CUSTOM CIRCUIT MK2 LED Light Bar

CUSTOM CIRCUIT MK2 LED Light Bar Installation Guide

Contents

CUSTOM

CUSTOM CIRCUIT MK2 LED Light Bar

Product Information

- **Specifications:**
  - **Product:** Prusa MK2/2.5/3/4/S LED light bar REV: V1

- **Manufacturer:** Kevin Pettersson
- **Date:** May 2024

Product Usage Instructions

- **Introduction**
  - Thank you for purchasing the LED light bar. This guide will walk you through the installation process.
- **Disclaimer**
  - The information provided is as is and without warranty. The user assumes all responsibility for the installation and use of this upgrade product.
- **Pre-requisites**
  - Tools required: Phillips screwdriver. Make sure to have the necessary holder for the light.
- **Installation**
  - **Step 1** Mount the LED light on the left arm using self-tapping screws. Optionally, use a zip tie for added strain relief.
  - **Step 2** Install the locking nut into the Z mount with proper orientation. Apply pressure to secure it in place.
  - **Step 3** Install the left arm onto the printer, ensuring correct cable positioning as shown in the illustrations.
  - **Step 4** Connect the light to the upgrade board following the provided instructions and organize the cabling neatly.

FAQs

- **Q: Can I use a different type of screwdriver for installation?**
  - **A:** It is recommended to use a Phillips screwdriver as specified in the manual for proper installation.
- **Q: What if I encounter excess slack in the cable during installation?**
  - **A:** Follow the provided guidance to neatly tuck away any excess slack into the arm for a clean setup.

Introduction

Thank you for purchasing this LED light bar. In this short guide, I will go through the main steps of how to install the light, so let’s begin!

Disclaimer

- The following information is provided ”as is” and without warranty of any kind, express or implied.
- I will not be liable for any damages of any kind arising from the installation or use of this upgrade product for your Prusa printer, including, but not limited to, direct, indirect, incidental, punitive, and consequential damages.
- The user assumes all responsibility and risk for the installation and use of this upgrade product.

Pre-requisites

The installation of the light only requires the use of a Phillips screwdriver; no other tools are necessary.

Make sure that you have printed the necessary holder for the light, which can be downloaded here. Also, make sure you have received the following:

- LED light with cable
- 10x self-tapping screws

Installation

- **Step 1**
  - To begin the installation take the left arm mount and the LED light and use one of the self-tapping screws to mount it on the arm, as shown in Figure 1.
  - You can use an optional zip tie for added strain relief, however, it's not required secondly, it has to be slim to fit once the lid is installed.

