



INSTALLATION GUIDE

RV SLIDE-OUT UNDER-GLOW LED LIGHT KIT

IMPORTANT! No two installation scenarios are the exact same. Accent lighting is highly subjective. Not everyone shares the same lighting or installation quality goals. Some folks are OK with twisting wires together, others want to solder and heat shrink them. Some folks are OK with running wires where they may be seen or unprotected to save money/time, others want a tidy, clean install so they wrap plastic split-loom around all exposed cables. Some folks are OK with mounting their LED strips to whatever surface they can find, others want to take the time necessary to build out appropriate mounting surfaces to provide the best lighting effect on their vehicle and maximize the longevity of their lighting system. The point is it's not possible to provide all the materials necessary for all installation scenarios on all types of vehicles to meet everyone's quality and lighting coverage goals. Our light kits provide the essential components needed for a high-quality, functioning LED light system. Installation of our light kit to your specific vehicle will however likely require additional items to make it look, fit and work the way you want. This is particularly the case with electrical wiring, switching functionality and mounting surfaces for the LED strips. We have created a list of additional items you may need. Here's the link: <https://www.boogeylights.com/other-items-you-might-need/>. While we offer them for sale you can also find these items locally – usually less expensive. We urge you to review this information before starting your install to make sure you have the proper materials available.

BENCH TEST YOUR LIGHTING COMPONENTS FIRST!

We know this takes a few extra minutes, but we **STRONGLY** suggest you bench test your lights AND your controller / switches on a table before doing anything further. Test all of them. While we test every light strip and controller before shipping, bench testing your lights will eliminate the possibility of any problems with the lights or controller before mounting. It also lets you know everything is working properly. Also, the process of bench testing gives you an opportunity to understand the wiring system without interference from other wires, connectors and cables. You can use any good 12vdc battery to do this (e.g. car battery, motorcycle battery, lawn tractor battery or 12vdc power supply capable of supporting a 5 amp load). If you're not sure how to do this, we have prepared a document explaining the process here: <https://docs.boogeylights.net/?wpdmdl=1305>. Bench testing takes an extra 10 or 15 minutes. It's simple to do and can potentially save you hours of time and frustration down the road.

Did we mention the importance of bench testing every LED strip and controller before installing?

BEFORE YOU START

Installing the Boogey Lights® LED slide out under-glow light kit is perhaps the most challenging of installations we do particularly if you're trying to make more than one of them work on the same LED controller. Typical installation time is about 90 minutes per slide but can take longer depending on the configuration. We have a link to an installation video that can be helpful. In the video we install our under-glow lighting on two slide outs on the passenger's side of an RV. You'll get a better idea of how we did it. Regardless, we encourage you to read through these instructions before starting the installation.

VIDEO: <https://www.boogeylights.com/video-installing-under-glow-lights-on-a-slide-out/>

THIS IS A GUIDE. NOT A HOW-TO. It's simply not possible to provide detailed instructions for all installation scenarios. Far too many variables. The information in this manual is intended to be used as a guide. It is not a detailed step-by-step how-to installation manual. We do not spell out every single step along the way. We cover the essential steps related to installing this kit. Beyond that we assume the installer has the skills, knowledge and tools necessary to do the work using the information we provide as a guide. You may need to vary your installation and/or make adjustments based on your RV. This is particularly the case with electrical wire routing into the slide out, electrical connections, electrical load sizing and switching. If you're unsure about how to do the installation – particularly the electrical components – we urge you to seek assistance from someone who has those skills.

YOU MUST HAVE AN UNDERSTANDING OF 12V POWER. An essential skill with installation of any Boogey Lights LED products is knowing how to correctly wire the product to a 12vdc circuit. This includes understanding the importance of having a properly sized fuse at the power source, polarity, how to properly seal an electrical connection, using properly sized wire gauge for the load, measuring voltage and measuring the additional amperage draw you're adding. If you are uncertain or unfamiliar with any of these concepts, we urge you to ask someone who has the knowledge to assist you. Electricity is unforgiving.

WORK AREA. Make sure you have ample area in which to work and that the area is protected from rain or cold temperatures. The 3M adhesive tape and 3M adhesion promoter works best if applied when the air temperature is above 40 degrees (and of course is DRY).

