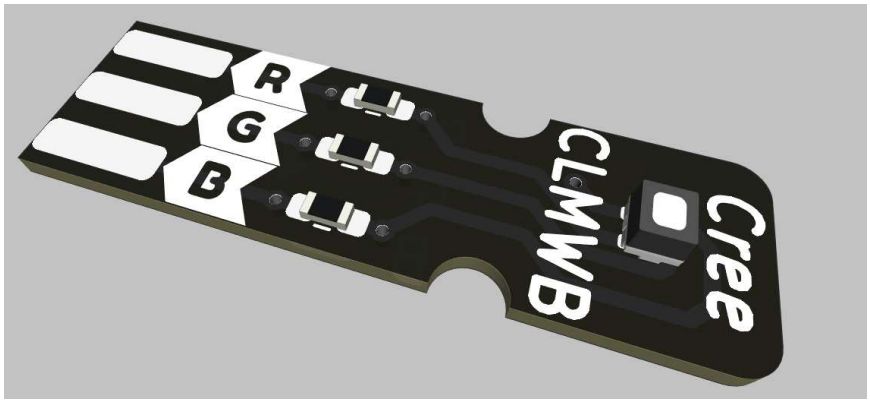
DR-11-CLMWB Operating Guide

Design Goals

This is a simple breakout board for the Cree CLMWB RGB LED. Onboard resistors are provided to create approximately equal visible brightness for each channel, with additional jumpers to bypass the resistors for other current control methods. The simple solder pads are intended to interface directly with bare or tinned wires.

Hookup

The CLMWB is a common-anode assembly, so power is applied to the +V pad, and the R/G/B pads are connected to ground (or external FETs on another part of your design). The current level of 15mA on the red channel is likely higher than most MCU pins can tolerate in a sink configuration.



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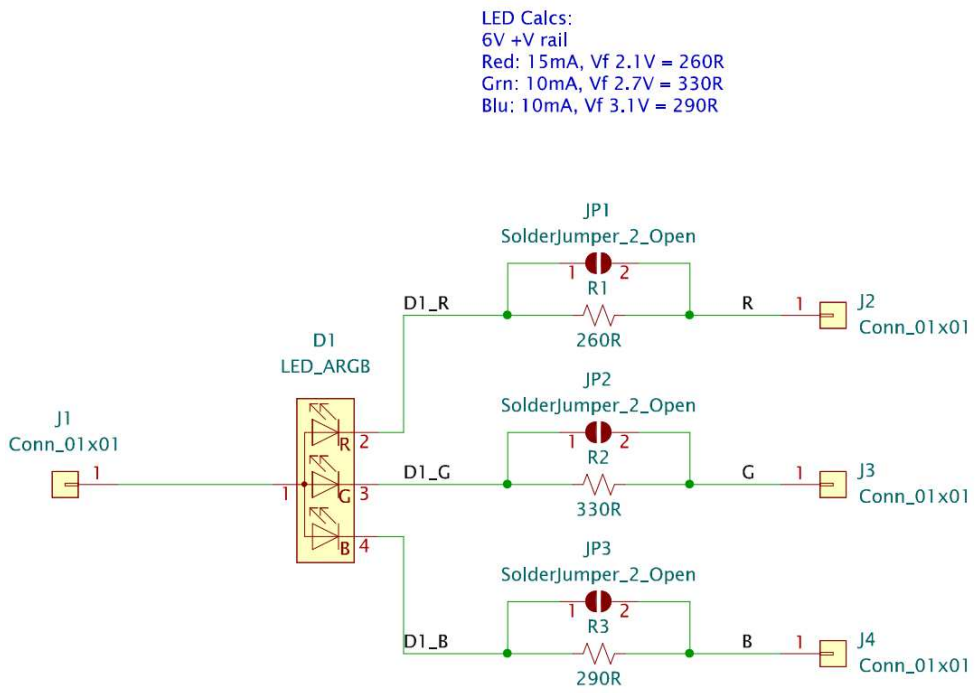
LED Calcs:
6V +V rail
Red: 15mA, Vf 2.1V = 260R
Grn: 10mA, Vf 2.7V = 330R
Blu: 10mA, Vf 3.1V = 290R
JP1
SolderJumper_2_Open
R1
260R
D1_R
R
J2
Conn_01x01
D1
LED_ARGB
JP2
SolderJumper_2_Open
R2
330R
J1
Conn_01x01
D1_G
G
J3
Conn_01x01
JP3
SolderJumper_2_Open
R3
290R
D1_B
B
J4
Conn_01x01