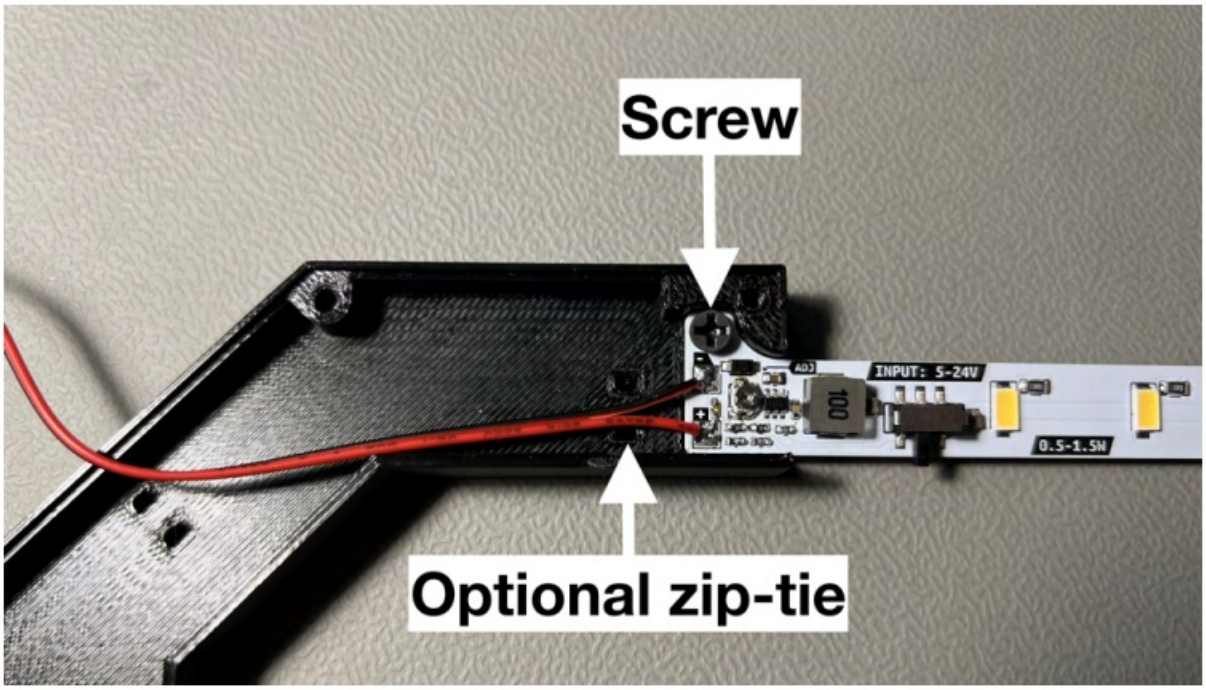
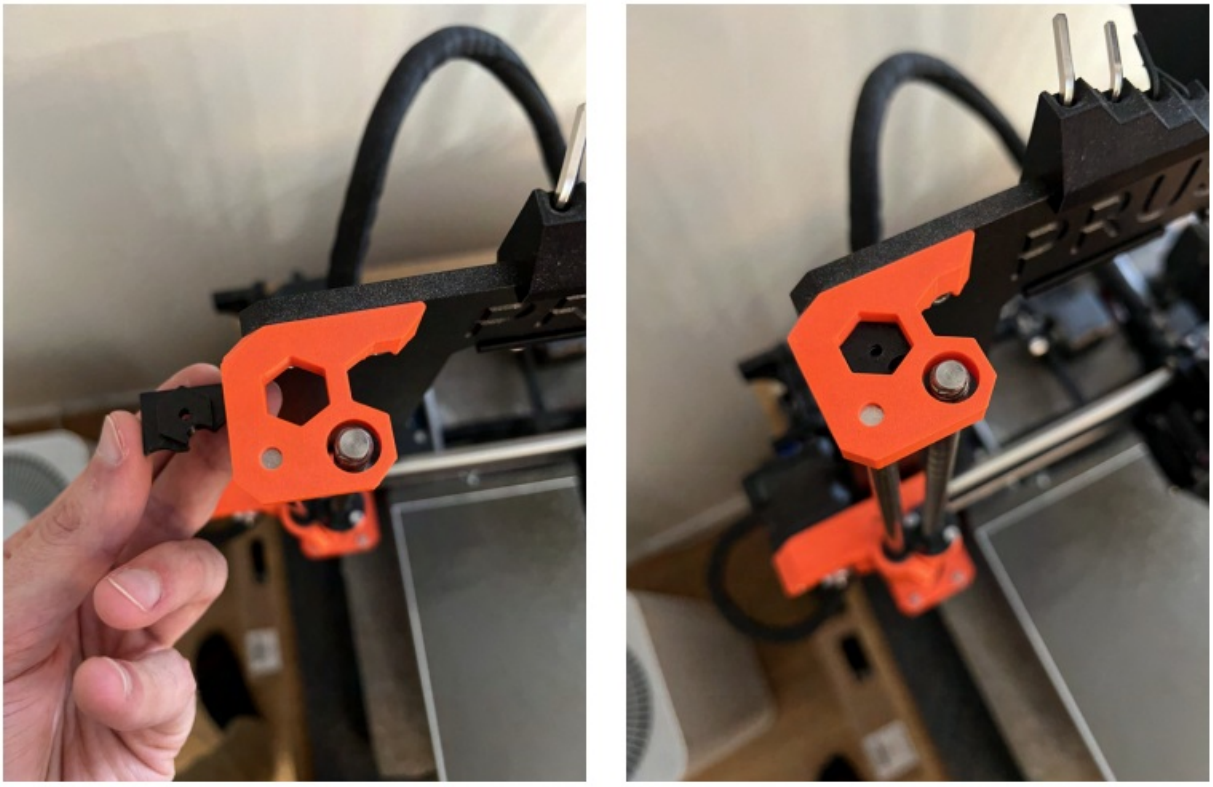


