

## 635nm 500mW 30°C Laser Diode in TO-18 $\phi$ 5.6mm Package

Part No. LD635D500C13

### FEATURES

- 635nm 500mW laser diode
- Package: TO-18 (5.6mm)
- High power
- Higher brightness

### APPLICATIONS

- Laser display
- PDT
- Biochemistry
- Military
- Medical/Life and health science
- Illumination

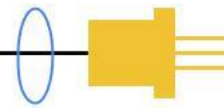
### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Optical output power	$P_O$	500	mW
Reverse voltage (LD)	$V_{RL}$	2	V
Operating temperature	$T_{opr}$	-10 to +30	°C
Storage temperature	$T_{stg}$	-40 to +85	°C

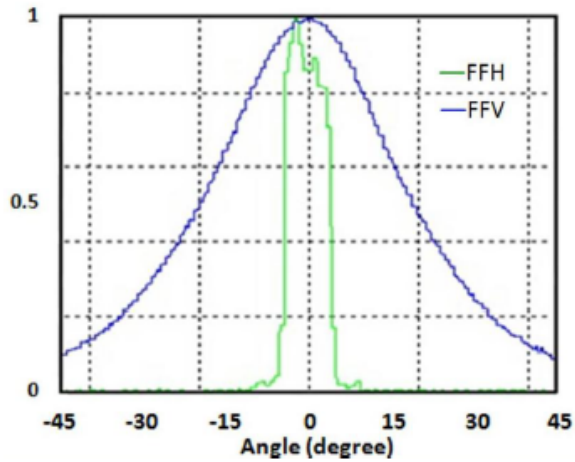
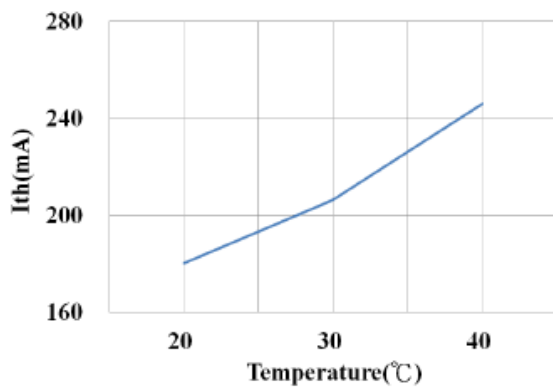
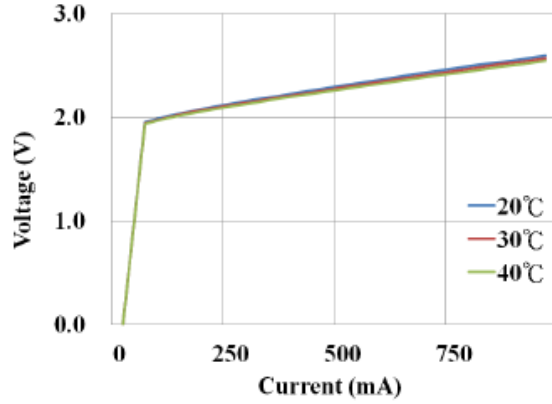
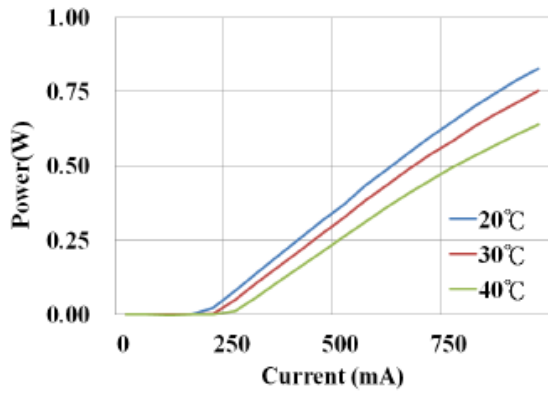
### ELECTRICAL AND OPTICAL CHARACTERISTICS ( $T_c = 25^\circ\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	$\lambda$	632	638	644	nm	$P_O = 500\text{mW}$
Polarization			TM			
Threshold current	$I_{th}$	-	200	300	mA	
Operating current	$I_{op}$	-	700	900	mA	$P_O = 500\text{mW}$
Operating voltage	$V_{op}$	1.9	2.5	3.0	V	$P_O = 500\text{mW}$
Slope efficiency	$\eta$	-	1.0	-	mW/mA	$P_O = 50-500\text{mW}$
Parallel divergence angle	$\Theta_{//}$	-	6	-	deg	$P_O = 500\text{mW}$
Perpendicular divergence angle	$\Theta_{\perp}$	25	36	45	deg	$P_O = 50\text{mW}$

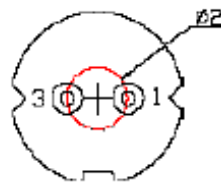
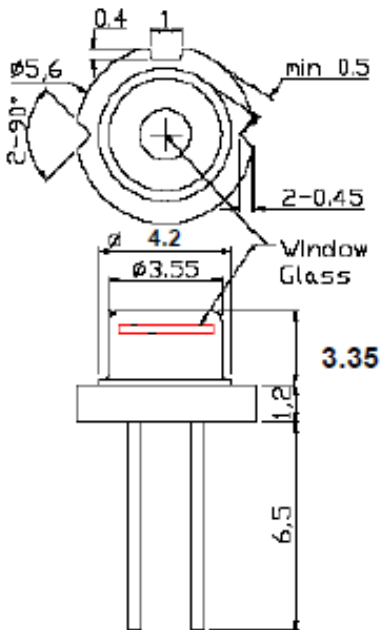
\*Sufficient heat dissipation is required for CW operation.



### TYPICAL CHARACTERISTICS



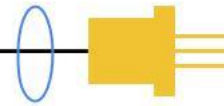
### MECHANICAL OUTLINE (unit: mm)



### Pin Configuration



\*Other pin configurations may be available upon request.



**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.