Modular Tester user guide: LED tester

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The LED tester tests LED's with a limited adjustable current from 1-150mA. It measures the actual current and voltage over the LED.

In alternative mode the preferred circuit supply voltage can be set and the tester will calculate the proper series resistor for the current settings.

Note: be very careful, a too high current will blow up the LED, always start at 0 current setting.

After power on the module shows the splash screen and goes to sleep.

Press the right rotary encoder and hold until the splash screen appears.

Connect the LED to the terminals, mind the polarity.

Turn the right encoder to adjust the current, the SET current, measured current and measured voltage are shown.

Note: when the LED is disconnected the current will be automatically set to 0mA as a safety measure, you can adjust the current without a LED connected but it will revert back to 0mA.

Press the right encoder short to toggle the mode.

In alternative mode the circuit supply voltage (V+ or VCC) is shown and can be adjusted with the left encoder, this voltage is only used for the calculations.

The series resistor for this V+ and the current LED measurement is calculated and selected based on the E12 series standard values, the calculated power is displayed.

Press right encoder long for the menu, turn to select, press to select or toggle setting:

Return: return to main screen.

Go to sleep: put the module to sleep.

Calibrate: go to calibration mode.

Calibration procedure

Note: the value of the sense resistor (consisting of a number of parallel resistors) must be measured exactly and entered in the source code before calibrating.

Connect a resistor to the terminals, for example 56 ohm 5W.

Go to the menu and select *calibrate*.

Step 1 current offset

No adjustment for now.

Step 2 cathode voltage

Measure the voltage at the + connector.

Turn the rotary encoder until the display matches the voltage.

This calibrates the voltage divider and ADC.

Step 3 anode voltage

Measure the voltage at the - connector.

Turn the rotary encoder until the display matches the voltage.

This calibrates the voltage divider and ADC.

Step 4 current

It will now auto calibrate from 1-150mA

Goes to sleep when completed.


LED tester
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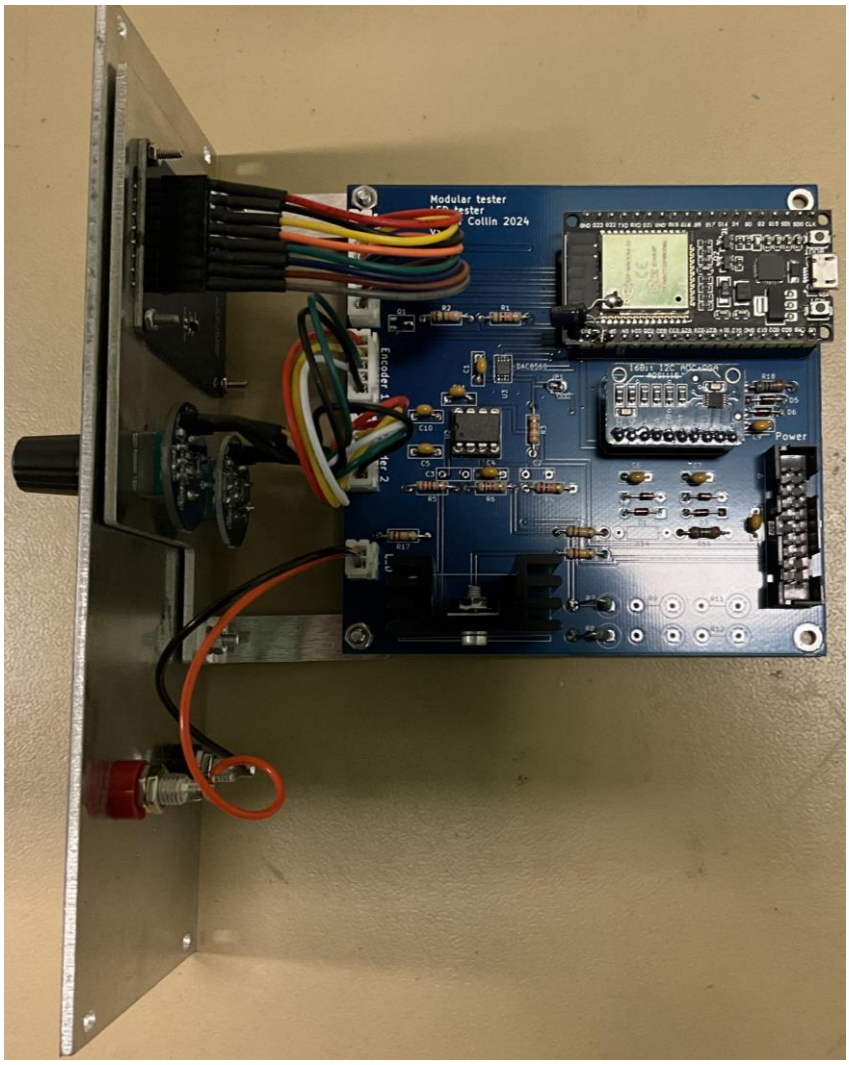
Modular tester
Collin 2024
Encoder 1
Power