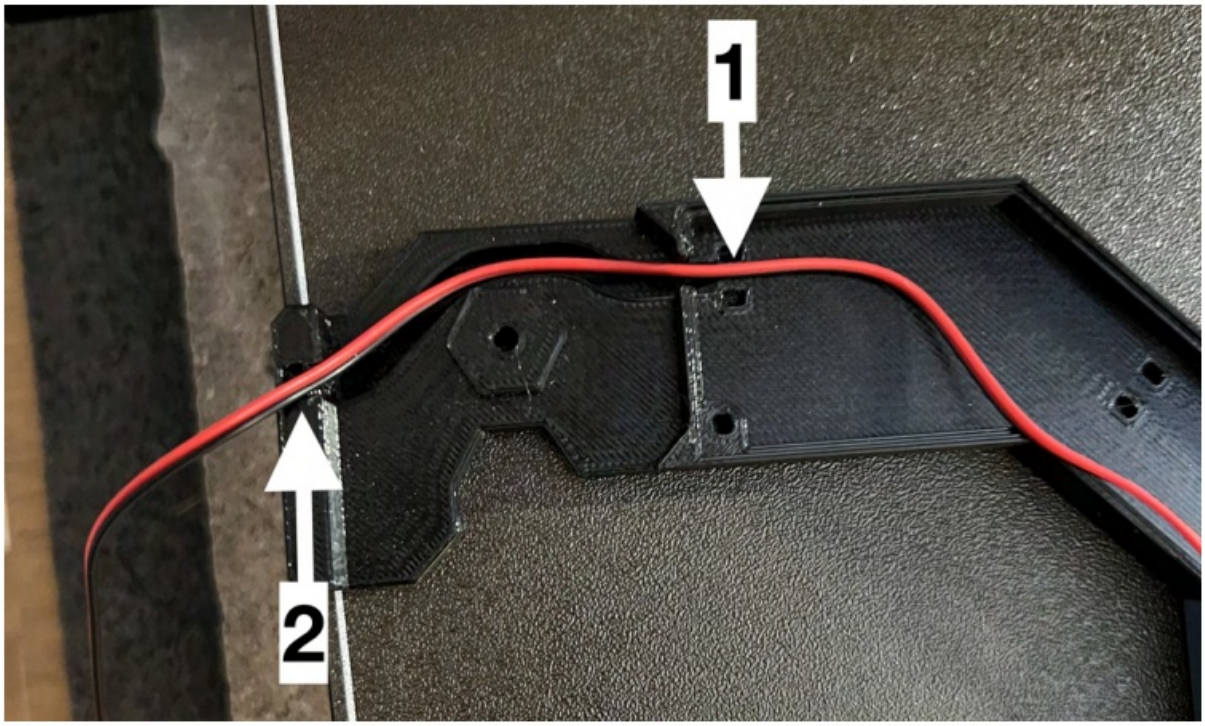
Figure 1: LED light mounting in the left arm.

- **Step 2**
  - The next step is to install the "locking nut" part into the Z mount. Ensure that the hexagonal portion is oriented upward and that the square edges face outward from the printer.
  - Note that this part is mirrored to accommodate either side of the printer, as illustrated in Figure 2a for the left side.
  - Carefully press the locking nut up into the holder until it is securely mounted, as depicted in Figure 2b.
  - It may require some pressure to fit snugly, but it should ultimately sit flat once properly installed. Repeat this procedure for the opposite side.



- **Figure 2:** Locking nut installation illustration where (a) shows correct orientation and (b) is mounted in the Z-axis holder.

- **Step 3**
  - Next, we will proceed with installing the left arm onto the printer. Before doing so, ensure that the cabling is correctly positioned within the designated slot, as demonstrated in Figure 3. Maintain a slight slack in the cable for future adjustments.
  - While carefully holding the cable at points 1 and 2, as depicted in Figure 3, affix the arm onto the left Z-axis holder.
  - Ensure the arm sits flush against the holder, as shown in Figure 4, taking care not to pinch the cable.
  - After mounting, verify that the cable moves freely by gently pulling on one side. If the cable does not move smoothly, lift the arm and reposition the cable.
  - Once the cable moves freely, use a self-tapping screw to secure the arm to the holder, as illustrated in Figure 5.
  - Proceed to mount the right arm. This step is simpler as there is no associated cabling. Remember to use a self-tapping screw to secure the opposite end of the LED on the right-side arm.