KNOW YOUR AMPERAGE DRAW. Pay attention to the number of LEDs you are lighting and the total amps you will be drawing. We manufacture a number of LED Controllers of varying capacities. If you over-load the LED controller, it will either not work at all or the lights will dim in a short period of time. Amperage data for all our LED products are on each product page. You can also download it directly here:

<https://docs.boogeylights.net/?wpdmdl=1137>

As a point of reference, one 16' RGB LED strip (300 LEDs) will consume about 3.5 amps on full power brightness (white, max brightness setting). One 16' RED single color LED strip (300 LEDs) will consume about 4.3 amps on full power brightness. On lower brightness settings the consumption is considerably less. While most people do not use this max brightness setting for long periods of time, you still need to make sure the 12vdc power source you're using is not only capable of powering the load you're adding, it needs to be able to sustain that load over time. Not all RV converters are sized to handle the additional 12vdc electrical load you're now adding to your system. If your batteries and/or converter isn't sufficient to handle the load, the first thing you'll notice is the lights will dim quickly after turning on. Or, they might dim over the course of an hour or so. More information about this issue in our Trouble Shooting Guide here: <https://www.boogeylights.com/trouble-shooting-guide/>. See #6 and #8. Of course if you're using the optional 120vac to 12vdc power converter, this won't matter other than to make sure the power converter is large enough to handle the amperage.

NOTE ABOUT ELECTRICAL WIRE COLORS. Modern RVs, trailers, motorhomes, fifth-wheels and campers often have a mixture of **110vac** and **12vdc** wiring installed. **ALL Boogey Lights® products are native 12vdc.** If you connect a Boogey Lights® controller or LED strip to 120vac instead of 12vdc, it will absolutely damage the controller and LED strip beyond repair. Similarly, if you reverse the polarity of the power (e.g. connecting 12vdc+ to the negative side of the controller), it may also damage the controller beyond repair.

In a typical 120vac environment the BLACK wire is the positive (hot) wire and the WHITE wire is the neutral/ground wire. HOWEVER, in a 12vdc environment, the BLACK wire is always 12vdc- (ground/negative) and the RED (or WHITE) wire is always 12vdc+ (hot). All Boogey Lights® controllers have the power leads clearly marked as to what is 12vdc positive and 12vdc negative.

