

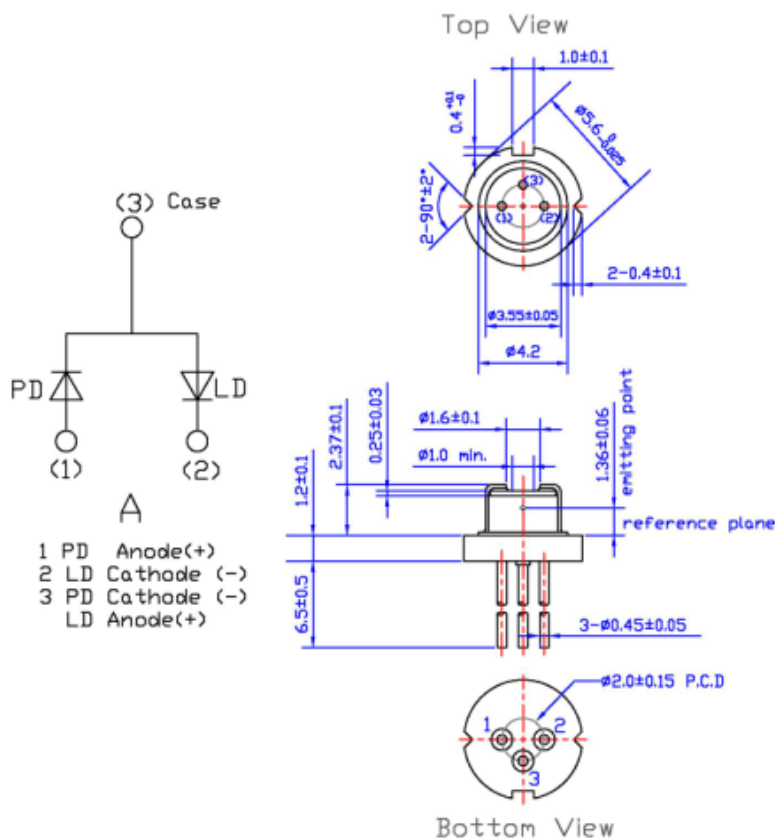
670nm Laser Diode

670nm Red Laser Diode
LCU-670561A-preliminary

■ Specifications

- (1) Device: Laser Diode
- (2) Structure: TO-18 (ϕ 5.6mm), With Pb free glass cap, PD

■ External dimensions(Unit : mm)



■ Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Optical Output	Po	7	mW
Reverse Voltage	Laser	Vr	V
	PIN PD	Vr(PIN)	V
Operating Temperature	Top	-10~+60	°C
Storage Temperature	Tstg	-15~+85	°C

670nm Laser Diode

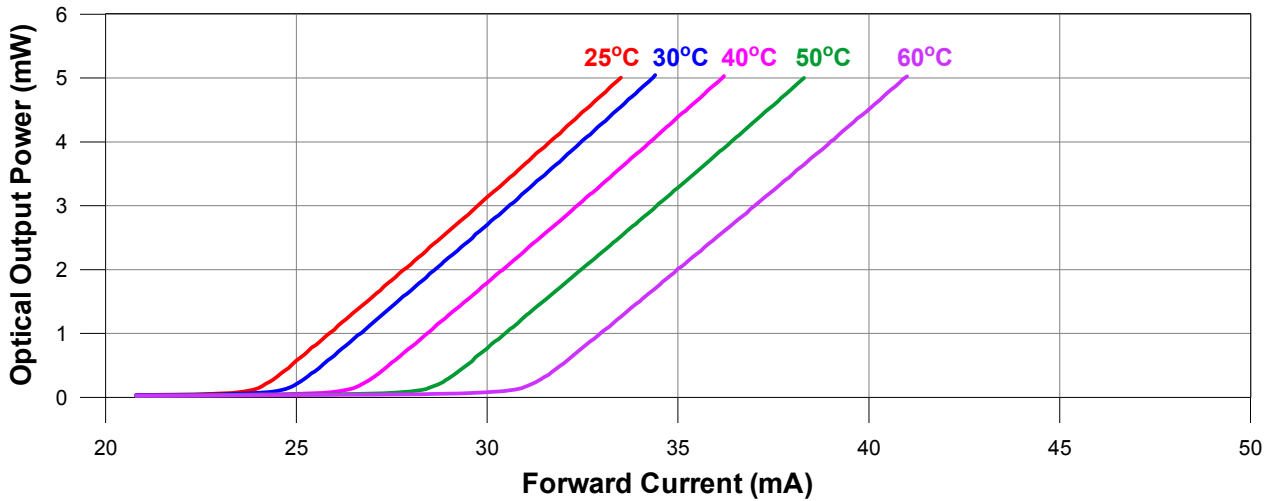
■ **Electrical and Optical Characteristics(Tc=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I _{th}	CW	-	24	35	mA	
Operating Current	I _{op}	P _o =5mW	-	34	45	mA	
Operating Voltage	V _{op}	P _o =5mW	-	2.2	2.6	Volt	
Slope Efficiency	η	4mW-1mW	0.4	0.5	-	mW/mA	
		I _{4mW} - I _{1mW}					
Monitor Current	I _m	P _o =5mW	0.1	0.2	0.5	mA	
Beam Divergence	Parallel	θ //	P _o =5mW	7.5	9	11	deg.
(FWHM)	Perpendicular	θ ⊥	P _o =5mW	25	32	35	deg.
Lasing Wavelength	λ	P _o =5mW	660	670	678	nm	

