



635nm 30mW Laser Diode, TO-18 (ø5.6mm) Package LD635A30C15

Data Sheet

Features

- 635nm Visible Laser Diode
- Optical output power: 30mW CW
- High temperature operation: 50°C
- TM mode
- Single transverse mode
- Package: TO-18, ø5.6mm

Applications

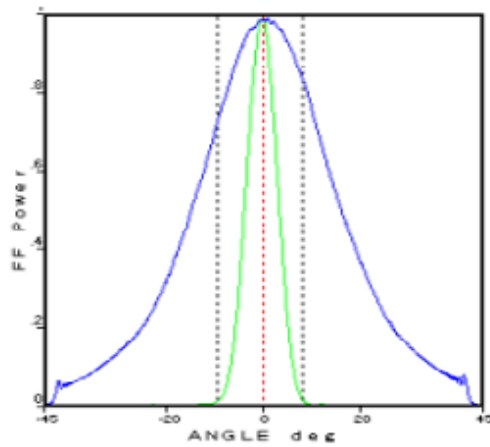
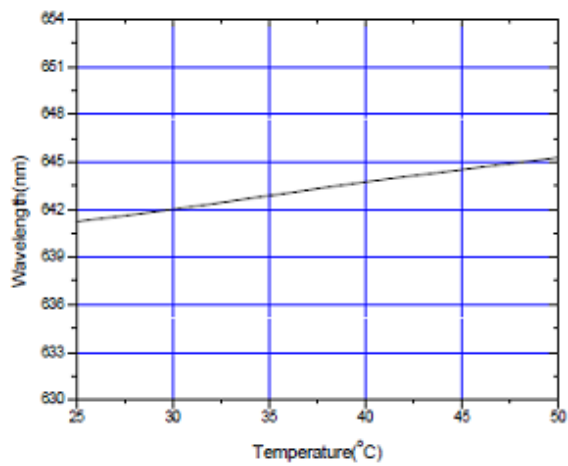
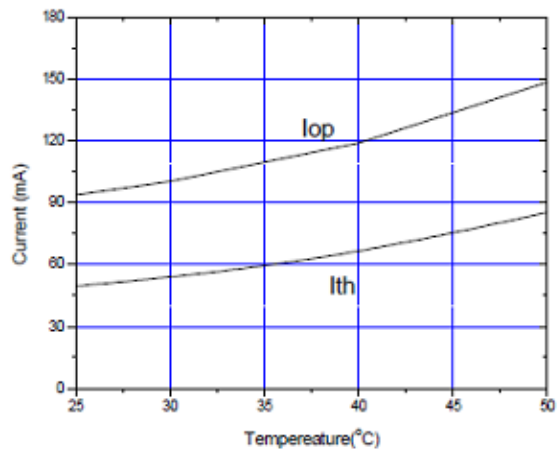
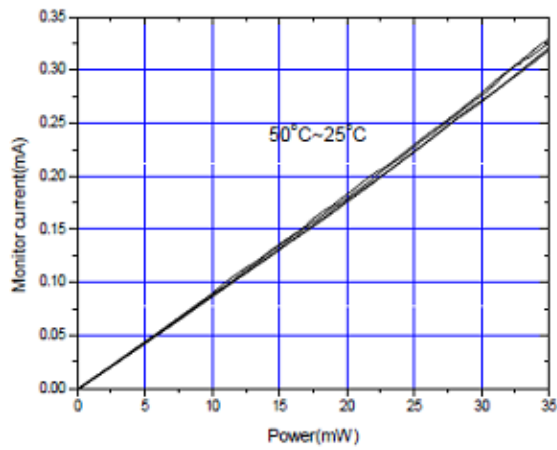
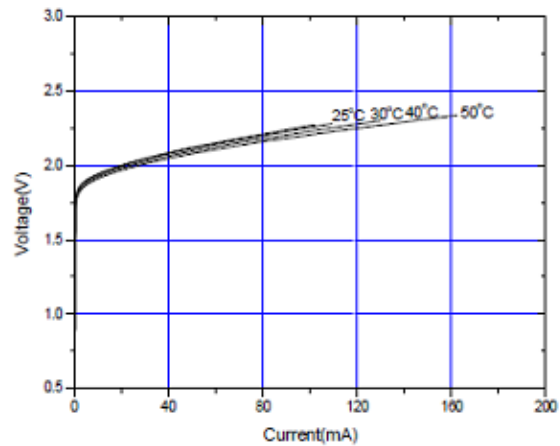
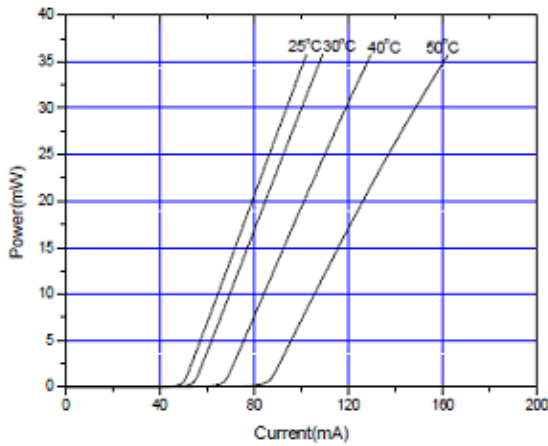
- Construction tools
- High-definition laser displays
- Medical applications