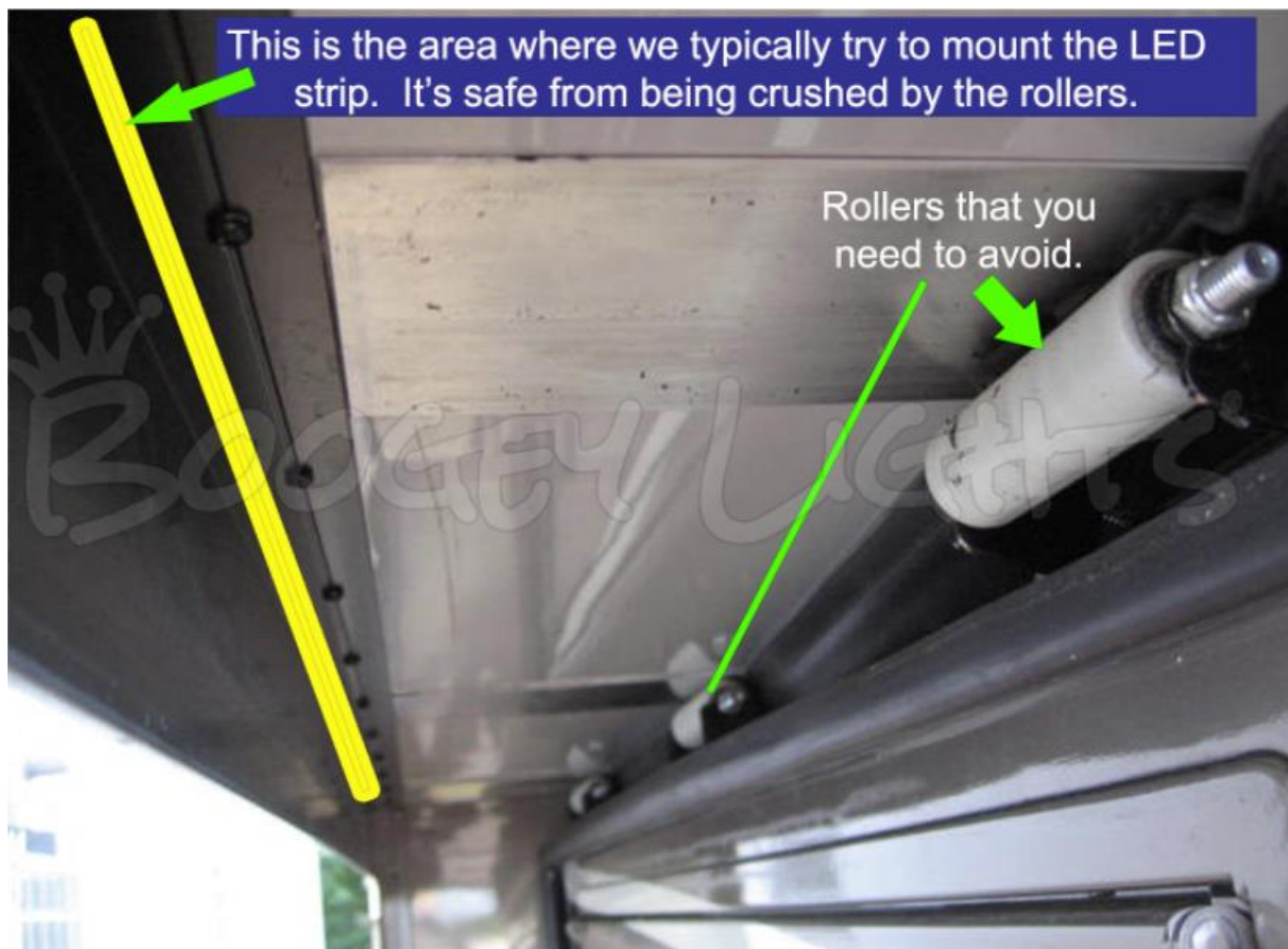
While we suggest only connecting Boogey Lights® products directly to your RV's house batteries it may be more convenient to tie into an existing 12vdc circuit rather than running power back to the house batteries. **If you are going to tie into an existing circuit it is important to make sure you have properly identified the type of power you are tapping into (AC or DC) AND have identified the polarity of the wires (positive or negative).** **Do not assume the color of the wires will match the controller.** We strongly suggest using a volt meter to make sure you are using the proper power and polarity. Also, make sure the circuit you are tapping into (both the circuit-breaker rating and wiring) is capable of handling the additional amperage draw you are adding to the circuit. Overloading the circuit could result in over-heating and potentially cause a fire. Wiring the power incorrectly will damage your controller beyond repair and invalidate the warranty.

12VDC VS 120VAC? All Boogey Lights® lighting products are native 12vdc devices. We always suggest using 12vdc power whenever possible. It makes for a cleaner installation and provides for greater flexibility in terms of using the lights. That said, slide out under-glow lighting is perhaps the one light kit where it might be easier to use a 120vac to 12vdc power converter especially if you're unable to find suitable 12vdc power in the slide out itself.

