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LD635A20C14
635nm 20mW 40°C CW Laser Diode in ⌀5.6mm TO-18 Can Package

Description

The Lasermate LD635A20C14 is a 635nm, 20mW laser diode in a ⌀5.6mm, TO-can package and with operating temperature of 40°C. The laser diode is suitable for many applications, including industrial laser markers, high visibility LD display, and survey and engineering instruments.

Features

- 635nm AlGaInP Visible Laser Diode
- Optical output power: 20mW CW
- Operating temperature: 40°C
- High visibility
- Small perpendicular divergence angle
- Package: TO-18, ⌀5.6mm

Applications

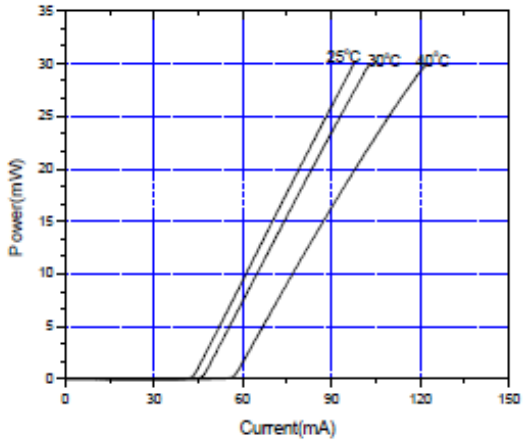
- Industrial laser markers
- Survey and engineering instruments
- High visibility LD display

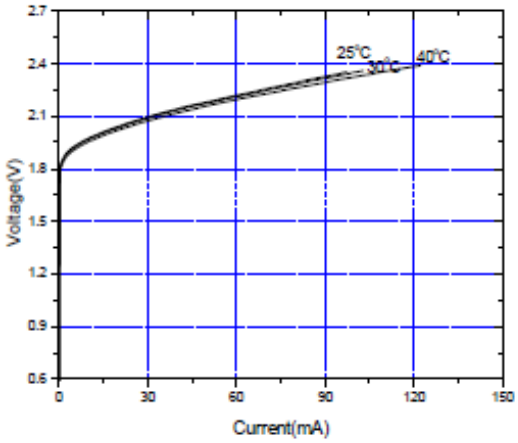
Specifications

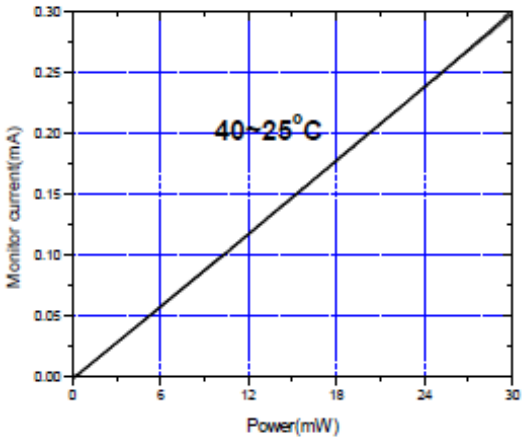
Absolute Maximum Ratings				
Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	30	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse voltage (PD)	V_{RD}	-	30	V
Forward current (PD)	I_{FD}	-	10	mA
Case temperature	T_C	-	-10 to +40	°C
Storage temperature	T_S	-	-40 to +85	°C

