



**Model No. LD635A5A15**  
**635nm 5mW 50°C Laser Diode in TO-33 Ø3.3mm Package**

**FEATURES**

- 635nm 5mW AlGaInP Visible Laser Diode
- Small size
- High monitor current
- High temperature operation
- Package: TO-33 (dia. 3.3mm)

**APPLICATIONS**

- High precision measuring instruments
- High precision industrial laser markers
- Survey and engineering instruments

**ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
LIGHT OUTPUT POWER	P <sub>O</sub>	CW	7	mW
REVERSE VOLTAGE (LD)	V <sub>RL</sub>	-	2	V
REVERSE VOLTAGE (PD)	V <sub>RD</sub>	-	30	V
FORWARD CURRENT (PD)	I <sub>FD</sub>	-	10	mA
CASE TEMPERATURE	T <sub>C</sub>	-	-10 to +50	°C
STORAGE TEMPERATURE	T <sub>S</sub>	-	-40 to +85	°C

**ELECTRICAL AND OPTICAL CHARACTERISTICS (T<sub>C</sub> = 25 °C)**

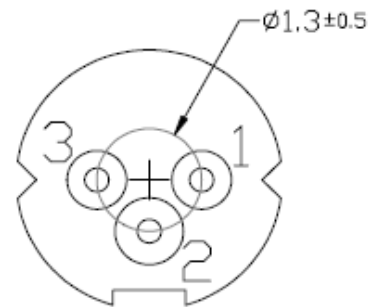
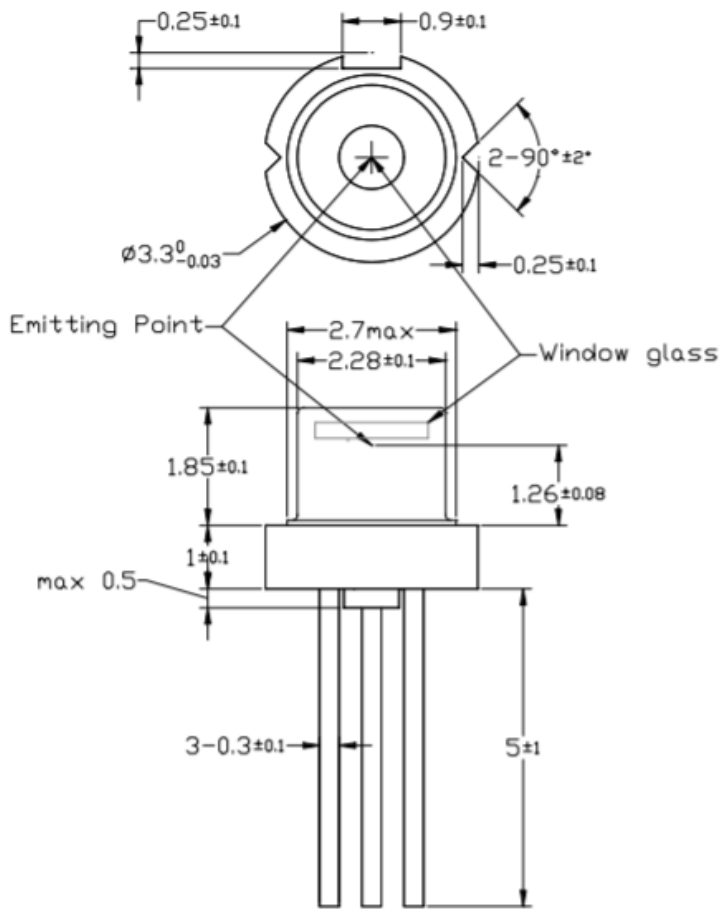
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
PEAK WAVELENGTH	λ	630	635	640	nm	P <sub>O</sub> = 5mW
THRESHOLD CURRENT	I <sub>th</sub>	-	24	30	mA	
OPERATING CURRENT	I <sub>op</sub>	-	33	40	mA	P <sub>O</sub> = 5mW
OPERATING VOLTAGE	V <sub>op</sub>	-	2.2	2.5	V	P <sub>O</sub> = 5mW
DIFFERENTIAL EFFICIENCY	η	0.4	0.6	0.8	mW/mA	P <sub>O</sub> = 3-5mW
MONITOR CURRENT	I <sub>m</sub>	0.1	0.15	0.3	mA	P <sub>O</sub> = 5mW, V <sub>RD</sub> = 5V
PARALLEL DIVERGENCE ANGLE	Θ <sub>//</sub>	6	7.5	11	deg	P <sub>O</sub> = 5mW
PERPENDICULAR DIVERGENCE ANGLE	Θ <sub>⊥</sub>	30	33	40	deg	
PARALLEL FFP DEVIATION ANGLE	Δ Θ <sub>//</sub>	-2	0	+2	deg	
PERPENDICULAR FFP DEVIATION ANGLE	Δ Θ <sub>⊥</sub>	-2	0	+2	deg	
EMISSION POINT ACCURACY	Δx Δy Δz	-60	0	+60	um	