HOW TO VIDEOS -> <https://www.boogeylights.com/how-to-videos/>

CHOOSING THE MOUNTING LOCATION ON YOUR SLIDE OUT

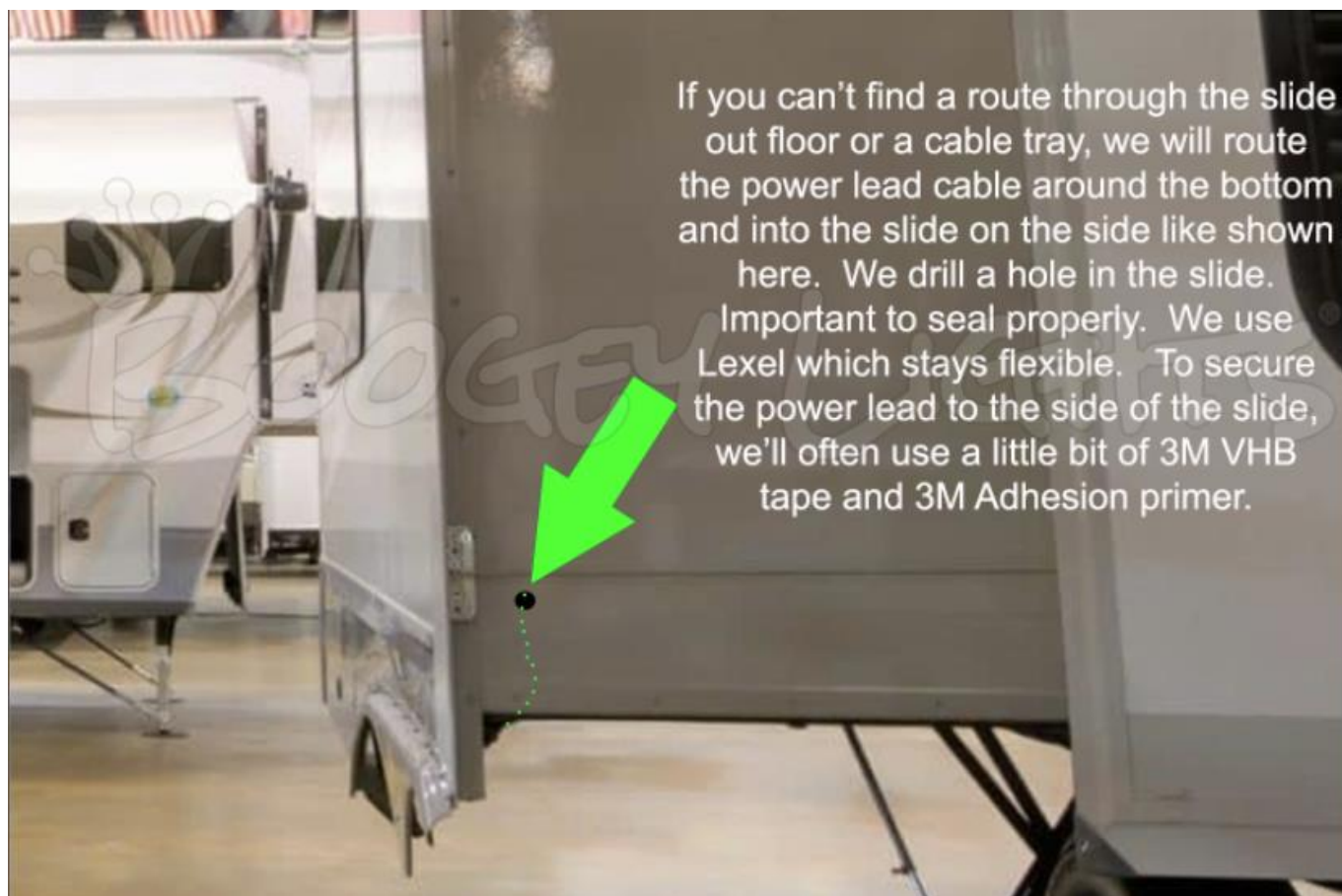
The LED strip needs a smooth flat mounting surface of about 1/2" wide. This means the bottom of the slide out (or the inside of slide out face itself if you want the LED light shining in ward towards the side of the Rv) has to have at least that much room to mount the LED strip such that when the slide out retracts into the side of the RV the LED strip isn't crushed. That last part is crucial. For most RVs this isn't an issue but there are some where it can be. So before doing anything, take a close look at the bottom of the slide outs you want to light up. You can usually tell pretty quickly if you'll have room to mount the LED strip. If your slide is on rollers (most are), you'll be able to observe the roller marks on the bottom of the slide out to see where they stop when the slide is fully seated inside the RV. Another way to tell is to place some light colored masking or electrical tape on the areas where you think you can mount the LED strip. Then, bring the slide out fully in - and, out again. Now, look at that tape. If there aren't any roller marks on that tape you should be good. If there are roller marks, you absolutely can not use that location for mounting your LED strip.



ROUTING THE POWER LEAD INSIDE THE SLIDE OUT

The LED strip power lead has to be routed inside the slide out some way so it can connect to the controller or power source inside the RV. To do that almost always requires drilling a hole in the bottom of the slide out OR in the side of the slide out such that the LED strip power lead can be fished through that hole (sealing the holes of course afterwards).