- **Figure 3:** Cable routing in the holder with points 1 and 2 showing suggested points to hold the cable while mounting the arm.

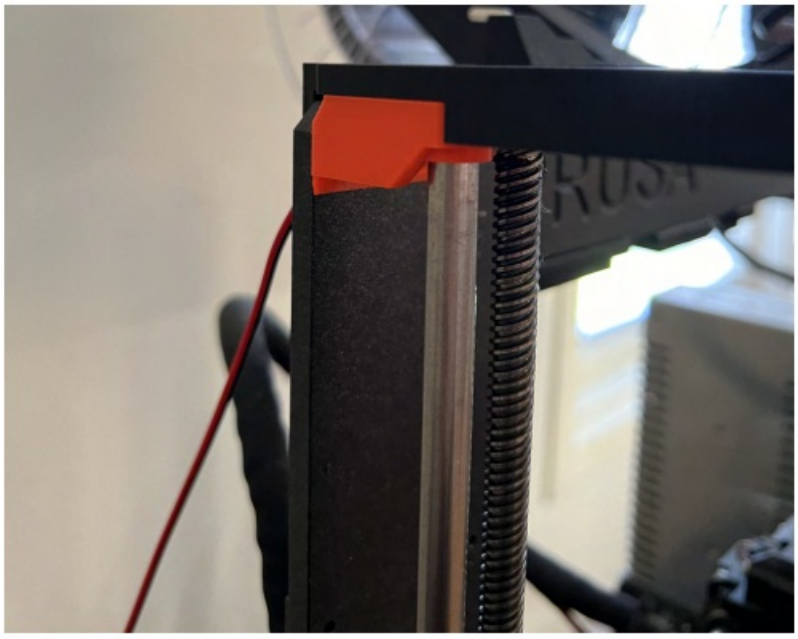


Figure 4: Mounted arm.

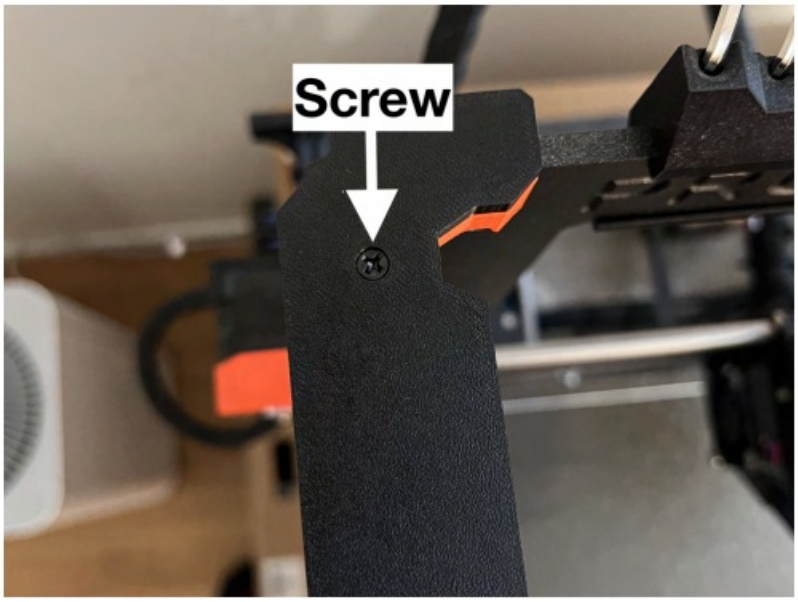
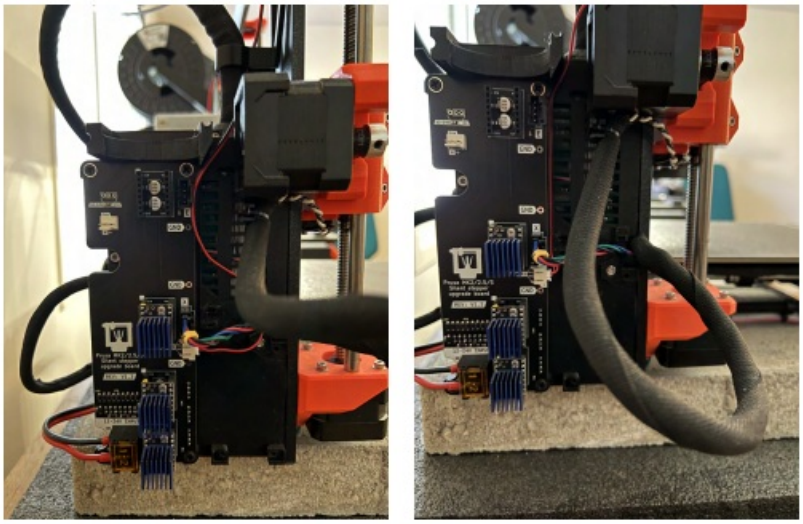


Figure 5: Position of where the screw goes to secure the arm to the printer.