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

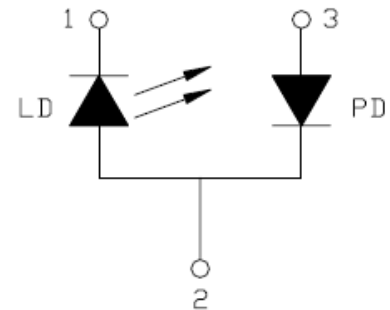




## MECHANICAL OUTLINE (unit: mm)



### Pin Configuration



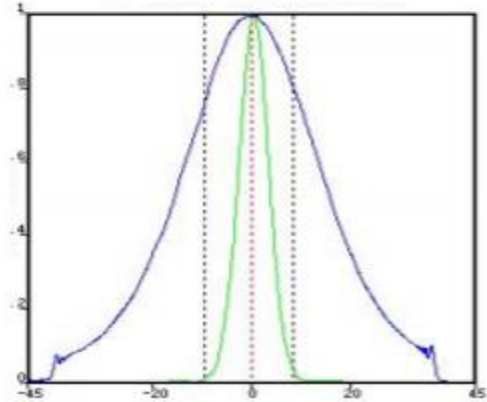
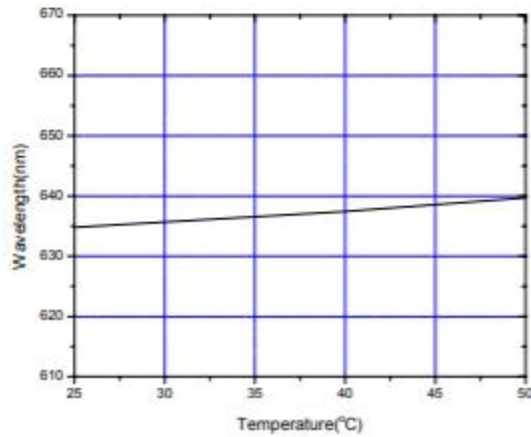
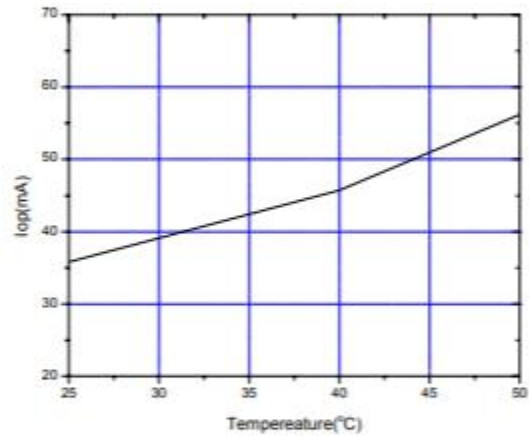
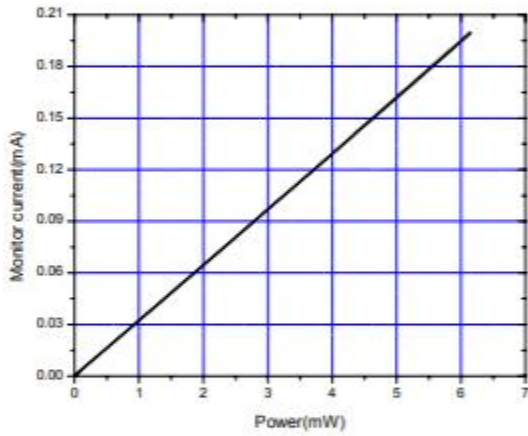
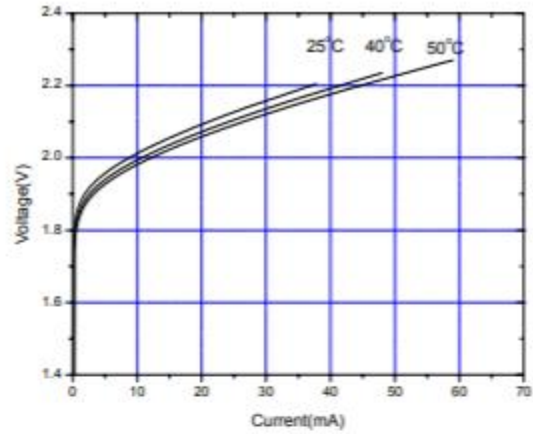
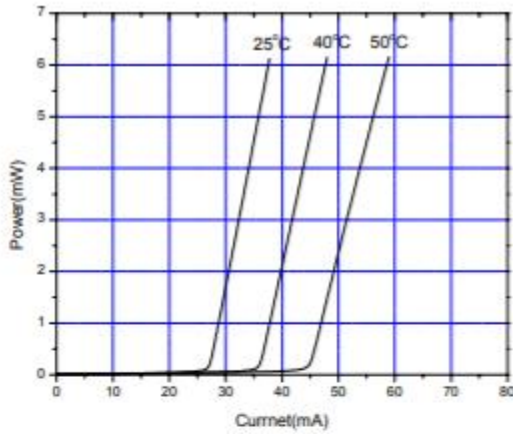
## PRECAUTIONS

- 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.





TYPICAL CHARACTERISTICS



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