On some RVs you may be able to fish that power lead wire inside the cable tray that often is under the slide out which is built in. The challenge with doing it this way is that those cable trays are usually in the middle or off-set a little to one side of the slide out whereas the power lead for the LED strip is at the very end of the LED strip at either end of the slide. So that power lead will have to loop back toward the center of the slide out where it can then enter the cable tray. Making that hair pin turn with the power lead and securely affixing the power lead to the slide out such that it won't fall out, move or be crushed by the slide when it retracts into the RV can be challenging. If we can make the cable tray work, that's usually our first choice however in most cases, we end up drilling through the side of the slide out a few inches up from the bottom of the slide and into the slide out that way (carefully sealing that hole with Lexel). We realize lots of folks cringe at the thought of drilling a hole in their slide out which is why we are mentioning this now. Truth is, it's not difficult. We do it almost every day. As long as you take the time to carefully seal the hole (inside and out), you don't have to worry about water intrusion.

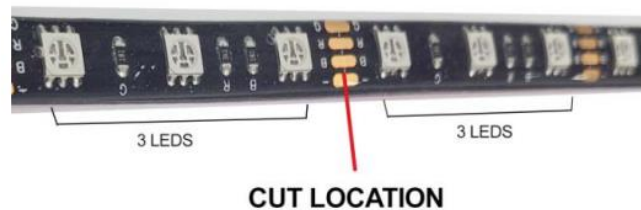


CONNECTING TO THE LED CONTROLLER

By definition a slide out moves in and out of the RV. Anything attached to that slide out will move too. The challenge becomes connecting that LED strip power lead affixed to the slide out to the LED controller or power source inside the RV. If you're OK with having a dedicated LED controller or switch for the slide out lighting, then the solution is to simply mount the LED controller on the slide itself so it too moves with the slide. All components of the slide lighting move together. The problem with this configuration is if you have more than one slide you're trying to light, you now need a controller (with remote) or switching mechanism for each slide out. Operationally it's a little cumbersome having different hand held remotes for each slide (and even worse if you have another remote for the RV's full perimeter under-glow system too). The ideal solution is to connect all of the slide out under-glow lights to one controller (single zone or dual zone) so you have one remote to control the slide out lighting. The challenge here is that you'll need to find a way to fish the power leads from each slide out to one central location in the RV and that location is stationary -- it doesn't move with the slides. It can be done. We've done it many times but it's something that takes time and planning. In many case you'll need to spend time investigating how your RV is built. For example, we'll often use existing wire and plumbing chase walls to run the power leads. Doing so allows you to fish the power lead wire down into the basement area of the RV and over to the battery bay where the controller is mounted. When doing this, the trick is making sure you leave enough slack in that power lead wire so it can move with the slide out. We typically will allocate an additional 2 hours of installation time when the customer wants more than one slide out on the same controller - or - wants to operate the slide out lighting on a dual zone controller that's shared with a full perimeter under-glow light system. The video link we included early on in this guide shows this particular setup. If you're trying to control two slide outs on the same controller, take a look at that video.

CUTTING YOUR LEDS- If you need to cut your LED strip you can do so as long as you cut in the proper location – which is every three LEDs as shown in the below photo. Cutting incorrectly could damage your lights and is not covered by the warranty. If you cut the strip, be sure to seal the cut end. You can also use silicone found at your local hardware or RV store. If you do need to cut your LED strip, we strongly suggest doing so BEFORE you mount the strip to your RV/Camper/Trailer. **NOTE: Heavy Duty LED strips CANNOT be cut. LOW PROFILE only.**

HI-INTENSITY SURFACE MOUNTED LED STRIPS



The LED strip can be cut one time on the copper solder pad where indicated; between the cluster of 3 LEDs. Important to cut in the center of the copper pads. Once cut, the end must be sealed using silicon, liquid electrical tape or even heat shrink to stop water intrusion from damaging the strip.

