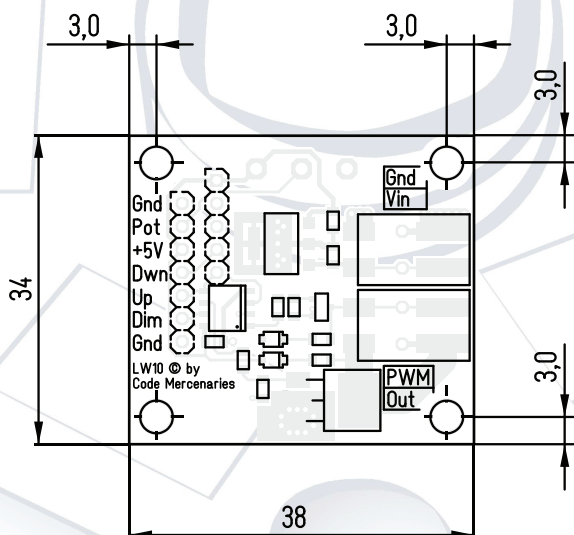


LED-Warrior10-01MOD LED Dimmer - Instructions



LW10-01MOD is a dimmer controller for LED applications. It generates a PWM signal to either control a LED driver or to directly supply constant voltage LED modules.

The LED brightness can be controlled by a potentiometer, two buttons, or a single button. For button control a power-on value may be set if the LED should always switch on to a certain brightness level when power is applied. A minimum brightness can also be programmed.

No mains/line power!

The LW10-01MOD is not designed to be connected to mains/line power. The specified voltages have to be observed.

Power supply

The LW10-01MOD can be used with 5.5 V to 40 V DC voltage. AC does not work. It is important that the power supply does not require a minimum load for proper function, otherwise low dimming levels and off mode can cause problems. The LW10-01MOD uses up to 25 mA for its own supply. Current consumption goes down to about 6 mA when the LEDs are off.

Positive power supply is connect to "Vin", negative to "Gnd".

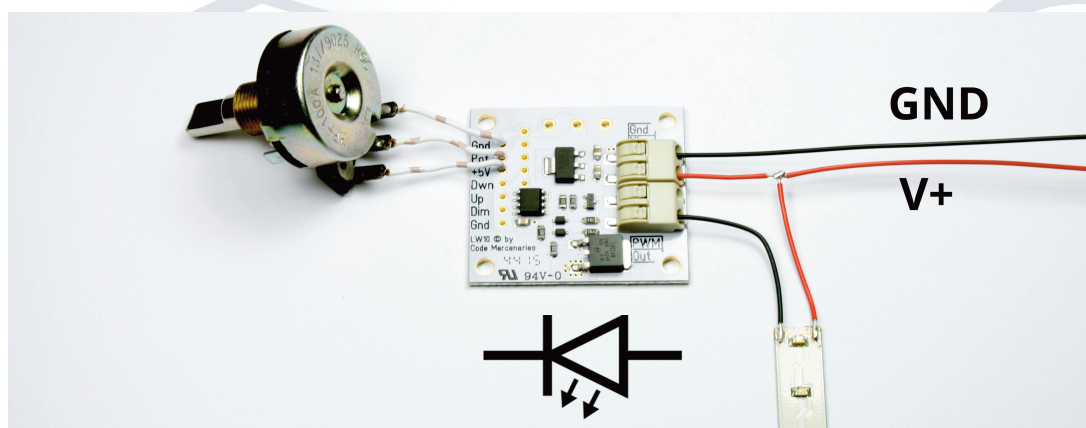
Compatible LEDs

LED strips, modules, lamps for use with a constant voltage can be directly driven by LW10-01MOD. A maximum current of 4 A can be sinked by the module. The supply voltage must be compatible with the LEDs.

Not compatible are LEDs that require a constant current for operation. To use those a constant current driver with a PWM control input is required.

Connecting LEDs

The LED unit's anode end (positive) has to be connected to the supply voltage, the cathode end (negative) goes to the "Out" connector of the LW10-01MOD.



Dimming with potentiometer

Potentiometer with 1 k Ω to 200k Ω may be used with LW10-01MOD. The two end terminals of the potentiometer are connected to "+5V" and "Gnd", the center tap to "Pot". Alternatively a potentiometer with 5 mm pin spacing can be soldered direct into the module.

The brightness of the LED is set directly by the potentiometer position.

Dimming with buttons

The potentiometer function has to be disabled by connecting "Pot" and "Gnd" to allow button dimming. Momentary switches are required for the dimming. Latching switches do not work. Either a single button connected between "Dim" and "Gnd" or two buttons connected one each between "Up"/"Gnd", and "Dwn"/"Gnd" can be used. A short press switches the LED on or off, a long press dims the brightness up or down. The last brightness is remembered on switching off. The next time the LED is switched on will go to the same brightness.

Setting power-on brightness

When power is applied to LW10-01MOD the value at the "Pot" input determines if the LED is switched on and at which brightness. In button control mode ("Pot" and "Gnd" connected) the LED will be off by default at power up.

It is possible to set the brightness at which the LED will be switched on after supply power is applied in button mode.

To set a power-on brightness first dim to the intended value (including switching it off). Then press and hold a button until the LED flashes twice. The brightness that was active before pressing and holding the button is now stored as the power-on value.

Setting minimum brightness

Some LED modules and replacement lamps can not be dimmed down to the lowest levels supported by the LW10-01MOD, they will stop producing light below a certain dimming level. To avoid this a minimum brightness can be set.

The method is similar to setting the power-on brightness. Dim to the intended value (off will reset the minimum brightness to the minimum value the LW10-01MOD can produce). Then press and hold any button until the double flashing of the LEDs happens for the second time.

At the second double flash the former value for power-on will be restored and the brightness before the press of the button will be stored as the minimum value. Now dimming can not go below this value and switching on will also go at least to this value.

