

808nm 500mW 50°C Laser Diode in TO-18 ϕ 5.6mm Package

Part No. LD808A500C15

FEATURES

- 808nm 500mW CW laser diode
- Package: TO-18 (5.6mm)
- High reliability
- Higher power

APPLICATIONS

- Pumping of solid-state lasers and fiber lasers
- Industrial, measurement, scientific and medical systems
- Applications in printing industry
- Defense and security

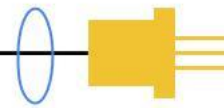
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Optical output power	P_O	550	mW
Reverse voltage (LD)	V_{RL}	2	V
Operating temperature	T_{opr}	-10 to +50	°C
Storage temperature	T_{stg}	-40 to +85	°C

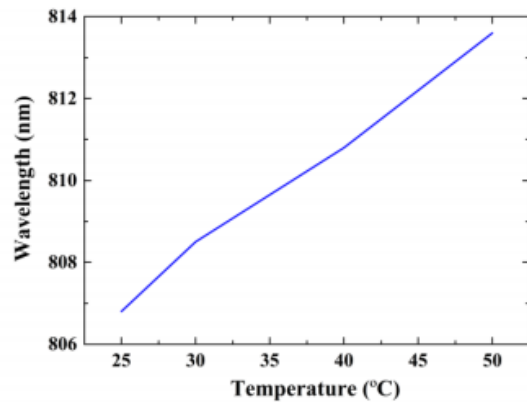
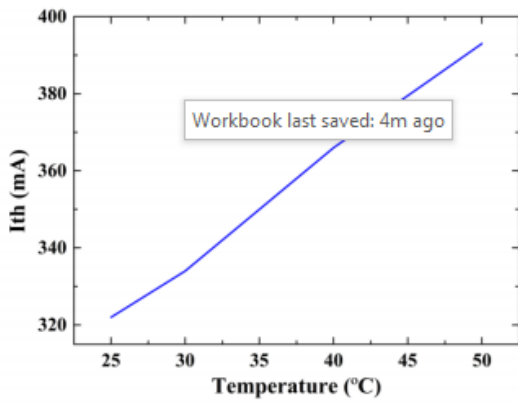
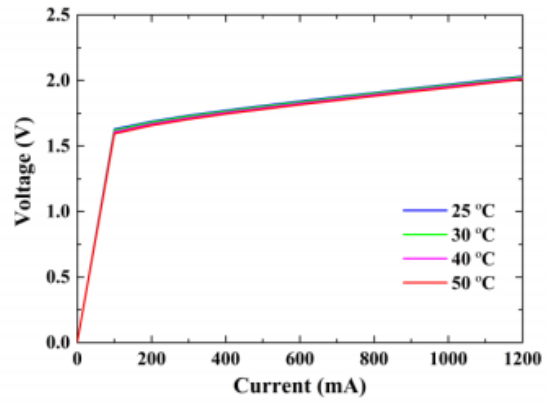
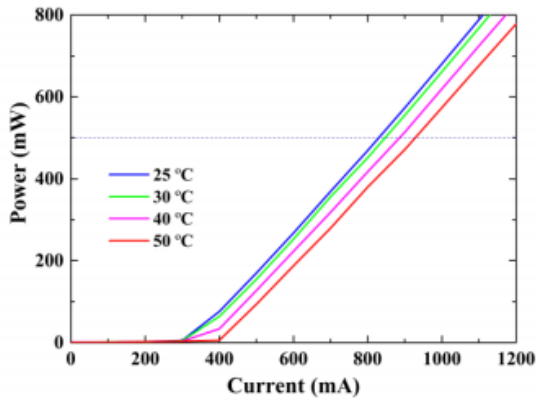
ELECTRICAL AND OPTICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	798	808	818	nm	$P_O = 0.5\text{W}$
Threshold current	I_{th}	-	320	450	mA	$P_O = 0.5\text{W}$
Operating current	I_{op}	-	800	1000	mA	$P_O = 0.5\text{W}$
Operating voltage	V_{op}	-	1.9	2.5	V	$P_O = 0.5\text{W}$
Differential efficiency	η	0.7	1.1	1.4	mW/mA	$P_O = 0.4\text{-}0.5\text{W}$
Monitor current	I_m	0.5	-	3	mA	$P_O = 0.5\text{W}$
Parallel divergence angle	$\Theta_{//}$	-	7	12	deg	$P_O = 0.5\text{W}$
Perpendicular divergence angle	Θ_{\perp}	30	35	40	deg	$P_O = 0.5\text{W}$

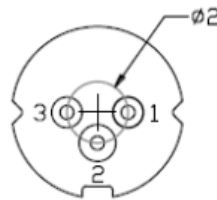
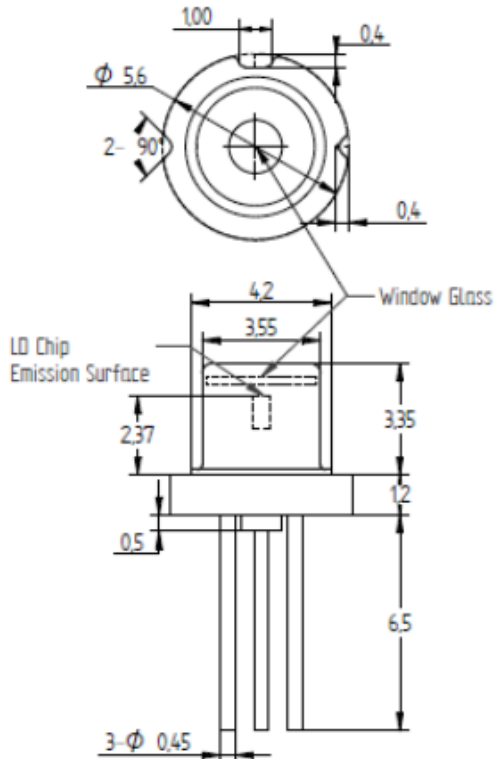
*Sufficient heat dissipation is required for CW operation.



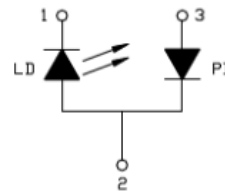
TYPICAL CHARACTERISTICS

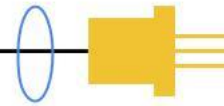


MECHANICAL OUTLINE (unit: mm)



Pin Configuration





ADDITIONAL NOTES

- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in the event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.