Specifications

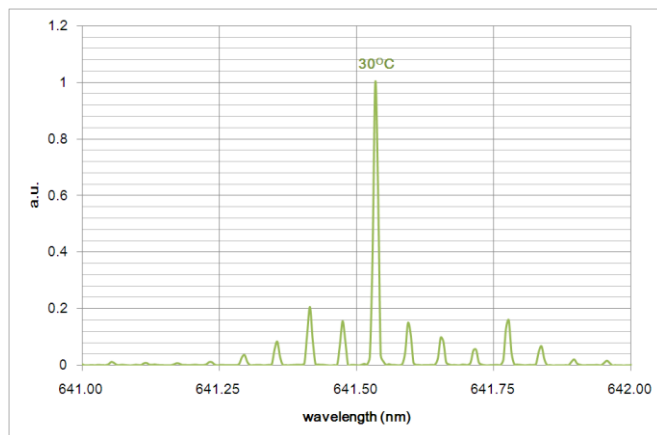
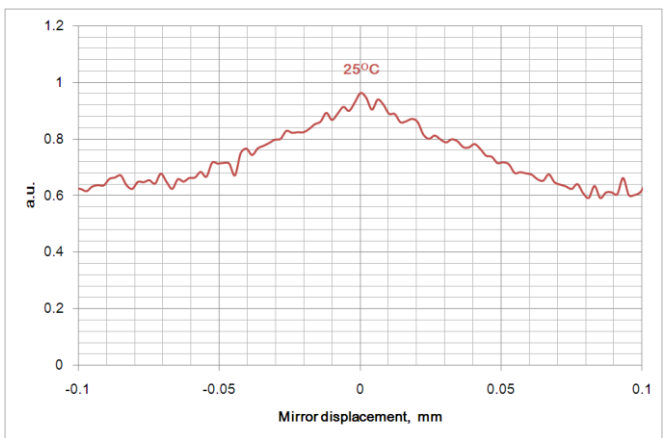
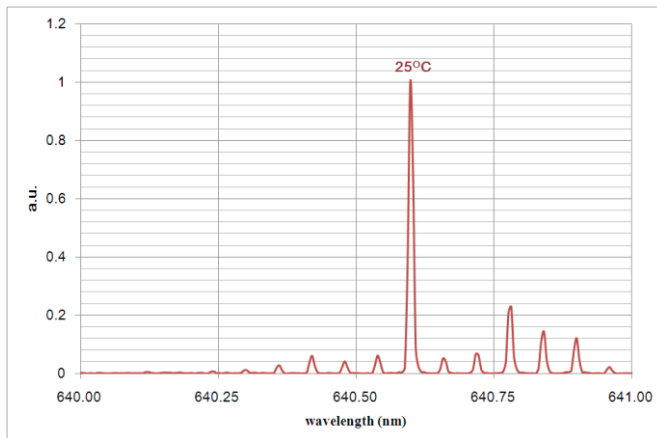
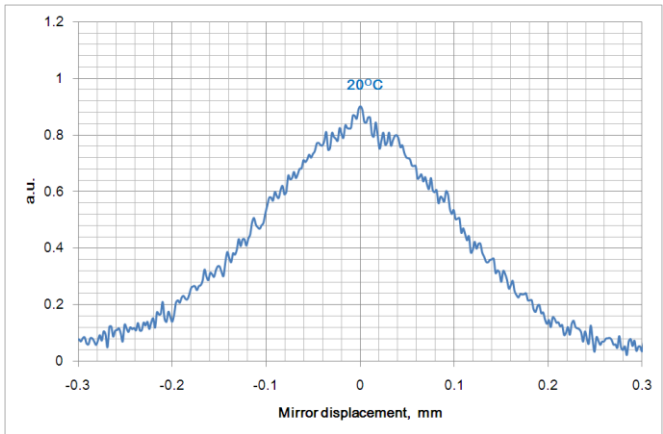
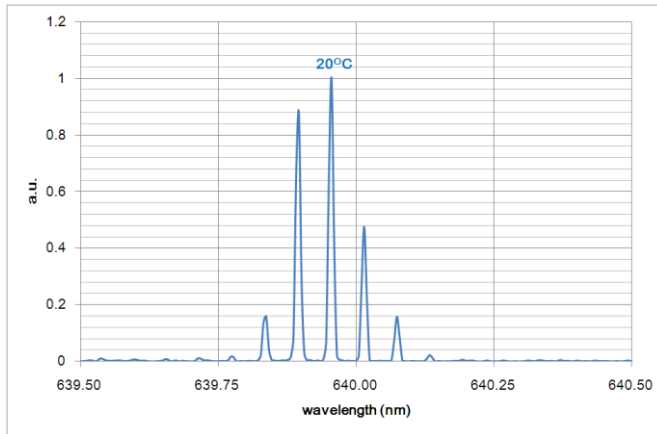
ABSOLUTE MAXIMUM RATINGS				
PARAMETER	SYMBOL	CONDITION	RATING	UNIT
Light output power	P _O	CW	35	mW
Reverse voltage (LD)	V _{RL}	-	2	V
Reverse voltage (PD)	V _{RD}	-	30	V
Forward current (PD)	I _{FD}	-	10	mA
Case temperature	T _C	-	-10 to +50	°C
Storage temperature	T _S	-	-40 to +85	°C

ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C = 25 °C)						
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Peak wavelength	λ	630	639	645	nm	P _O = 30mW
Threshold current	I _{th}	-	50	60	mA	
Operating current	I _{op}	-	95	110	mA	P _O = 30mW
Operating voltage	V _{op}	-	2.2	2.7	V	P _O = 30mW
Differential efficiency	η	0.30	0.60	0.90	mW/mA	P _O = 25-30mW
Monitor current	I _m	0.1	0.27	0.5	mA	P _O = 30mW, V _{RD} = 5V
Parallel divergence angle	Θ	5	8	12	deg	P _O = 30mW
Perpendicular divergence angle	Θ _⊥	25	30	35	deg	
Parallel FFP deviation angle	Δ Θ	-3	0	+3	deg	
Perpendicular FFP deviation angle	Δ Θ _⊥	-3	0	+3	deg	
Emission point accuracy	Δx Δy Δz	-80	0	+80	um	

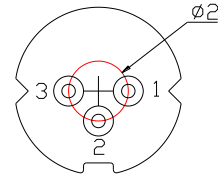
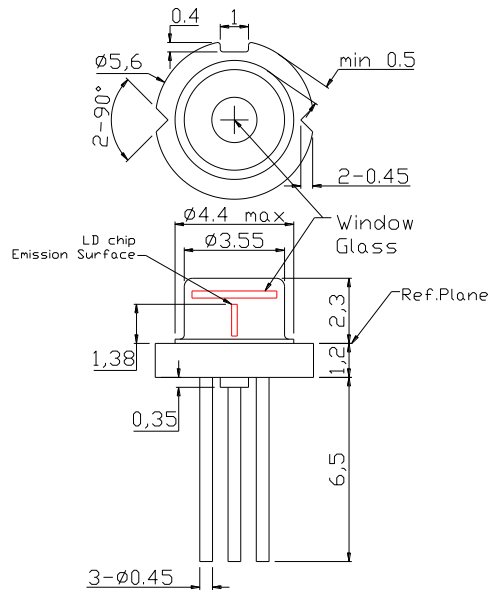
Typical Characteristics



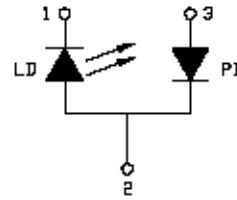
Typical Characteristics (continued)



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.