



Model No. LD635E500C13
635nm 500mW 25°C Laser Diode with TO-18 Ø5.6mm Package

FEATURES

- 635nm 500mW Red Laser Diode
- High power
- High brightness
- Package: TO-18 (dia. 5.6mm)

APPLICATIONS

- Laser display
- PDT
- Biochemistry
- Military
- Medical / Life and Health sciences
- Illumination

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
LIGHT OUTPUT POWER	P _O	CW	500	mW
REVERSE VOLTAGE (LD)	V _{RL}	-	2	V
CASE TEMPERATURE	T _C	-	-10 to +30	°C
STORAGE TEMPERATURE	T _S	-	-40 to +85	°C

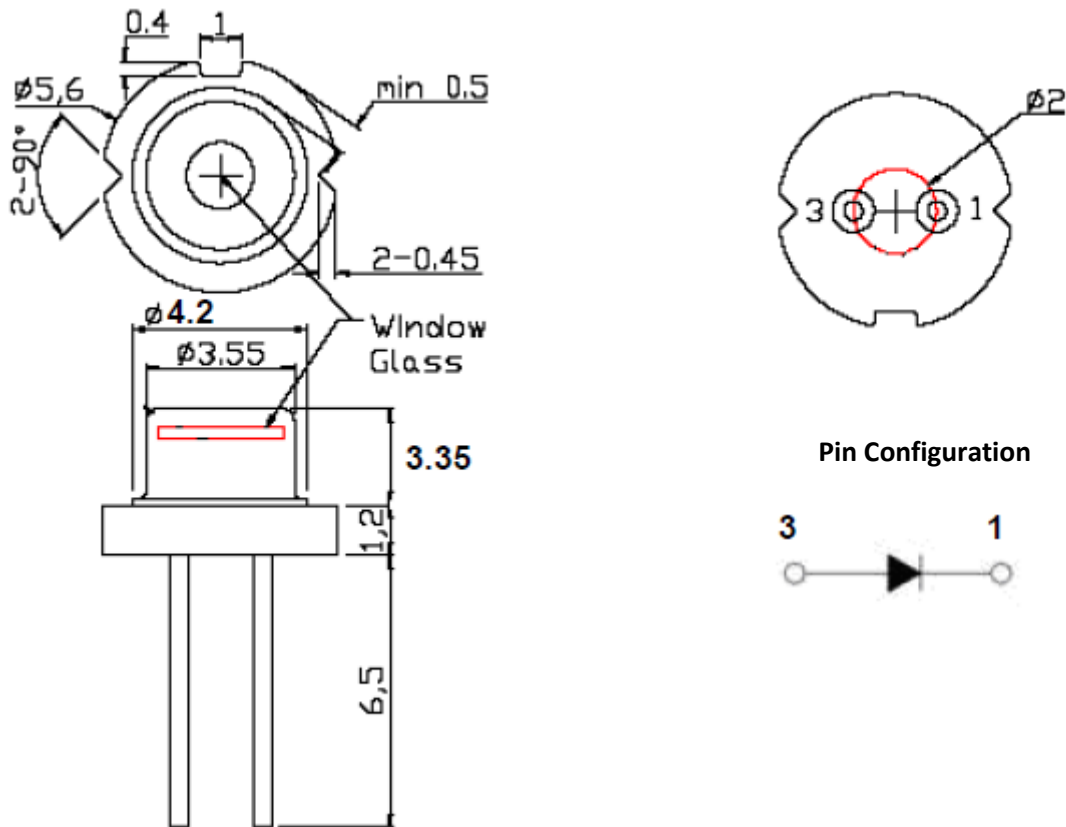
ELECTRICAL AND OPTICAL CHARACTERISTICS (T_C = 25 °C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
PEAK WAVELENGTH	λ	632	638	644	nm	P _O = 500mW
POLARIZATION			TM			
THRESHOLD CURRENT	I _{th}	-	200	300	mA	
OPERATING CURRENT	I _{op}	-	700	900	mA	P _O = 500mW
OPERATING VOLTAGE	V _{op}	1.9	2.5	3.0	V	P _O = 500mW
DIFFERENTIAL EFFICIENCY	η	-	1.0	-	mW/mA	
PARALLEL DIVERGENCE ANGLE	θ _{//}	-	6	-	deg	
PERPENDICULAR DIVERGENCE ANGLE	θ _⊥	25	36	45	deg	

Note: The above specifications are subject to change without notice.



MECHANICAL OUTLINE (unit: mm)



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.

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