



This version (07 Jun 2018 17:46) was **approved** by Brandon.

The [Previously approved version](#) (07 Jun 2018 08:16) is available. 

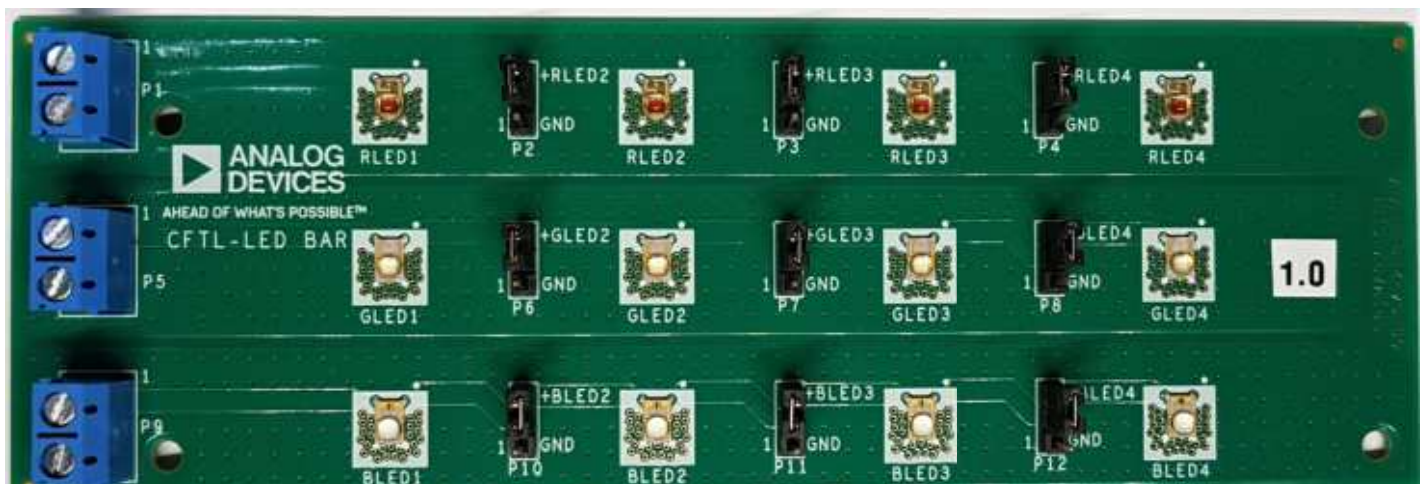
CftL-LED-Bar

Description

The  **CftL-LED-Bar** is a boards that contains LED's with 3 different spectral outputs (627nm, 530nm and 470nm). Each of the three channels contains a string of four LED's in series able to handle currents of up to 1A.

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Recommended LED's

- Lumileds Red LED- **LXM5-PD01**
- Lumileds Green LED- **LXML-PM01-0080**
- Lumileds Blue LED- **LXML-PB02**
-  [Lumileds Datasheet](#)

Connectors

Screw Terminals

Screw terminals P1, P5 and P9 are connectors for the anode and cathode for each of the red, green and blue channels of the  **CftL-LED-BAR**. Pin 1 is the anode and is to be connected to the positive terminal of the source while pin 2 is the cathode and is to be connected to the negative terminal of the source.

3 Pin Headers

The 3 pin header is used to add LED's to series string of each channel. Placing a shunt on +XLEDN, where X is for the channel to be controlled and N refers to the LED number, adds the next LED on the string and placing the shunt on GND position terminates the string, connecting the

last LED to the negative terminal.



LED Ratings

Red Channel

Each LED on this string has a typical forward voltage of 2.9V and tested with 500mA of current. Adding LED's to the string of LED's in series will result in a higher forward voltage. Please see below table for reference:

No. of LED's	Minimum Forward Voltage Required
1	2.9V
2	5.8V
3	8.7V
4	11.6V

Green Channel

Each LED on this string has a typical forward voltage of 3.21V and tested with 500mA of current. Adding LED's to the string of LED's in series will result in a higher forward voltage. Please see below table for reference:

No. of LED's	Minimum Forward Voltage Required
1	3.21V
2	6.42V
3	9.63V
4	12.84V

Blue Channel

Each LED on this string has a typical forward voltage of 2.95V and tested with 500mA of current. Adding LED's to the string of LED's in series will result in a higher forward voltage. Please see below table for reference:

No. of LED's	Minimum Forward Voltage Required
1	2.95V
2	5.90V
3	8.85V
4	11.80V

Schematic, PCB Layout, Bill of Materials

CFTL-LED-BAR Design & Integration Files



- [Schematics](#)
- [Bill of Materials](#)
- [Gerber Files](#)

Related Hardware

- [CN0410 3-Channel LED Driver](#)

End of Document

resources/eval/user-guides/circuits-from-the-lab/cftl-led-bar.txt · Last modified: 07 Jun 2018 17:46 by Brandon

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