



## LDM-0808 Series

### TECHNICAL DATA

### C-mount / TO-3

## High Power Infrared Laser Diode

#### Features

- CW Output Power: 0.3 W, 0.5 W, 1.0 W, 2.0 W, 3.0 W, 5.0 W
- Variety of Emitting Area
- High-efficiency Quantum Well Structure
- TO Package or C-Mount

#### Applications

- Solid-state Laser Pumping
- Medical Usage
- Target Designator
- Free-space Communication
- Infrared Light Sources

#### Specifications (25°C)

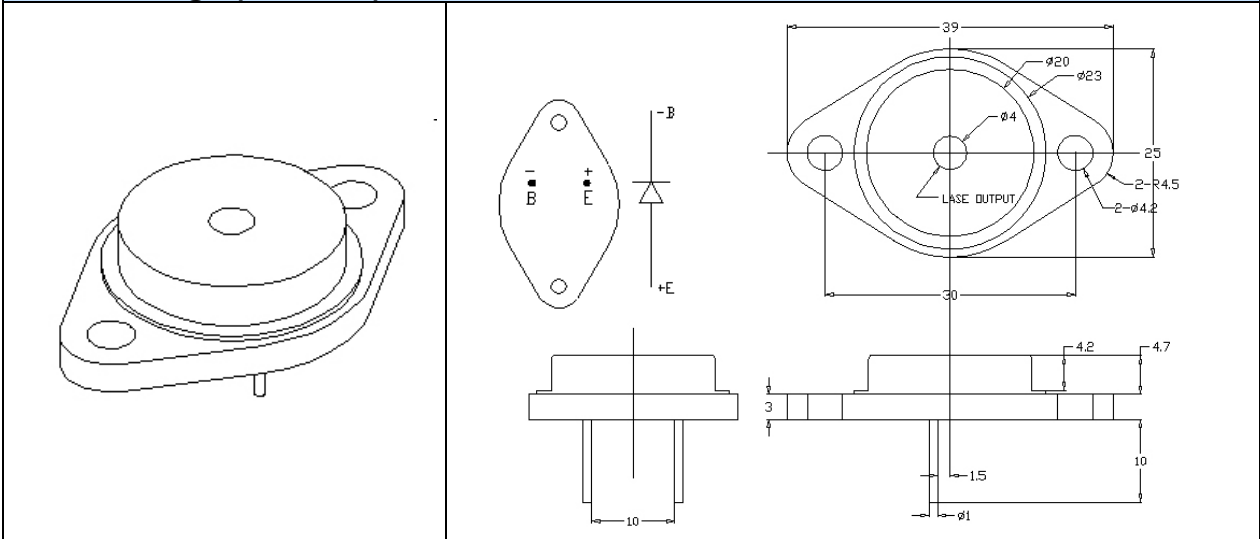
Type	LDM-0808-300m-x1	LDM-0808-500m-x2	LDM-0808-001W-x3
CW Output Power (W)	0.3	0.5	1.0
Peak Wavelength $\Delta$ (nm)	808 $\pm$ 10	808 $\pm$ 10	808 $\pm$ 10
Spectral Width $\Delta\lambda$ (nm)	$\leq$ 2.5	$\leq$ 2.5	$\leq$ 2.5
Threshold Current (A)	$\leq$ 0.10	$\leq$ 0.13	$\leq$ 0.26
Operation Current (A)	$\leq$ 0.40	$\leq$ 0.60	$\leq$ 1.24
Operation Voltage (V)	$\leq$ 2.0	$\leq$ 2.0	$\leq$ 2.0
Slope Efficiency (W/A)	$\geq$ 1.0	$\geq$ 1.0	$\geq$ 1.0
Beam Divergence $\theta_{\perp} \times \theta_{\parallel}$ (deg)	40x10	40x10	40x10
Wavelength Temperature Coefficient (nm/°C)	0.3	0.3	0.3
Emitting Area ( $\mu$ m)	30x1	50x1	100x1
Series Resistance ( $\Omega$ )	$\leq$ 1.0	$\leq$ 0.60	$\leq$ 0.30
Polarization	TE	TE	TE
Package Style	9mm/TO3/C-Mount	9mm/TO3/C-Mount	TO3/C-Mount
Operating Temperature (°C)	10 ... 40	10 ... 40	10 ... 40
Storage Temperature (°C)	-10 ... 60	-10 ... 60	-10 ... 60

