

# INSTALLING BOOGEY LIGHTS

## END CAP LED LIGHT REPLACEMENTS

It's simply not possible to provide detailed instructions for all installation scenarios. This information is intended to be used as a guide. You may need to vary your installation based on your RV configuration.

### BEFORE YOU START

We know this takes a few extra minutes but we STRONGLY suggest bench testing your lights (and LED controller if you purchased one) on a table before doing anything further. 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. 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 12vdc battery to do this (e.g. car battery, motorcycle battery, lawn tractor battery or 12vdc power supply). 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. **Please take our advice. Bench test your LEDs (AND controller if purchased) before mounting.**

BTW ... Did we mention we suggest bench **testing your LEDs and** controller before installing? You would be surprised at how many people don't take our advice on this step; many regret it later.

NOTE: If for whatever reason you need to cut the LED strip, you can. Details on how to cut your END CAP LEDs can be found on our INSTALLATION RESOURCES page or at this link:

<https://www.boogeylights.net/?wpdmdl=964>

### Important Warranty Note

Recessed Mounting Location is Essential. This product is designed and intended to be used to replace existing factory installed end cap led lights that have the wiring in place (single color usually) as well as a recessed location to mount the LED strip on the end cap. In most factory installed end cap lights there's a recessed structure the LED light strip fits or sits in. It's part of the end cap design and helps protect the strip from side shear wind / weather forces beating against it while the trailer moves down the road. If your RV doesn't have factory installed end cap LED strip lights OR if it does not have a very clear recessed indentation where the LED strip can be safely mounted protecting it from side wind shear forces, we do not recommend using this product as it will likely fail prematurely.

Do Not Bend on a Curve or a Horizontal Plane. These LED strips need to be mounted on a flat, straight smooth surface. They cannot be mounted on a surface that requires bending around a corner or bending on a horizontal plane. This is important. Our LED strips are wider than stock LED strips to support the larger, brighter LEDs. This however limits their ability to bend on a horizontal plane vs thin LED strips. Bending them on a horizontal plane will stress the solder joint in the PCB and cause the LED strip to fail prematurely.

Installing the LED Strip. You do not need to press very hard to get them to stick. In fact, pushing too hard can damage the connector wires and LEDs embedded in the strip. Just a little light pressure is all it takes. Also, when affixing the light strip to the mounting surface *DO NOT* stretch, tug, pull or twist the LED strip. **Do not put tension on the strip itself.** For example, do not allow either the power lead cable or the entire roll of LEDs to dangle while you're working on mounting the strip. The LED strip is not built to support lateral tension, twisting or bending. Simply unroll the LED strip in a straight line as you go lightly pressing the strip to the surface. This is a super important concept to understand if you want your lights to last. The natural tendency is to pull tightly on the LED strip to keep it straight and level (especially when mounting horizontally) but doing so means the solder joints in the LED strip will be installed under maximum tension from day one. Mounting the strips this way doesn't allow room for the solder joint to expand with the mounting surface as needed. Strips mounted under tension will fail at the solder joint which is not covered under warranty. Not a matter of if but when.

Mounting this product on the face of an RV that does not have a clear recessed indentation to protect the LED strip from wind side shear or mounting them on a surface that isn't straight and flat will result in premature failure of the LED strips. Failures of LED strips mounted this way are not covered under warranty.

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



Do NOT bend the LED strip on a horizontal plane.



## WHAT YOU'LL NEED

- Rubbing alcohol, 3M Adhesion Primer, Clean rags
- Lexel, Butyl Putty or similar sealant.
- Cutting pliers, Wire Strippers, Heat gun (or hair dryer).
- Plastic putty knife or similar edged tool used to gently help remove existing OEM led light strip.
- Ladder (or similar) so you can reach the End Cap LED strips on the front of your RV

## SINGLE COLOR vs MULTI-COLOR

The vast majority of END CAP LED light installs are single color. This is because every factory installed End Cap LED light strip we know of is single color. Replacing a single color LED light strip using the existing factory installed wiring and wall switch is by far the easiest to do. Typical single color installation time is 1.5 to 2 hours to do both End Cap LED strips. Multi-color LED strip install is more complicated because you need to install an LED controller between the LED strip and the 12vdc power source. Doing so almost always requires that you install at least one (sometimes two) access panel holes in the interior wall just behind the End Cap. This allows access to the back side of the End Cap where you can run the extra wires needed for multi-color LED (4 instead of 2) and then route those wires down to the battery box or storage area where you can mount the LED controller and connect it to 12vdc power. Typical multi-color LED strip install is 5 to 6 hours.

