). Yes – the entire strip -- both the ends and the sides where the diffuser snaps in. See below. And yes Lexel. Why? Because Lexel is petroleum based (adheres better to the LED strip epoxy coating) and it dries clear (does not impact the lighting).









Additional Resources

- How to Videos: <https://www.boogeylights.com/how-to-videos/>
- Troubleshooting: <https://www.boogeylights.com/trouble-shooting-guide/>
- Installation Resources: <https://www.boogeylights.com/installation-resources/>
- How to Bench Test: <https://docs.boogeylights.net/?wpdmdl=1305>
- Amperage Data: <https://docs.boogeylights.net/?wpdmdl=1137>
- Quick Search: <https://www.boogeylights.com/quick-find/>
- GEN2 LED Controller Wiring Diagrams + Operating Info: <https://docs.boogeylights.net/?wpdmdl=1163>
- GEN2 RF Wireless Remote Operating Info: <https://docs.boogeylights.net/?wpdmdl=1164>
- GEN2 Bluetooth APP Operating Info: <https://docs.boogeylights.net/?wpdmdl=1169>
- GEN2 Bluetooth APP Quick-Start: <https://docs.boogeylights.net/?wpdmdl=1167>

Support

- Phone: 800.847.1359 (M-F, 9-6 Eastern)
- Text: 859.955.8155
- Open a Support Ticket: <https://www.boogeylights.com/email-us/>
- Online: 24/7 resources at <https://www.boogeylights.com/installation-resources/>
- How to Make a Warranty Claim: <https://www.boogeylights.com/make-a-warranty-claim/>

Warranty

The Boogey Lights® warranty requires an original sales receipt from Boogey Lights or an authorized dealer. It covers product replacement only, not labor or other costs. Register your purchase at: <https://www.boogeylights.com/warranty-registration/>. Full details: <https://www.boogeylights.com/warranty/>.