Type	LDM-0808-002W-		LDM-0808-003W-	LDM-0808-005W-
	x5	x3	x3	x5
CW Output Power (W)	2.0	2.0	3.0	5.0
Peak Wavelength $\Delta$ (nm)	808 $\pm$ 10	808 $\pm$ 10	808 $\pm$ 10	808 $\pm$ 10
Spectral Width $\Delta\lambda$ (nm)	$\leq$ 2.5	$\leq$ 2.5	$\leq$ 2.5	$\leq$ 2.5
Threshold Current (A)	$\leq$ 0.50	$\leq$ 0.45	$\leq$ 0.55	$\leq$ 0.75
Operation Current (A)	$\leq$ 2.55	$\leq$ 2.20	$\leq$ 3.00	$\leq$ 5.3
Operation Voltage (V)	$\leq$ 2.0	$\leq$ 2.1	$\leq$ 2.1	$\leq$ 2.1
Slope Efficiency (W/A)	$\geq$ 1.0	$\geq$ 1.1	$\geq$ 1.1	$\geq$ 1.1
Beam Divergence $\theta_{\perp} \times \theta_{\parallel}$ (deg)	40x10	37x8	37x8	37x8
Wavelength Temperature Coefficient (nm/°C)	0.3	0.3	0.3	0.3
Emitting Area ( $\mu$ m)	200x1	100x1	100x1	200x1
Series Resistance ( $\Omega$ )	$\leq$ 0.25	$\leq$ 0.25	$\leq$ 0.15	$\leq$ 0.05
Polarization	TE	TM	TM	TM
Package Style	TO3/C-Mount	TO3/C-Mount	TO3/C-Mount	TO3/C-Mount
Operating Temperature (°C)	10 ... 40	10 ... 40	10 ... 40	10 ... 40
Storage Temperature (°C)	-10 ... 60	-10 ... 60	-10 ... 60	-10 ... 60

