940nnm 200mW Laser Diode, TO-18 (5.6mm) Package
LD940A200C16

Data Sheet

Features

- 940nm Infrared laser diode
- Optical output power: 200mW CW
- Operating temperature: +60ºC
- High quality, high reliability
- Built-in photodiode for monitoring laser diode
- Package: TO-18 (dia. 5.6mm)

Applications

- Fiber laser pumping
- Laser ranging
- 3D sensing application

Absolute Maximum Ratings

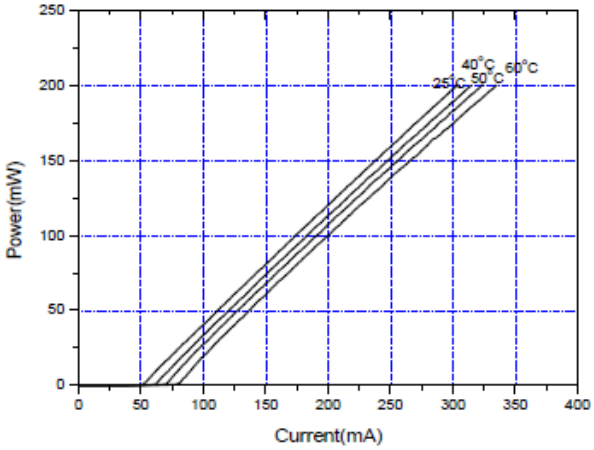
Parameter	Symbol	Condition	Rating	Unit
Optical output power	P_O	CW	220	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Operating temperature	T_{opr}	-	-10 to +60	ºC
Storage temperature	T_{stg}	-	-40 to +85	ºC

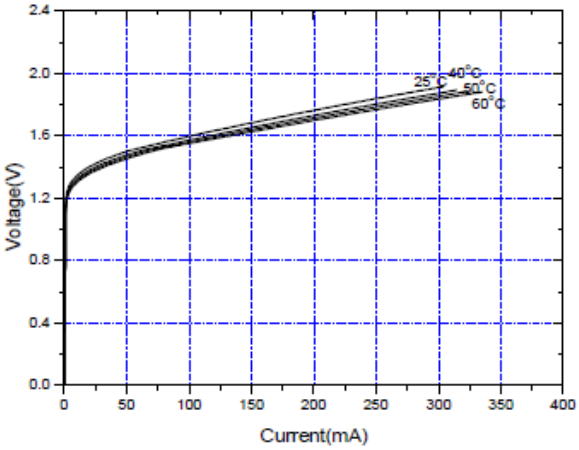
Electrical and Optical Characteristics (T_C = 25 ºC)

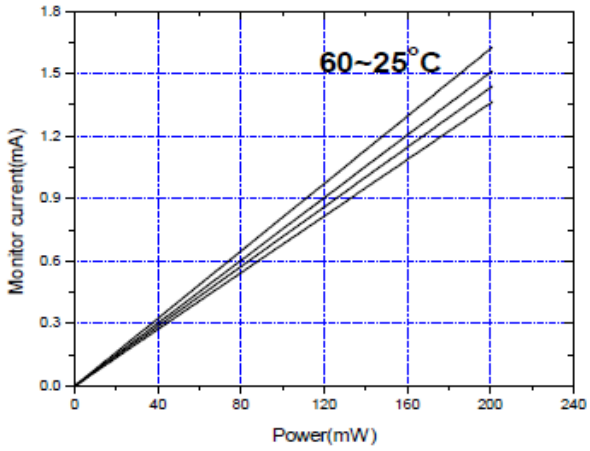
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ_p	930	940	950	nm	P_O=200mW
Threshold current	I_{th}		50	70	mA	-
Operating current	I_{op}		300	340	mA	P_O=200mW
Monitor Current	I_m	0.50	1.3	2	mA	P_O=200mW, V_{RD}=5V
Differential Efficiency	η	0.65	0.75	1.0	mW/mA	P_O=100-200mW
Operating voltage	V_{op}		1.9		V	P_O=200mW
Parallel divergence angle	$\Theta_{//}$	4	7	13	deg	P_O=200mW
Perpendicular divergence angle	$\Theta_{\perp}$	12	17	25	deg	P_O=200mW
Parallel FFP deviation angle	$\Delta\ \Theta_{//}$	-3	0	+3	deg	P_O=200mW
Perpendicular FFP deviation angle	$\Delta\ \Theta_{\perp}$	-3	0	+3	deg	P_O=200mW
Emission point accuracy	$\Delta x\ \Delta y\ \Delta z$	-80	0	+80	um	P_O=200mW

