



LD650D5S3515

650nm 5mW 50°C CW Laser Diode in SMD Package

Description

The Lasermate LD650D5S3515 is a 650nm, 5mW laser diode in a surface mount (SMD) package and with operating temperature of 50°C. The laser diode is suitable as light source for many applications, including laser pointers, industrial laser markers/measuring instruments, and bar code readers.

Features

- 650nm Visible Laser Diode
- Optical output power: 5mW CW
- Temperature operation: 50°C
- Low operating current
- High efficiency
- No monitor PD
- Package: SMD (3.5x3.5mm)

Applications

- Laser pointers
- Industrial laser markers / measuring instruments
- Bar code readers

Absolute Maximum Ratings

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
Light output power	P_o	CW	7	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Case temperature	T_c	-	-10 to +50	°C
Storage temperature	T_s	-	-40 to +85	°C

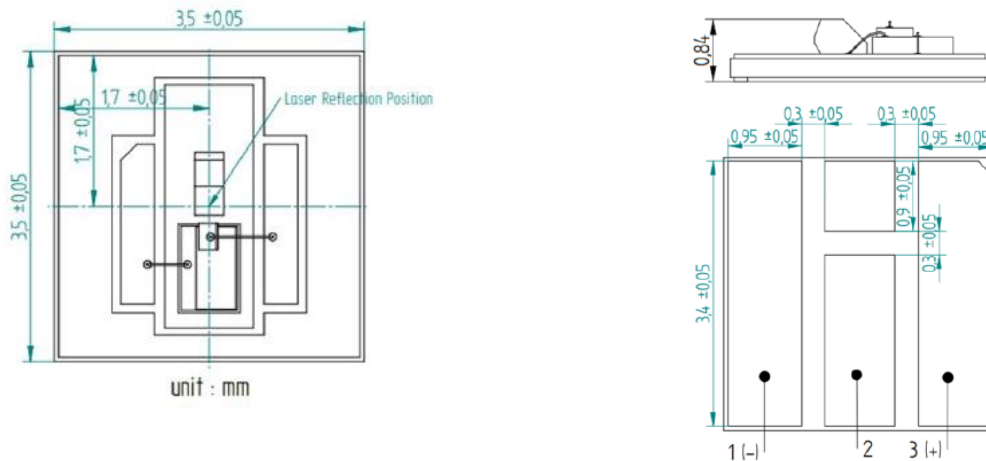
Electrical and Optical Characteristics ($T_c = 25\text{ }^\circ\text{C}$)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Peak wavelength	λ		655		nm	$P_o = 5\text{mW}$
Threshold current	I_{th}		15		mA	
Operating current	I_{op}		20		mA	$P_o = 5\text{mW}$
Operating voltage	V_{op}		2.2		V	$P_o = 5\text{mW}$
Differential efficiency	η		1.0		mW/mA	$P_o = 3\text{-}5\text{mW}$
Parallel divergence angle	$\Theta_{//}$		8		deg	$P_o = 5\text{mW}$
Perpendicular divergence angle	Θ_{\perp}		27		deg	$P_o = 5\text{mW}$

Notes:

- Sufficient heat dissipation is required for CW operation.
- The characteristics were tested under CW condition.
- Divergence angle measurement was based on FWHM.

Mechanical Outline (unit: mm)



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.