

RapidLED CREE CXB3590 Instructions

Overview

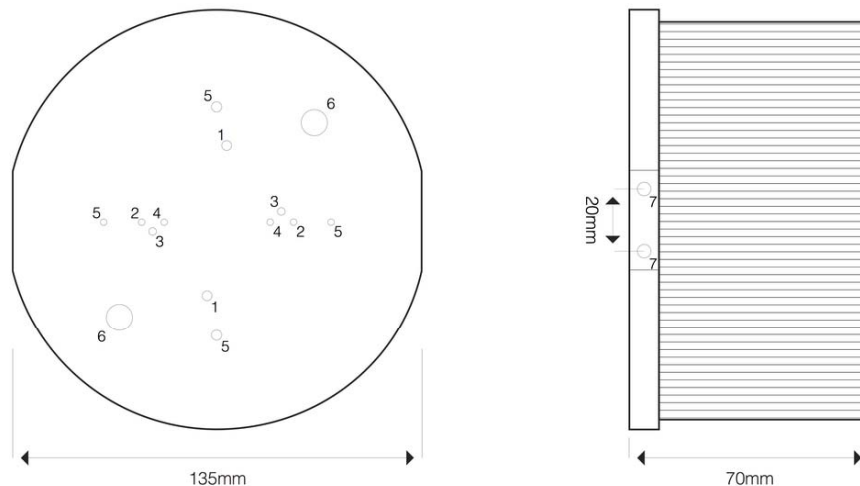
As with any type of lighting retrofit, there are many dangers, difficulties, and pitfalls that may occur. The Rapid LED CXB3590 retrofit should only be attempted by people familiar with AC/DC power and wiring, electronics, LEDs, LED Drivers, series circuits, etc. If you are uncomfortable with or inexperienced at any of the prerequisites required for this retrofit, you should not attempt this retrofit.

Attaching LEDs to the Heatsink

We will use one SurSeal thermal pad in between each CXB3590 and pin heatsink for better thermal conductivity. There is a thin plastic protective sheet on both sides of the thermal pad, make sure to peel both sides off before placing on the heatsink.

Next, place the Ideal 50-2303CR solderless holder on top of the CXB3590. Note that one connector on the 50-2303CR will be + and one will be -. You must ensure that the + goes on top of the CXB3590's + pad, and the - goes on top of the CXB3590's - pad. Doing this backwards can cause your LED to string to not light up or possibly be damaged.

The pin heatsink has many pre-drilled/tapped holes on it. Each CXB3590/50-2303CR holder will be held down via two screws using hole numbers 2 on the pin heatsink.



1- Ideal 50-2300AN lens adapter
Note: Lens adapter mounts on top of 50-2303CR solderless holder.

2- Ideal 50-2303CR
 -CXA3590
 -CXB3590

3- VERO29 SE Gen 7

4- Ideal 50-22XX or BJB 47.319.2154.50
 -CXA3050/3070
 -CXB3050/3070

5- Ledil 15264, 14720, 15379
 -VERO29 SE Gen 7

6- Through Holes

7- Mounting Holes

*******NEVER APPLY POWER TO THE LED DRIVER BEFORE ALL WIRING IS COMPLETE *******

Wiring the Driver to AC Power

The AC Line and Neutral, or ACL and ACN wires, which are brown and blue, connect to the 3 prong power cord. Strip the white and black wires of the power cord and attach them to the blue and brown wires on the driver with WAGO connectors, wire nuts, solder/shrink wrap, etc. The hot wire is typically black (connects to brown ACL wire on driver) and the white wire is typically neutral (connects to blue ACN wire on driver). Next, strip the green (ground) wire on the power cord and attach to the Green/Yellow wire on the driver like you did with the ACL/ACN wires previously. Obviously, this step is dangerous because you are working with 110 or 220VAC. Make sure nothing is plugged in and have a licensed electrician assist you with this step.

There are 4 output wires on the HLG-320H-C1400B driver. The dimming wires, DIM + (gray), and DIM – (black), simply hook up to the red(+) and black(-) wires on the dimmer/potentiometer (aka knob).

On both the power cord and potentiometer/knob you can either wire all 3 drivers to a single cord/knob, or you can wire them individually. However, on higher wattage set-ups we do recommend one power cord per driver.

Mounting LEDs and heatsinks to the rail system

We suggest mounting the LEDs/heatsinks to the rails at this point in the assembly. It's often easier to mount them to the rails before the wiring is completed as that provides more flexibility. Please see the two rail and canopy substrate instructions for how to complete this step. Once mounted please continue to the final step of wiring in between LEDs.

Wiring the driver to the LEDs

Once the LEDs/heatsinks are mounted we'll take the final step of wiring up the drivers to the LEDs. To begin we will wire the Brown/V+ wire from the driver to the + connector on the first CXB3590 solderless holder. Since the driver's output wires are fairly thick and pre-soldered it's best to connect some bulk wire to these wires first before inserting to the connector.

Starting with the – connection on the first LED we'll wire up the rest of the string going – to +, in series, until our final LED (total of 6 LEDs per driver). On the last/6th LED we will have one final open – connector. This will wire back to the Blue/V- wire on the driver. Please make sure the wire used in between connections is 18-22 AWG stranded wire, or 18-24 AWG solid copper wire and is stripped properly (1/4"-5/16") before being inserted into the solderless connector.

Finishing Up

Only after all of your wiring is complete will you power on the driver. The lights should be extremely bright, and the potentiometer if wired in will give you manual dimming control.