## SINGLE COLOR INSTALLATION PROCESS

1. Remove the existing END CAP LED light strip from the face of the End Cap. We typically do one at a time, start to finish. Most OEM strips will peel off fairly easily. You may need some rubbing alcohol and/or a plastic putty knife to clean the surface completely. Just be careful not to scratch the RV's painted surface.
2. The hole where the power lead wires of the existing LED light strip come out of the end cap is usually filled with a sealant of some type when it comes from the factory. You'll need to remove some of this sealant – at least enough of it to allow the power lead wires coming out of the end cap to move freely. You can usually insert a round screw driver or similar tool into the hole to widen it. Just be careful not to damage the power leads that come out of that hole; you need them!
3. Carefully pull the extra power lead wire of the existing End Cap LED light strip from behind the End Cap out so you have some wire to work with. There's usually 3 or 4 inches you can pull out. Tape these wires to the end cap so they won't fall back into the End Cap when you cut them in the next step.
4. Cut the existing power lead wires (should be 2 of them – usually a red and black wire) that attach to the existing End Cap LED light strip. Cut as close to the end of the existing LED strip as possible. You want to maximize the amount of existing power lead wire you have to work with.

5. Strip one-half inch of the insulation away on the existing power lead wires that come out of the end cap. Do the same for the power lead wires coming from the Boogey Lights replacement LED strip.
6. Slide a 2 or 3" piece of supplied heat shrink tubing over both the black and red power leads coming out of the Boogey Lights led strip. Push the heat shrink up to the LEDs as far as it will go and then using a heat gun, secure the heat shrink in that position. The goal here is to completely cover the immediate two or three inches of exposed power lead wire connected to the Boogey Lights LED strip with heat shrink.
7. Slide a 1 to 2" piece of supplied heat shrink tubing over just the black Boogey Lights power lead. Twist the black Boogey Lights power lead together with the black existing OEM power lead coming out of the End Cap. You're going to want to make sure these wires are tightly twisted. Then, slide the heat shrink over the twisted bare wire connection and secure the heat shrink in that position with a heat gun. Make sure the twisted bare wire is fully covered with heat shrink.
8. Repeat the above process for the red Boogey Lights power lead and existing red OEM power lead.  
NOTE: We know folks may be tempted to use electrical tape to cover these wires but we urge you to use the supplied heat shrink because the heat shrink has an adhesive glue backing which will make the seal around the twisted wires water tight.
9. With the Boogey Lights LED strip now attached to the existing OEM wires going into the end cap, it's time to test the light before affixing it to the RV end cap. The light should work. If not, check your connections and/or switch/power source before proceeding.
10. Push as much of the extra power lead wire back into the end cap as you can. You're going to want to position the Boogey Lights LED strip on the end cap surface where the previous OEM strip used to be. You don't want any extra power lead wire hanging from the end cap.
11. Before you attach the Boogey Lights LED strip to the end cap you need to first clean the surface with rubbing alcohol. Next, apply 3M Adhesion Primer to the area where the strip will be placed. This is a critical step. Do not skip it. 3M Adhesion Primer must be used if you want your LED light strip to stay stuck.
12. Starting at the end where the power lead feeds into the end cap, carefully peel the backing tape from the LED strip and gently position the LED strip against the RV surface. You'll need to do this for the entire length of the LED strip. **Note that you only get one try at this.** The instant the LED strip makes contact with a properly prepared surface it will bond to the surface; it cannot be moved without damaging the LED strip.
13. Use Lexel or similar sealant to fill the hole where the power lead goes into the end cap. This is important as you do not want water to intrude into that front end cap.
14. Repeat the above steps for the second End Cap LED Light strip.