- **Step 4**
  - Now it's time to connect the light to the upgrade board. Insert the light's connector into the LED port, as demonstrated in Figure 6a.
  - To organize the cabling, gently push it into the dedicated cable channel on the upgrade board holder, as depicted in Figure 6b.
  - After this step, you may notice some excess slack in the cable, resembling Figure 7a. To address this, simply pull the excess slack into the arm, following the guidance shown in Figure 7b.
  - Note that once the lid is installed, this excess slack will not be visible.



(a) (b)

  - **Figure 6:** (a) Showcases where to plug in the connector to the LED light and (b) how it should look after tidying up the routing with the cable channel in the holder.

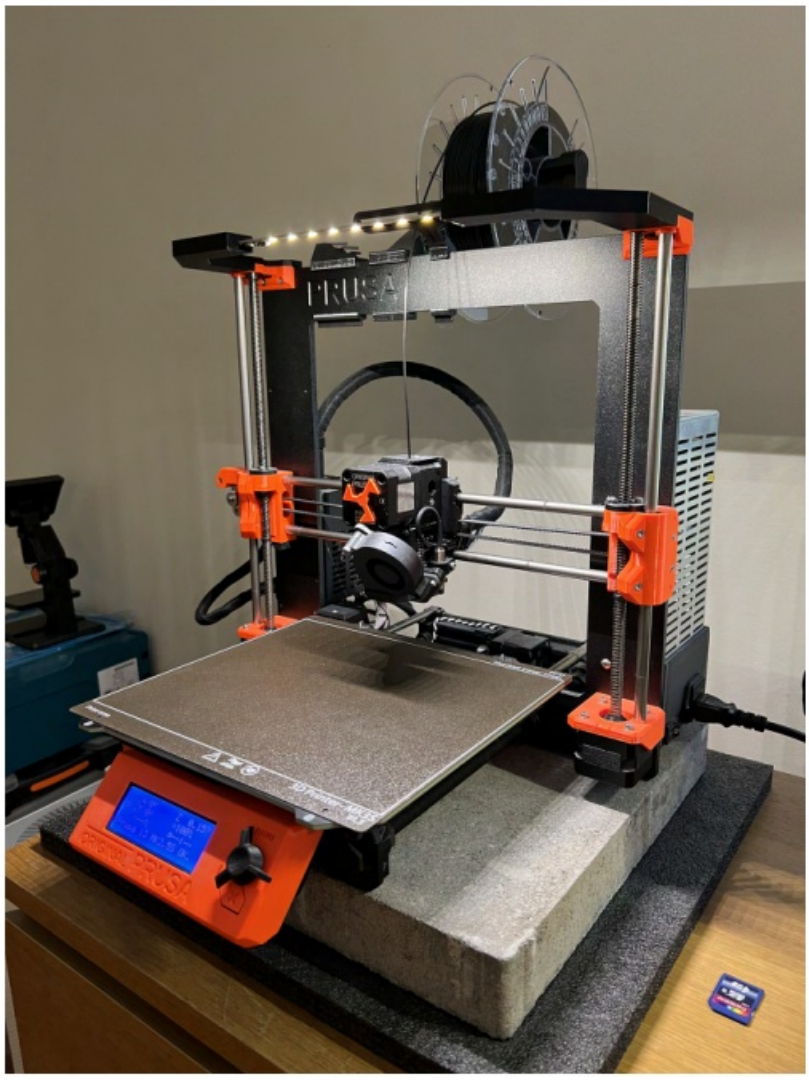
(a) (b)

- **Figure 7:** (a) Slack after using the cable channel on the upgrade board holder and (b) after pulling the slack through to the arm.

- **Step 5**
  - The last step is to simply install the lids which are mounted with 3 self tapping screws per lid.

