

LDM-50W High Power Laser Diode Mount and Actively Cooled Heat Sink



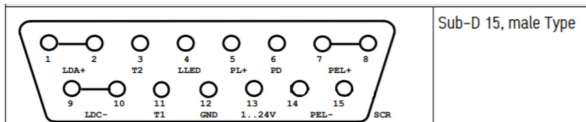
LASER DIODE MOUNT & HEAT SINK

- ◇ Up to 50 Watt Heat Dissipation
- ◇ Designed for Laser Diodes from 1 Watt Optical Power Output to 35 Watt
- ◇ Ideal for Fiber-Coupled Pump Lasers
- ◇ Top Mounting Plates Can Be Customized for Your Laser Diode Package
- ◇ Integrated Peltier Cooler for Stable Thermal Control of Laser Diode

LDM-50W PRODUCT OVERVIEW

The LDM-50W high power laser diode heat sink and mounting module is a high performance mounting solution designed for fiber coupled and free-space laser diodes. It is a TEC-based “all-air” cooling design which precisely stabilizes the temperature of your laser. The surface of the mounting plate is designed with micron level surface flatness and finish tolerances. Standard mounting plates with pre-drilled hole footprint patterns are available for most package styles. A high reliability Peltier element located under the laser mounting plate works with the embedded 10k Ohm thermistor to provide fast heat removal and high stability temperature control.

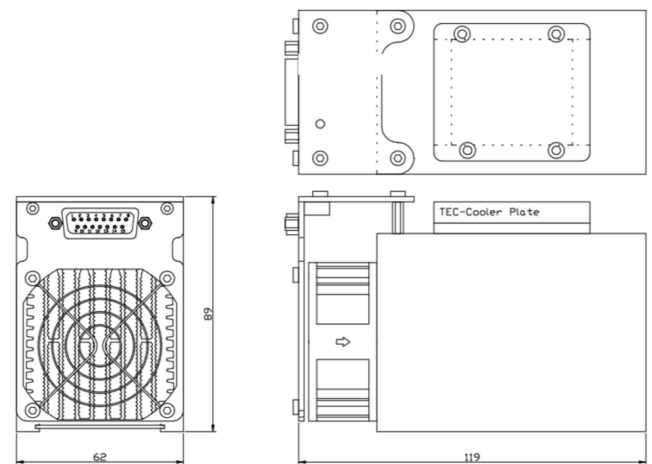
CONNECTOR



Sub-D 15, male Type

PIN.No	Abbr.	Function
1;2	LDA+	Laser Diode Anode
3	T2	Optional: Second Temperature Sensor
4	LLED	Laser On LED
5	PL+	Optional: Pilotlaser Anode
6	PD	Optional: Monitor Photodiode Cathode
7;8	PEL+	Peltier Element (+)
9;10	LDC-	Laser Diode Cathode
11	T1	First Temperature Sensor
12	GND	Common Ground - N.C. To Screen
13	1..24V	1..24V Supply, max. 300mA (-24V at GND) supports fan etc.
14;15	PEL-	Peltier Element (-)
	SCR	Common Screen

DIMENSIONS (mm)



LDM-50W PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS

- Maximum Heat Load (@ 25°C room temp.): 52 Watts
- Laser Diode Mounting Plate Area: 58 mm x 52 mm
- Laser Diode Mounting Plate Material: Anodized Aluminum
- Laser Diode Mounting Plate Surface Flatness: < 10 µm
- Laser Diode Package Footprint (pre-drilled holes): Customer Specified
- Graphite Thermal Pad (included): Pre-Cut to Match Laser Diode Package Footprint
- Temperature Uniformity (typical): < 0.5 °C Across Mounting Plate
- Temperature Control Range (typical): 10 °C ~ 45 °C
- Thermal Resistance R (th): < 0.06 K/W

INTEGRATED PELTIER COOLER AND THERMISTOR SPECIFICATIONS

- Peltier / TEC Current (max): 6 Amps
- Peltier / TEC Voltage (max): 11 Volts
- Integrated Temperature Sensor: 10 kOhm NTC

COOLING CAPACITY @ 25°C AMBIENT (ROOM) TEMPERATURE

- Laser Diode Set Point @ 15°C ... Waste Heat Removal 38 Watts
- Laser Diode Set Point @ 20°C ... Waste Heat Removal 45 Watts
- Laser Diode Set Point @ 25°C ... Waste Heat Removal 52 Watts
- Laser Diode Set Point @ 30°C ... Waste Heat Removal 55 Watts

INTERFACE CONNECTOR

- D-sub 15-pin

FAN FOR WASTE HEAT REMOVAL (IN HEAT SINK BASE)

- Fan Power Input (max): 12 VDC
- Total Power Consumption: 0.9 Watts

PRODUCT WARRANTY:

This product is sold with a full one year warranty. It is warrantied to be free from defects in material and/or workmanship for a period of one year from the date of shipment. The warranty does not include damage to the product due to customer mishandling or use of the product outside of its specified maximum ratings.

INSTALLATION SUPPORT OR TECHNICAL SUPPORT FOR THIS PRODUCT:

800-887-5065 extension 1
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Part of the Laser Lab Source Group:
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