

[OEMOD-LDC-500BF(DIP), 800BF(DIP),1000BF(DIP)]

## Laser Diode Controller (OEM version)

OEMOD-LDC Laser Diode Controller combines ultra-stable temperature controller and accurate constant current driver. It is ideal to drive laser diode module (transmission laser diode, pump laser diode, etc.), semiconductor optical amplifier (SOA), super luminescent diode (SLD) and light emitting diode (LED). Two PI loops monitor and control both laser diode current and temperature. The controlled laser diode current range is 20mA~500mA (OEMOD-LDC-500, OEBSL-300), 50mA~800mA (OEMOD-LDC-800, OEBSL-300) with option to 1.0A driving current, or 80mA~3000mA (OEMOD-LDC-3000). The thermoelectric cooler (TEC) control current is from 1.2A, 2.0A up to 2.2A. With on-board Butterfly solder pads or DIP-14 connector, mounting Butterfly packaged module or DIL-14 packaged module is easy and reliable. Adjustable current limitation and slow-start can protect the laser diode modules.

### OEMOD-LDC-500DIP

DIP-14 connector, 500mA Laser diode driving current, 1.2A temperature control current for pump laser, SLD, DFB.

### OEMOD-LDC-800DIP

DIP-14 connector, 800mA Laser diode driving current (with option to 1.0A current), 2.0A temperature control current for pump laser, SLD, DFB et al.

### OEMOD-LDC-500BF

Butterfly solder pads, 500mA Laser diode driving current, 1.2A temperature control current for pump laser, SLD, DFB.

### OEMOD-LDC-800BF

Butterfly solder pads, 800mA Laser diode driving current (with option to 1.0A current), 2.0A temperature control current for pump laser, SLD, DFB et al.

### OEMOD-LDC-1000BF

Butterfly solder pads, 1000mA Laser diode driving current, 2.0A temperature control current for pump laser, SLD, DFB.

### OEMOD-LDC-3000BF

Ideal for any type of laser diode package, TO-56, TO-9, DIP, Butterfly up to 3000mA Laser diode driving current, 2.2A temperature control current for all types of laser diode like DFB, PUMP, SLD, SOA, ToCan laser diodes and LEDs. September 2025

### OEMOD-LDC-BLS300

Ideal for any type of laser diode package, TO-56, TO-9, DIP, Butterfly up to 800mA (with option to 1.0A ) Laser diode driving current, 1.2A temperature control current for all types of laser diode like DFB, PUMP, SLD, SOA, ToCan laser diodes and LEDs.

## 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-foot long connection cables are included. Customized cable length is available.



Figure 1. OEMOD-LDC-500DIP

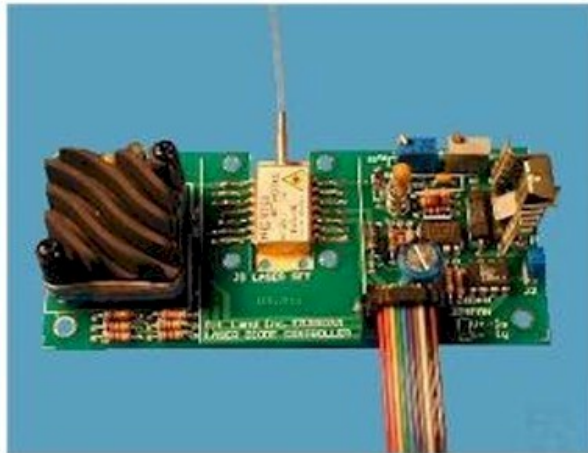


Figure 2. OEMOD-LDC-500B



Figure 3. OEMOD-LDC-1000BF



Figure 4. OEMOD-LDC-BLS300



Figure 5. OEMOD-LDC -3000BF

### Parameters

	<b>MIN.</b>	<b>TYP.</b>	<b>MAX.</b>
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)		

Note: All specifications are subject to change without notice.