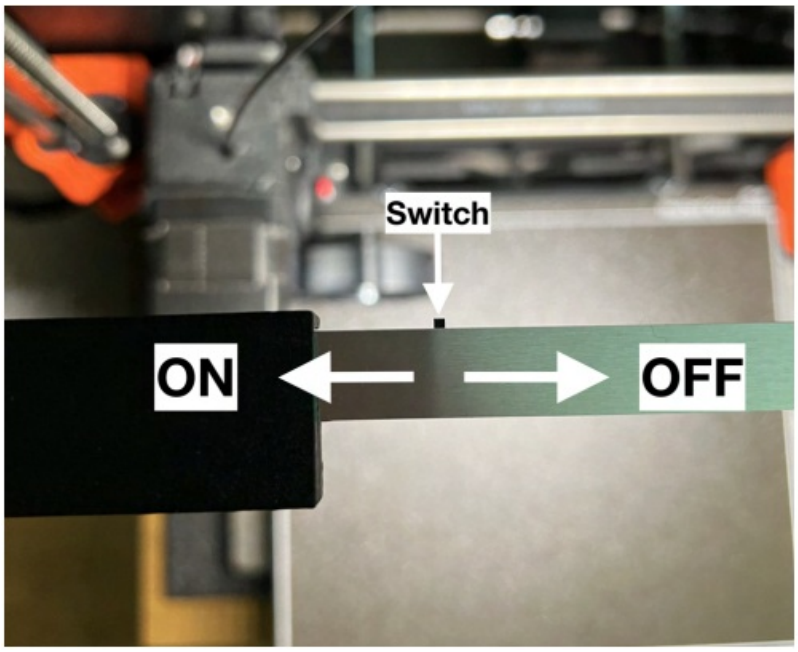
Finished

You have now completed the installation, so you can enjoy a well-lit printer. For more information about the light check out the section below.

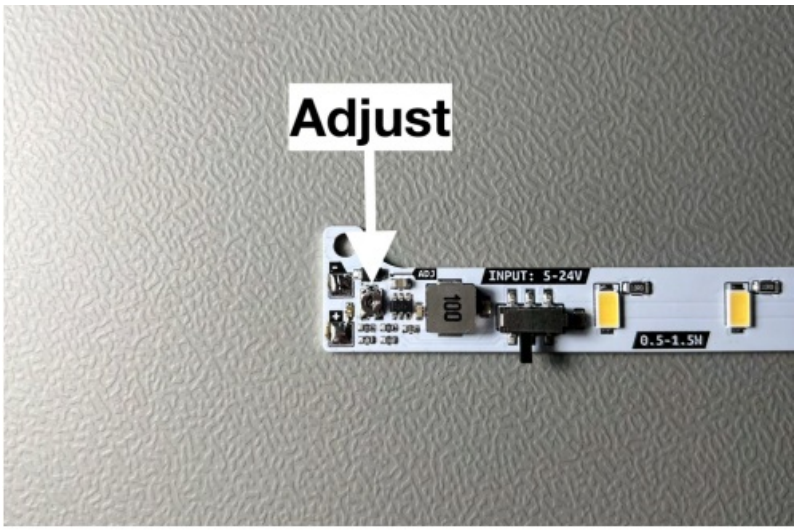


Operation

- To turn on and off the light, you can use the switch located on the light, when it’s installed the light switch sticks out ever so slightly as shown in Figure 9.
- Pushing it lightly to the left will turn on the light and pushing it to the right will turn off the light, but remember to be careful with the switch as it is rather small.
- To adjust the brightness you need a small flat or Phillips head screwdriver, to adjust the small potentiometer located as illustrated in Figure 10. There is a small hole in the lid so it is possible to adjust the brightness while its mounted.
    - **NOTE:** be careful to not shorten anything while adjusting and if possible use a plastic screwdriver to be on the safe side!



- **Figure 9:** Location of the power switch for the light and the direction to turn on and off the light.



- **Figure 10:** Location of the power switch for the light and the direction to turn on and off the light.

Prusa MK2/2.5/3/4/S LED light bar

- REV: V1
- Kevin Pettersson
- May 2024

Documents / Resources

CUSTOM CIRCUIT CO.	CUSTOM CIRCUIT MK2 LED Light Bar [pdf] Installation Guide MK2 LED Light Bar, MK2, LED Light Bar, Light Bar, Light Bar

References

- Printables
- User Manual