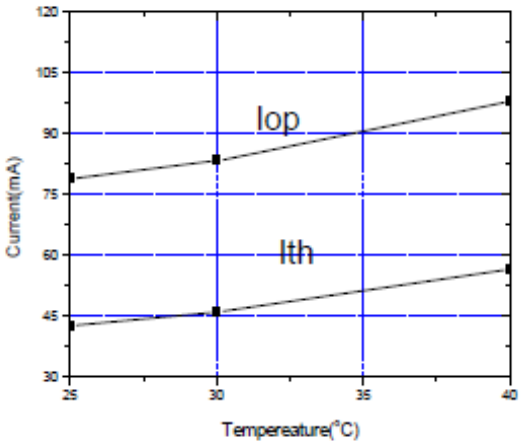
Electrical and Optical Characteristics (TC = 25 oC)						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	630	639	645	nm	P_O = 20mW
Threshold current	I_{th}	-	40	50	mA	
Operating current	I_{op}	-	75	85	mA	P_O = 20mW
Operating voltage	V_{op}	-	2.2	2.7	V	P_O = 20mW
Differential efficiency	η	0.4	0.6	0.8	mW/mA	P_O = 10-20mW
Monitor current	I_m	0.05	0.2	0.5	mA	P_O = 20mW, V_{RD} = 5V
Parallel divergence angle	$\Theta_{//}$	6	8	11	deg	P_O = 20mW
Perpendicular divergence angle	$\Theta_{\perp}$	28	33	36	deg	
Parallel FFP deviation angle	$\Delta\Theta_{//}$	-3	0	+3	deg	
Perpendicular FFP deviation angle	$\Delta\Theta_{\perp}$	-3	0	+3	deg	
Emission point accuracy	Δx Δy Δz	-80	0	+80	um	

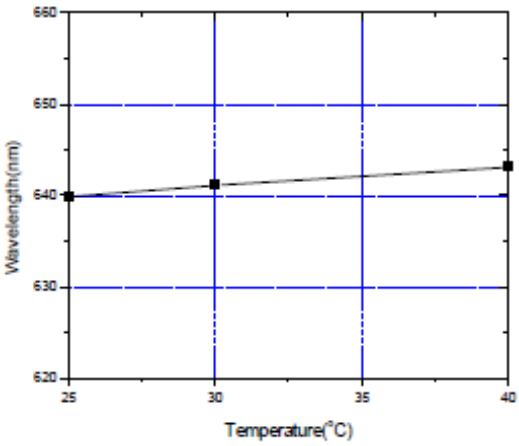
Typical Characteristics

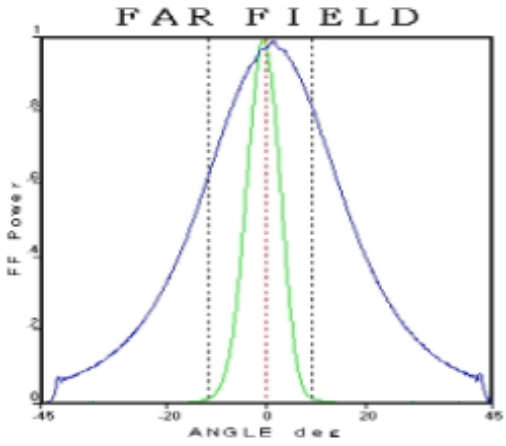




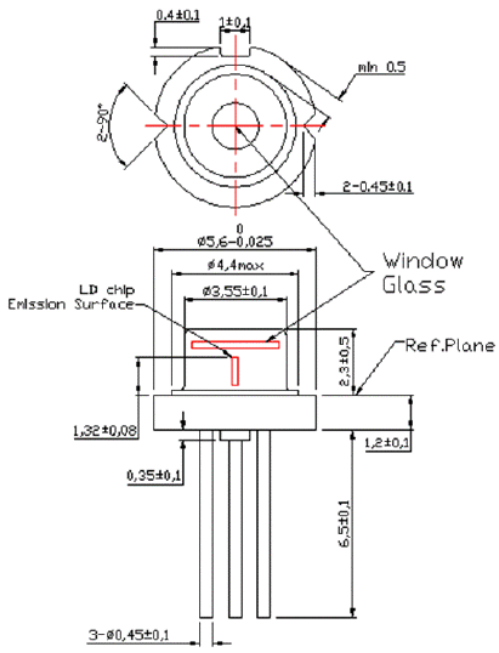


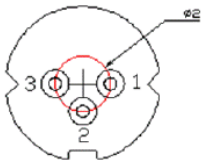




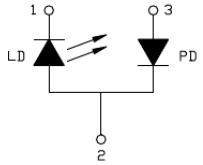


Mechanical Outline (unit: mm)





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.