

LED Constant Current Lighting Regulator

The LED Constant Current Lighting Regulator (**LEDCCLR**) is a board designed to convert track voltage AC to constant current DC for LED lighting. LED lighting offers a number of enhanced features over the incandescent lighting currently used in in most O-gauge accessories and rolling stock. The lighting module works correctly when supplied with from 5 to 19 volts AC, the minimum operating voltage is dependent on the configuration of the LEDs connected to the module.

LEDCCLR Features

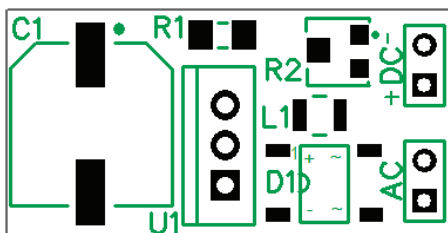
- Requires a small fraction of the power of conventional lighting
- Provides adjustable lighting intensity
- Storage capacitor on module provides flicker-free operation
- MTH DCS compatible, will not degrade DCS track signal
- Simple connections to power and LEDs

The LEDCCLR is fabricated on a printed circuit board with the dimensions of 1.1" x 0.55" in size. The overall LEDCCLR height including components is approximately 0.8" tall.

The LEDCCLR can supply constant current to one or more LEDs from 5ma to 45ma, the current is adjustable by a small adjustment potentiometer on the board. The LED's can be connected either in series or parallel to accomplish the lighting goals. The LEDCCLR requires AC voltage higher than the DC voltage requirement of the connected LEDs. For example, three white LED's connected in series require about 9 volts DC, the LEDCCLR with this configuration would require 10 volts or more of AC power for correct operation.

An easy way to mount the LEDCCLR is by use of double-sided foam tape to any convenient location in the car or accessory that it is to be employed in.

The LEDCCLR requires very simple connections. Four solder connection points are provided to the PCB, they're illustrated below on the right hand side labeled AC and DC.



The AC connections are for incoming AC (or DC) power to the regulator circuit. The DC connections are for the constant current output to the LED(s) being powered by the board. Note the + pin on the DC connector goes to the positive side of the attached LED(s). Note that there is no common ground on the DC side of the regulator, so neither of the output wires should be connected to AC common.

If you have any questions or comments, you can contact us at lighting@will-enterprises.com