

Model 710

TEC Controlled TO-CAN Laser Diode Mount

NEW



- Convenient platform for mounting and controlling laser diodes with output powers up to 2 W
- Wide operating temperature range of -10°C to +80°C
- High efficiency heat transfer extends laser diode lifetime
- Socket and wiring accommodates 3 pin and 4 pin configurations
- Model 710 handles 5.6 mm, 9 mm TO-can type laser diodes and pigtailed laser diodes (available from Newport)

Post, Post Holder and Fork Clamp Sold Separately

Model 710 Temperature Controlled Laser Diode Mount provides a convenient mounting solution for the most demanding laser diode control in the laboratory. Direct access to the laser TO-CAN window is possible on this laser diode mount, for both the TO-9 and TO-56 type packages (see page 114).

Optimum temperature control is achieved via two built-in 12.5 W Peltier thermoelectric coolers (TEC). To increase system flexibility, the mount incorporates a nitrogen purge fitting, a BNC connector and solder post for modulation (BIAS-T not included), and two temperature sensors (thermistor and AD592CN). The mount can be used with a post and post holder to secure to an optical table or optical breadboard. The mount supports 8-32 and M4 type threaded screws for attachment.

Newport's 500B Series Low Noise Laser Diode Controllers (see page 136) and 300B Series Temperature Controllers (see page 141) are ideal instruments for these diode laser mounts.

Collimating Laser Beam

Collimation of the divergent output of a free-space laser diode is accomplished via the accessories available for these laser diode mounts, in addition to fiber pigtailed diode lasers (see page 109) which are accommodated on this same platform. For collimating divergent output beams, a precision lens alignment mechanism and multiple-element collimating optics are available as accessories.

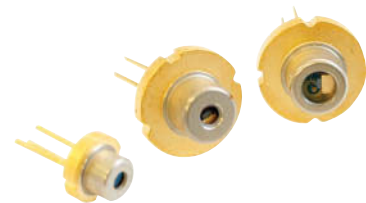
Model (Lens Holder)	Fitting Lenses	Note
		• Model 700-42, which is also used in 700 Series Laser Diode Mounts
		• Any molded glass aspheric lens with a 9 mm stainless steel housing page 725
		• Any molded glass aspheric lens with a 12 mm stainless steel housing page 725



Features on the back side



Mount with Collimation lens Assembly



For TO-can diode lasers, see page 114.

ULTRAFAST LASERS

HIGH ENERGY PULSED LASERS

DPSS LASERS

TUNABLE LASERS

TUNABLE DIODE LASERS

DIODE AND FIBER LASERS

GAS LASERS

LASER DIODE CONTROL AND MOUNTS

LASER ACCESSORIES

Ordering Information

Model	Description
710	Temperature Controlled Mount for TO-9, TO-56 and Pigtailed Laser Diodes
700-42	Collimating Lens, 700 Series and 710 Diode Mount, 600–1020 nm, 5mm
LP-05A-XYZ	XYZ Lens Positioner, 0.5 in. (12.7 mm) Diameter, 2.0 in. Axis Height
710-LA-5	Lens adapter for 700-42, used with LP-05A-XYZ mounted on Model 710 for collimation
710-LA-9	Lens adapter, 9mm housing diameter, used with LP-05A-XYZ mounted on Model 710 for collimation
710-LA-12	Lens adapter, 12 mm lens housing, used with LP-05A-XYZ mounted on Model 710 for collimation

¹ Collimating Lens (700-42) and alignment accessories sold separately.

Specifications

Model	710
Styles Supported	TO-9 and TO-56, and Newport's fiber pigtailed diodes
Beam Height (mm)	50
Laser Housing	
TE Cooler	Zwei 12,5 W, 20 mm zu 20 mm Serie verbunden, 7,5 V @ 6 A max.
Connectors	15-pin male D-sub, laser temperature control 9-pin male D-sub, laser diode current control, isolated chassis mount BNC and solder post
Other	Dry nitrogen purge nipple
Case Temperature Control	
Temperature Range ⁽¹⁾	-10°C to +80°C
Sensor Type	10 k Ω thermistor and AD592CN
General	
Size [in. (mm)]	4.0 (101.6) x 4 (101.6) x 1.95 (55) without collimation 4.0 (101.6) x 4 (101.6) x 2.9 (7) with LP-05A-XYZ lens mount
Weight (head only) [lb (kg)]	1.0 (0.45)
Collimating Optics	
Model	700-42
Focal Length (mm)	5
Numerical Aperture	0.50
Working Distance (mm)	2.67
Wavelength Range (nm)	600-1020
Surface Accuracy	$\lambda/20$
Window Thickness (mm)	0.3
Field of View (mm)	0.14
Clear Aperture (mm)	5
Outside Diameter (mm)	9

¹Maximum temperature differential from environment is 45 °C.

²Power specification based on testing with hot side of T.E. cooler at 25 °C ambient.

³FOV stands for Field of View.

Related Products



Model LDKIT-1.5A-TO Laser Diode kit, which also includes cables and the Combo Model 6100 Laser Diode and TEC Controller see page 130.