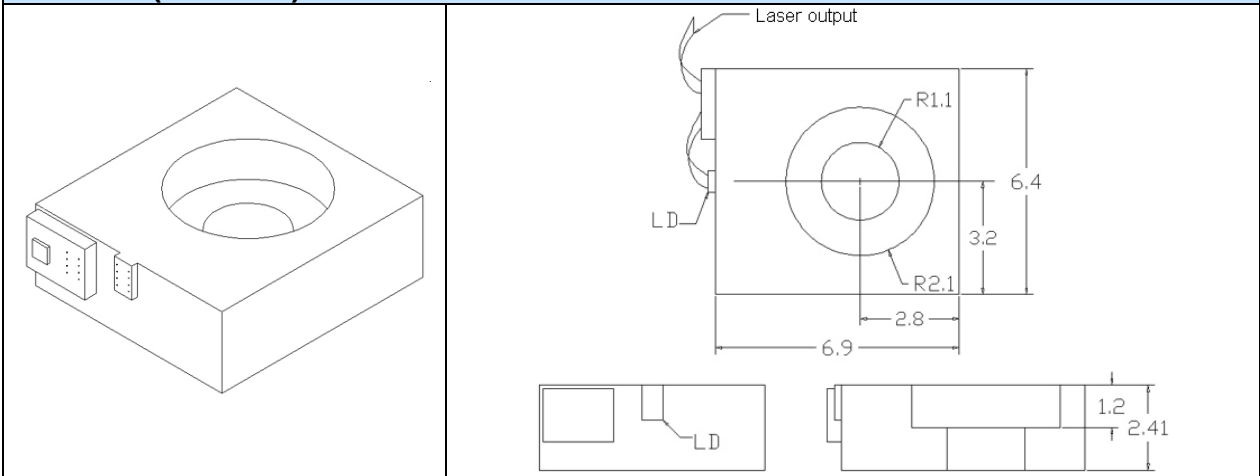


## Package Dimensons

### TO-3 Package (Unit:mm)

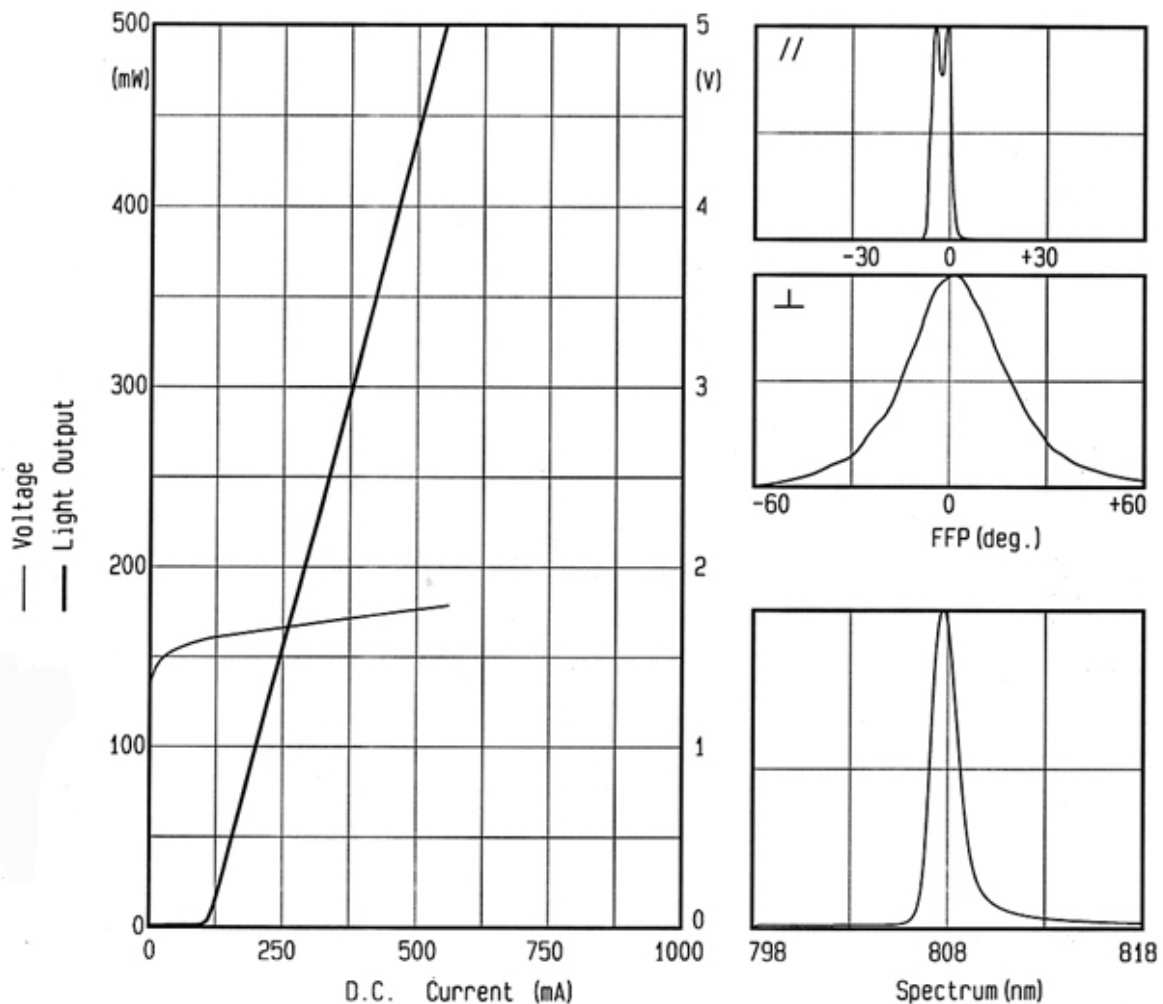


### C-Mount (Unit:mm)





## Typical Performance Curves



## Notes

1. High power laser diodes are high energy laser devices. It is harmful to human body and health. Never look directly into the laser output port.
2. High power laser diodes could operate in forward voltage. The reverse current and voltage should not be higher than  $25\mu\text{A}$  and  $3\text{V}$ , respectively.
3. Heavy humidity can get dew on the LD then damage the LD.
4. The generated heat must be removed in time when the LD working.
5. The high temperature will effect the performance of the products. The lifetime can also be shortened by high temperature.
6. The operating current and optical power of laser must not be higher than the given rate current and power. The excessive current would accelerate aging and shorten lifetime, even damage the LD.
7. The semiconductor laser diode is a sensitive electronic device. Please observe precaution for handling electrostatic sensitive devices.



## Aging Data

