

OELDC-3000BF Laser Diode Controller

Description

OELDC Laser Diode Controller combines ultra-stable temperature controller and accurate constant 3.0A current driver. It is ideal to drive high power laser diode module, semiconductor optical amplifier (SOA), super luminescent diode (SLD) and light emitting diode (LED). Two PI loops monitor and control both laser diode current and module temperature. Single +5V power supply provides up to 3.0A laser diode current and 2.2A thermoelectric cooler (TEC) control current. With a separated Butterfly module mounting board, the laser module installation is easy and flexible. The cable length between the driver and the mounting board is customized. Adjustable current limitation and slow-start can protect the module.

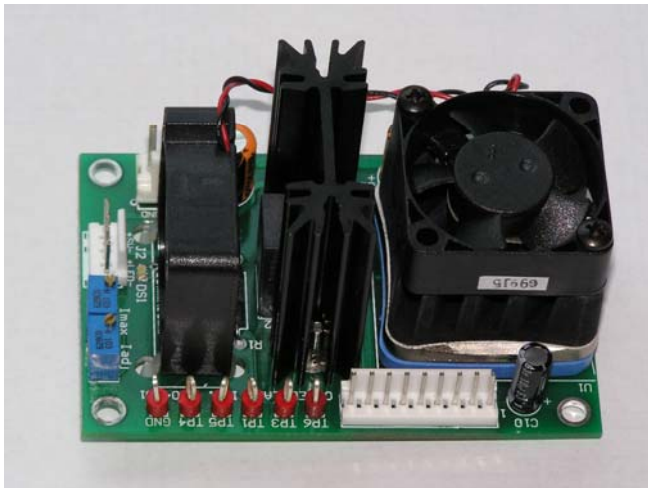


Figure1. Laser Diode Controller

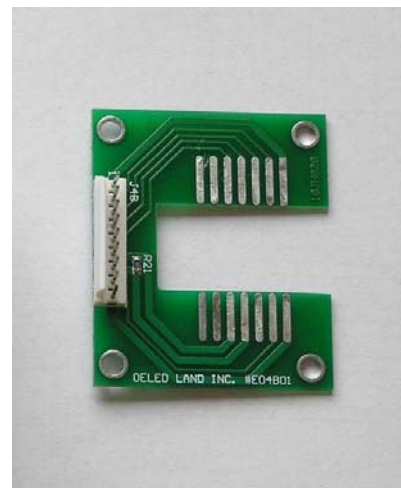


Figure2. Butterfly Mounting Board

Features

- On-board Butterfly Solder Pads for Butterfly Packaged Module.
- Up to 3.0A Laser Diode Current Drive Capacity.
- 0.1% Driving Current Accuracy.
- Adjustable Laser Current and Maximal Current Limitation.
- Slow Start Circuitry.
- Laser Diode Enable Switch and LED Indicator.
- High TEC Drive Capacity: 2.2A, 5V
- 0.005°C Temperature Stability.
- Temperature Stabilization Point: +25°C /10Kohms (Others on Request)
- Temperature Control Always-On Function.
- Single +5V Power Supply.
- All 2-feet long connection cables are included. Customized cable length is available.



Parameters

	MIN.	TYP.	MAX.
Laser Diode Output Current	0.08A		3.0A
Output Current Accuracy @3.0A	0.05%	0.1%	0.15%
Output Current Stability @250mA, 24 hrs		0.1% or 3mA	
TEC Output Current			2.2A
Temperature Stability @25°C, 1 hr	0.002°C	0.01°C	0.05°C
Temperature Stability @25°C, 24 hr	0.003°C	0.02°C	0.1°C
External Temperature Sensor	10K ohms @25°C thermistor, or on request		
Laser Diode Operation Mode	Continuous Constant Current Driving		
Laser Current Build-up Time		10mS	
Power Supplier	5V/6.0A		
Operation Temperature	0 to + 35 °C		
Storage Temperature	- 20 to + 70 °C		
Size	Controller: 3" x 2" x 1.75" (W x L x H) Mounting Board: 1.7" x 2" x 0.8" (W x L x H)		