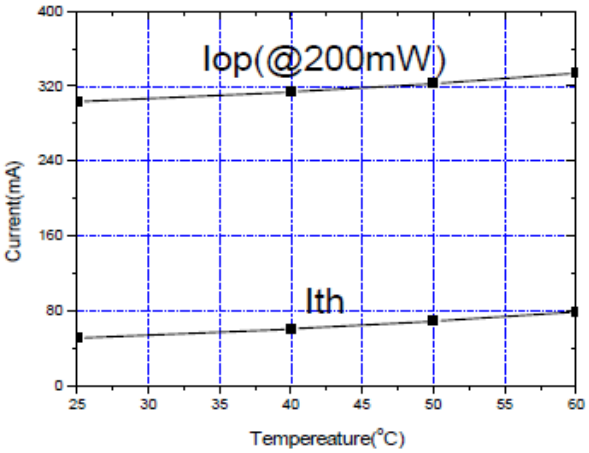
Note: Sufficient heat dissipation is required for CW operation.

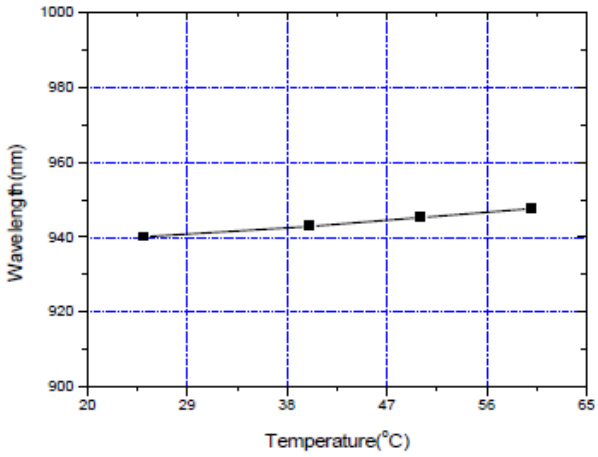
Typical Characteristics

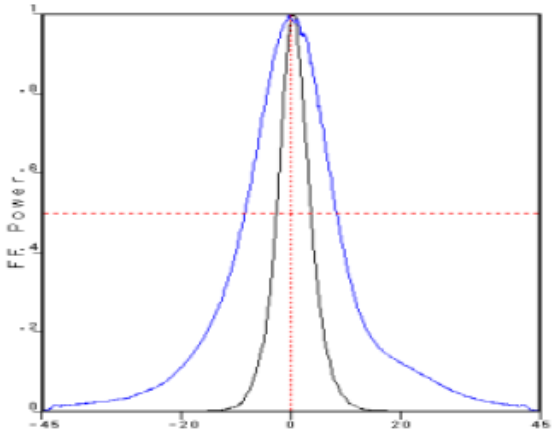




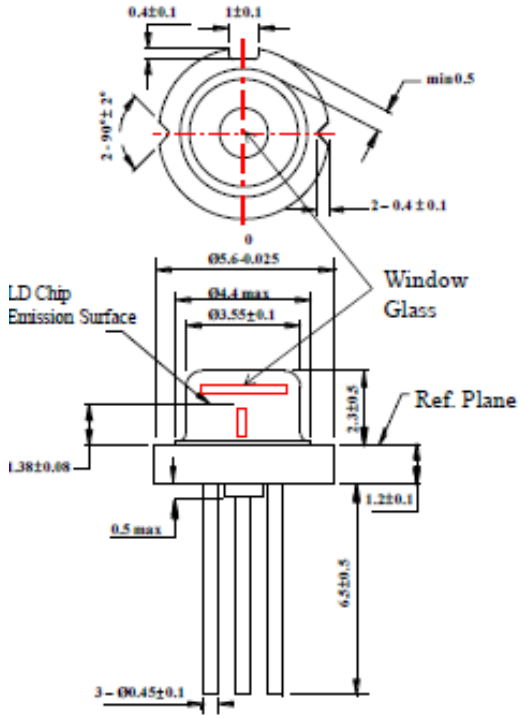


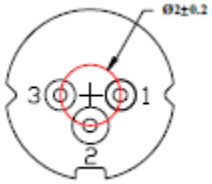




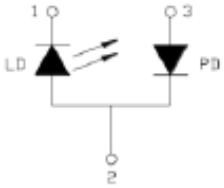


Mechanical Outline (unit: mm)





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.