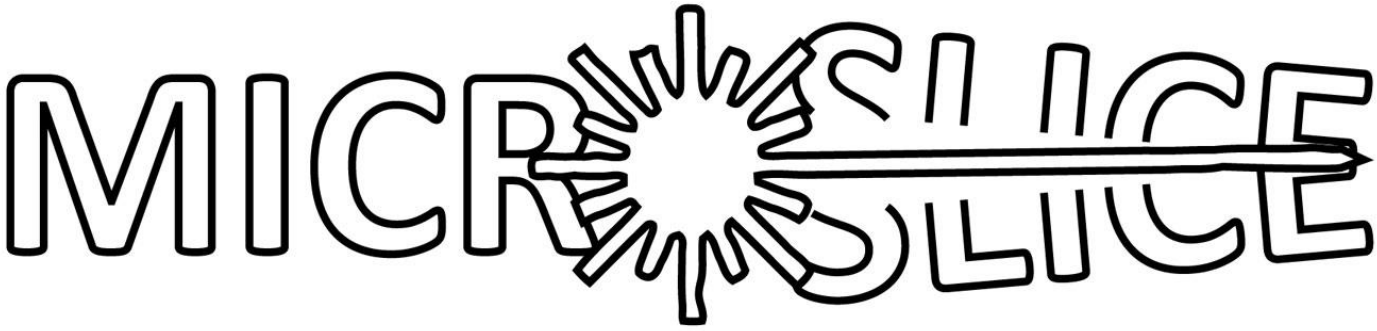


V2.5

http://thelittlebox.co

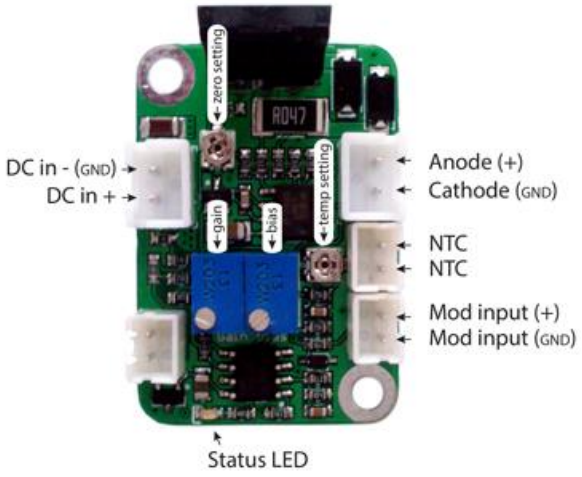
ALDM

(Analogue laser Driver Module)

The Analogue Laser Driver Module is designed for high power laser diodes and LEDs. It features built-in power supply reverse polarity protection, eddy current protection, start delay, standby bias suppression with turn-off delay, over-modulation clamping, and interlock input. The driver is able to work with an external NTC sensor for over-temperature shutdown protection.

Specification:

- Input DC voltage – 4 … 24V
- Output current – 0 – 1000mA
- Max bias current – 400mA
- Bias standby off-delay – 0.2sec
- Bias standby sensitivity – 0.1V
- Maximum power dissipation (with heat sink) 25W
- Modulation input – 0 … 5V
- Modulation input impedance > 20KΩ
- Modulation bandwidth – 0 … 100KHz
- Start delay – 4 sec
- Thermal shutdown range setting (with 10K NTC sensor) - 35°C to 70°C



***Check the load polarity before applying power*!**

Laser diodes are extremely sensitive to electrostatic discharge!

Setup:

1. Solder all connectors to the board and install the heat-sink.
2. Connect your laser diode or LED to |Anode +| |Cathode GND| pins with Amps meter in series connection.
3. Connect your power supply to |DC IN| pins.
4. Connect your modulation source (5V) to modulation input pins.
5. Turn the "bias" and "gain" trimmers counterclockwise until you hear clicks (12 *turns approx*).
6. Plug in a power supply to the MicroSlice.
7. Enable Laser Mode ($L1) and set the power to maximum (Z255).
8. To setup bias turn a "bias" trimmer clockwise until the moment when your laser diode starts lasing.
9. To setup operating current turn a "gain" trimmer clockwise until it reaches the desired value.
10. Attach NTC sensor to your laser diode or LED heat sink and connect it to |NTC| pins. Driver preconfigured on 50°C threshold. You can change it by using “temp” trimmer.
11. Zero balance adjustment - If your driver does not provide quiescent current (without modulation) less than 5-10mA, you need to set "zero" trimmers on the threshold position, when the current is reduced to 0-2mA (this trimmer is factory preconfigured).

The MicroSlice v2.5