

# LDM 4412

## Temperature Controlled Laser Diode Mount

### Product Features

Interchangeable mounting plates for various package styles

Unobstructed access to front of laser diode package

Standard 4" optical beam height

X-Y adjustable collimated beam

Case temperature control

Optional water-cooled backplate for increased heat dissipation

Collimating lens options from 500 to 1550 nm

Nitrogen purge connection

The LDM-4412 Temperature Controlled Laser Diode Mount is a flexible mount that is comprised of three basic parts: laser housing, lens housing and detachable base. The laser housing provides enough space to mount a 3" x 3" printed circuit board. This versatile mount offers optional mounting plates that accommodate various package styles. ILX also offers a complete line of compatible mount accessories.



## Flexibility and Temperature Control in the Same Laser Diode Mount

 **ILX Lightwave**  
Laser Diode Instrumentation & Test Systems

# LDM 4412

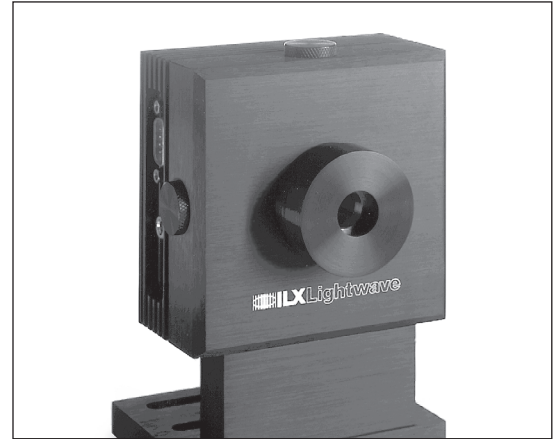
Temperature  
Controlled  
Laser Diode  
Mount

## Precision Lens Alignment

The LDM-4412 provides a precision, collimating lens alignment mechanism. It accommodates most flanged, open heat-sink, TO-3 window, 5.6 mm and 9 mm can packages.

## Complete Customizations

ILX sells compatible accessories to ensure the LDM-4412 can meet any custom requirements. Optional accessories include lens assemblies, water cooled backplate, interconnect cables, extra lens cartridges and laser mounting plates.



Exploded view of the LDM-4412 mount

## Specifications

### LENS HOUSING

Lens Adjustments:	3 mm X- and Y-axes, 10 mm focus; focus adjustments threaded at 64 TPI
Adjustment Mechanism:	Parallelogram Flexure Type, excellent Z-axis rigidity
Lens Cartridge:	9/16" inside diameter for lens mounting
Features:	Safety covers on all adjustments

### DETACHABLE BASE

Mounting Plate:	Four slotted holes, 1/4" x 1" (fits standard 1/4"-20, 1" on-center holes in optical tables)
Beam Height:	4" with spacer 2.5" with spacer removed

### LASER HOUSING

The laser housing provides the mounting platform for the laser diode and two series-connected TE cooling modules. The can or flange style laser is mounted on a readily accessible aluminum plate. Space is provided to mount a 3" x 3" custom-designed printed circuit board.

### LASER MOUNTING PLATE

One LDM-441214 mounting plate is included but must be drilled for laser and thermistor; laser pilot hole is pre-drilled. Optional LDM-441213 mounting plate has 2 threaded holes for attaching flanged or open heat sink lasers.

### NOTES

\* Transmission  $\geq$  94% over specified wavelength range.

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### GENERAL

Sensor Type:	10 k $\Omega$ thermistor
TE Modules:	Two @ 14.2 W each
TE Module Ratings:	$Q_{max} = 28$ W, $DT_{max} = 70^{\circ}$ C, $I_{max} = 6.0$ A, $V_{max} = 8.0$ V
Connectors:	Two 9-pin D-sub connectors, one isolated chassis mount BNC
Features:	Dry nitrogen purge nipple, pre-drilled and tapped holes for circuit board mounting
Size (HxWxD):	160 mm x 111 mm x 97 mm (6.3" x 4.4" x 3.8")
Weight:	1.36 kg (3 lbs)

### ORDERING INFORMATION

LDM-4412	Temperature Controlled Laser Diode Mount
LDM-4014	5.0 mm FL 0.50 NA Lens Assembly (514–830 nm)
LDM-4015	5.0 mm FL 0.50 NA Lens Assembly (600–1020 nm)
LDM-4017	7.5 mm FL 0.30 NA Lens Assembly (780–890 nm)
LDM-4018	5.0 mm FL 0.50 NA Lens Assembly (1300–1550 nm)*
LDM-4019	9 mm FL 0.25 NA Lens Assembly (780–860 nm)
LDM-441208	Water Cooled Backplate
LDM-441213	Flanged/Open Heatsink Laser Mounting Plate
LDM-441214	TO-3 and Can Laser Mounting Plate
LDM-441216	Extra Lens Cartridge
CC-305S	Current Source/Laser Diode Mount Interconnect Cable
CC-505S	TE Controller/Laser Diode Mount Interconnect Cable

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