MOUNTING THE LED STRIPS

Once you have your LED strips cut (if necessary) and you know where you are going to attach them, follow these steps:

- The area where you are mounting the LEDs has to be clean: free of all dirt, oil or anything that might affect the LED from sticking. You only get one opportunity to mount the LEDs so it's critical the area be prepared properly.
- Use alcohol to clean the area where you are going to mount the LED strip. Be sure to let the alcohol dry completely before proceeding to the next step. (Note: Do not use acetone or similar cleaner without reading the section "A Word About 3M Tape & 3M Promoter" further on in this document).
- Next, use the 3M Adhesion Promoter supplied with your kit to "paint" on the promoter where you are going to mount the LED strip. See the note below (on page 6) about the proper way to use promoter. **This is an important step. Do not bypass.** Allow the promoter to dry for 30-60 seconds.
- Peel off the red backing tape that protects the 3M adhesive tape on your LED strip. Be careful not to let the tape touch anything. The 3M backing tape on these LED strips are one-use only. They cannot be reused.
- Carefully push the LED strip to the area you have prepared. You will want to apply only enough pressure to the strip to make sure it is firmly mounted. *You only get one opportunity to do this.* Once the LED strip touches a properly prepared surface that has been promoted, that LED strip will be very difficult to remove. Moreover, if you do remove the LED strip, the strip cannot be used again without adding another layer of 3M adhesive tape to the back. **DO NOT press too hard as too much pressure can damage the LEDs and connecting wires in the strip. Also, do not pull, stretch or twist the LED strip. Too much tension on the strip will also damage the LEDs such that some of the LEDs in the strip will not illuminate. The strip must be mounted flat against a single continuous mounting surface, in a straight line. Really important that the ENTIRE STRIP be stuck to the**

Do NOT bend the LED strip in a radius of less than 2 inches.



Do NOT bend the LED strip on a horizontal plane.



mounting surface and that you NOT attempt to span across multiple mounting surfaces. NOTE: With these large LED rolls we suggest you unroll the LEDs as you apply them to the side or bottom of your RV, camper or trailer.

- Secure all power leads. Do not leave the power lead cable hanging. Doing so will place too much stress on the LED strip itself causing it to fall off or fail where the power lead connects to the LED strip (not covered under warranty).

3M Tape & 3M Adhesion Promoter (aka Primer)

All Boogey Lights® LED strips have 3M Tape backing affixed to them. This 3M Tape is designed to make a more-or-less permanent bond between the LED strip and the surface to which it is attached. When properly prepared, 3M Tape can be affixed to polyethylene, polypropylene, ABS, PET/PBT blends, concrete, wood, glass, metal and painted metal surfaces. To make this bond you must however prepare the surface to which the LED strip will be affixed. You do this by first cleaning the surface with isopropyl alcohol (50/50 mixture with water) and then painting on 3M Adhesion Promoter. **YOU CANNOT SKIP THIS STEP.** Always apply 3M Adhesion Promoter to any surface Boogey Lights® LED strips will be mounted. The promoter acts as a primer that ensures maximum adhesion. Porous surfaces may require 2 applications of 3M Promoter for uniform coverage and good adhesion. If you are going to add a second coat, allow the first application of promoter to dry before applying the second coat. Our lighting kits include a small bottle of 3M Adhesion Promoter. Simply use a clean, dry cloth to apply it to the mounting surface.

Using Acetone on Heavy Oiled or Greasy Surfaces: For situations where you are affixing Boogey Lights® to a surface where heavy oils or grease are present, a "degreaser" solvent such as acetone may need to be used first. If you use acetone (or any other degreasing solvent) you must still apply the 3M Promoter. Acetone is not a replacement for promoter. In addition, if you use acetone to clean a heavy oiled or greased surface, you will still need to follow up with an alcohol cleaning to help ensure any residue or film from the acetone is removed. This is because acetone (and most other degreasing solvents) will thin the promoter as well as break down the adhesive in the tape greatly reducing the tape's stickiness. Any surface first cleaned with acetone must also be cleaned with alcohol and then thoroughly dried before painting on promoter.

Important Reminder! The 3M adhesive tape on the back of Boogey Lights® LED stripes are one-use only. If you apply them to a surface that has not been properly prepared, the holding power of the 3M adhesive tape will be greatly diminished perhaps making the light strip unusable. If you take the time to properly prepare the surface in accordance with our instructions here, you won't have any problems mounting your LEDs.

Additional Resources

- How to Videos: <https://www.boogeylights.com/how-to-videos/>
- Under-Slide Install: <https://www.boogeylights.com/video-installing-under-glow-lights-on-a-slide-out/>
- 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>
- 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>
- Amperage Data: <https://docs.boogeylights.net/?wpdmdl=1137>

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/>.