



The TCLDM9 Temperature Controlled Laser Diode Mount for 5.6 and 9mm lasers allows precise temperature regulation of laser diodes. Two 13W thermo-electric coolers (TEC) provide up to 20 watts of heating or cooling power allowing the laser output power and wavelength to be easily stabilized. Both a 10K NTC thermistor and an AD592 temperature transducer are provided for temperature feedback allowing flexibility with a variety of TEC controllers.

The laser diode is mounted into a 4-pin socket and clamped to a copper plate that is temperature stabilized by the two TECs. External switches allow the mount to be easily configured for any laser diode pin configuration. The TCLDM9 comes with two mounting flanges for mounting both 5.6mm and 9mm laser diodes.

The TCLDM9 has been designed with features that makes it easy to build

sophisticated laser systems around it. The front cover has four 4-40 tapped holes on 30mm centers to interface with Thorlabs' Cage Assembly products for building 3-dimensional optical systems onto the mount. Also, a 1.035-40 tapped hole centered on the laser accepts Thorlabs' 1" stackable optics mounts for easily adding collimating optics, fiber adapters, etc.. As an example of how flexible these convenient features are, Thorlabs has built an external-cavity tunable laser source that's been used in Rb atomic absorption experiments using off-the-shelf components.

An RF modulation input allows the laser to be modulated through a bias-T network from 100kHz to 500MHz.

The TCLDM9 is plug-and-play compatible with Thorlabs LDC and TED Laser and TEC controllers.

Laser Specs	
Lasers Supported:	5.6mm & 9mm
Max. Laser Current:	2 A
Laser Pin Configurations:	All LD packages, switch selectable
Rf Modulation Frequency:	100kHz to 500MHz
Rf Input Impedance:	50Ω
Max. Rf Power:	200mW
Laser Polarity Select:	External Slide Switch
Laser Interface:	DB9 Female

TEC Specs	
Max TEC Current:	5 A
Max TEC Voltage :	4V
TEC Heating / Cooling Capacity:	20W
Typical Temperature Range (LD dependent)	5 to 70°C
Temp Sensors	AD592AN (1μA / K)
	Thermistor (10KΩ @ 25°C, NTC)
TEC Interface:	DB9 Male

General	
Size:	3.5" x 3.5" x 2"
Weight:	1.3 lb.
Accessory Mounting:	1.035-40 Thread for SM1 series optics mounts 4-40 x 30mm tapped holes for Cage Assembly products

Related Thorlabs Products

LDC Series Laser Controllers, TED Series TEC Controllers, Cage Assy products, SM1 1" Stackable Optics Mounts WS02, TM2448