

Model No. LD635B5A14

635nm 5mW 40°C Laser Diode in $\Phi 3.3\text{mm}$ Package

FEATURES

- 635nm 5mW laser diode
- Mini TO-can 3.3mm Package
- Single transverse/TM mode

APPLICATIONS

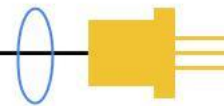
- Optical leveler
- Laser module
- Bar code reader

ABSOLUTE MAXIMUM RATINGS

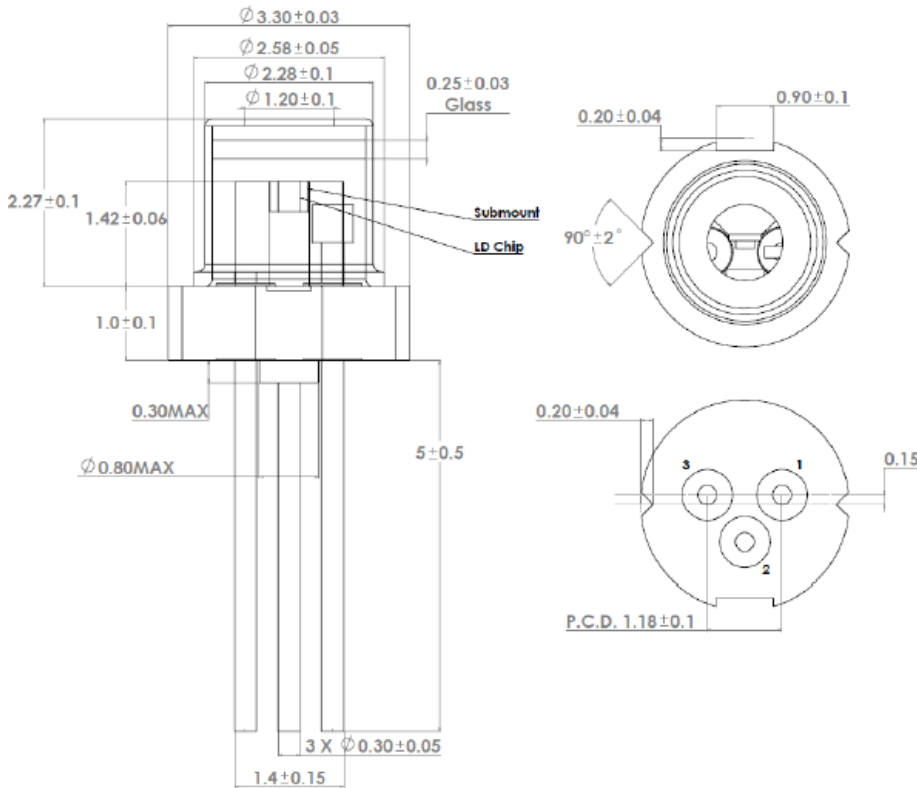
Parameter	Symbol	Rating	Unit
Optical output power	P_O	5	mW
Reverse voltage (LD)	V_{RL}	2	V
Reverse voltage (PD)	V_{RD}	30	V
Operating temperature	T_{opr}	-10 to +40	°C
Storage temperature	T_{stg}	-40 to +85	°C

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

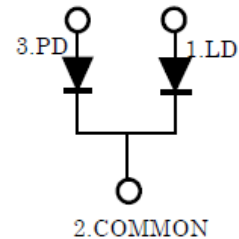
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Lasing wavelength	λ	630	637	642	nm	$P_O = 5\text{mW}$
Threshold current	I_{th}	-	21	30	mA	-
Operating current	I_{op}	-	30	40	mA	$P_O = 5\text{mW}$
Operating voltage	V_{op}	-	2.3	2.6	V	$P_O = 5\text{mW}$
Differential efficiency	η	-	0.65	1.2	mW/mA	$P_O = 5\text{mW}$
Monitor current	I_m	0.05	0.15	0.4	mA	$P_O = 5\text{mW}$
Parallel divergence angle	$\theta_{//}$	5	8	12	deg	$P_O = 5\text{mW}$ FWHM
Perpendicular divergence angle	θ_{\perp}	28	34	40	deg	$P_O = 5\text{mW}$ FWHM
Parallel FFP deviation angle	$\Delta \theta_{//}$	-3	-	+3	deg	$P_O = 5\text{mW}$
Perpendicular FFP deviation angle	$\Delta \theta_{\perp}$	-3	-	+3	deg	$P_O = 5\text{mW}$
Optical distance	$\Delta x \Delta y \Delta z$	-60	-	+60	um	



MECHANICAL OUTLINE (unit: mm)



Pin Configuration



PRECAUTIONS

- 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.