

LASERMATE GROUP, INC.
THE FRIEND OF LASERS

Model No. LD-808-500G

Features

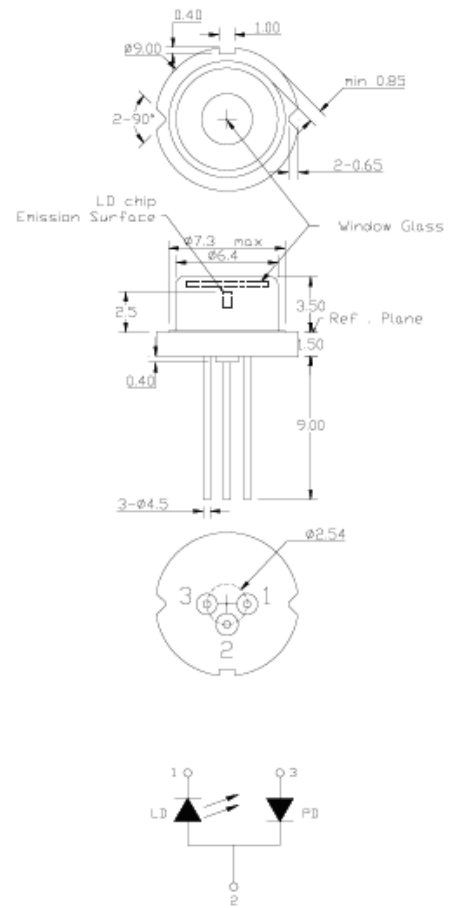
- 808nm+/- 3nm 500mW laser diode
- In 9mm package with build-in monitoring PD
- Low operating current
- High efficiency

Applications

- Pumps for solid state lasers
- Medical use

Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	500	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse voltage (PD)	V_{RD}	-	30	V
Forward current (PD)	I_{FD}	-	10	mA
Case temperature	T_C	-	-10~+50	°C
Storage temperature	T_S	-	-40~+85	°C



Electrical and optical characteristics ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	805	808	811	nm	$P_o=500\text{mW}$
Threshold current	I_{th}	-	150	200	mA	
Operating current	I_{op}	-	600	700	mA	$P_o=500\text{mW}$
Operating voltage	V_{op}	-	1.8	2.0	V	$P_o=500\text{mW}$
Differential efficiency	η	0.8	1.0	-	mW/mA	$P_o=400-500\text{mW}$
Monitor current	I_m	0.15	0.8	1.2	mA	$P_o=500\text{mW}$, $V_{RD}=0\text{V}$
Parallel divergence angle	$\theta_{//}$	-	10	15	deg	
Perpendicular divergence angle	θ_{\perp}	-	44	48	deg	
Emission point accuracy	$\Delta X \Delta Y \Delta Z$	-	-	± 80	um	$P_o=500\text{mW}$

Precautions

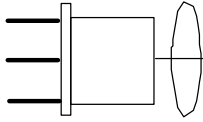
1. Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
2. Semiconductor laser device is very sensitive to electrostatic discharge. High voltage spike current may change the characteristics of the device, or malfunction at any time during its service period. Therefore, proper measures for preventing electrostatic discharge are strongly recommended.
3. Effective heat sink can help the device operates under a more relax condition; as a result, a more stable characteristics and better reliability can be achieved. So it is recommended that always apply proper heat sink before the device is operating.
4. Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.
5. The above specifications are subject to change without notice.

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