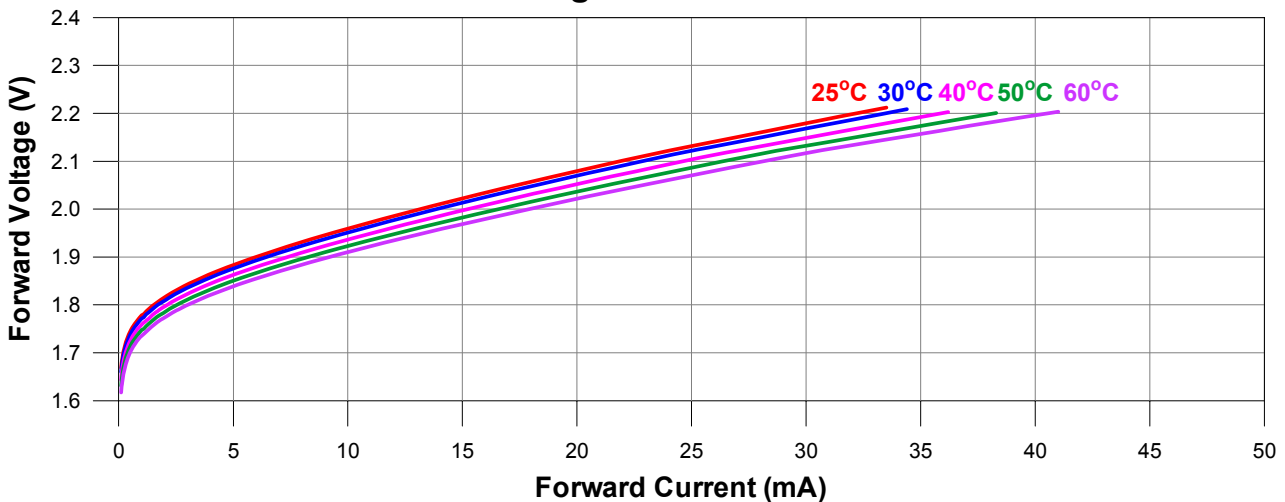
◎ θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

■ **Typical characteristic curves**

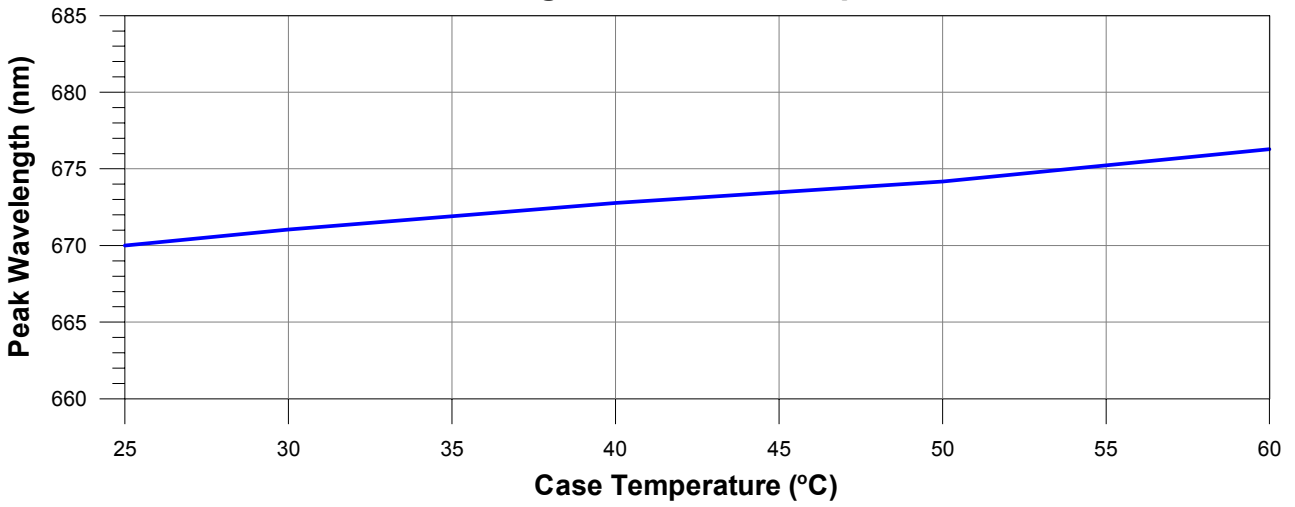
Optical Output Power v.s. Forward Current



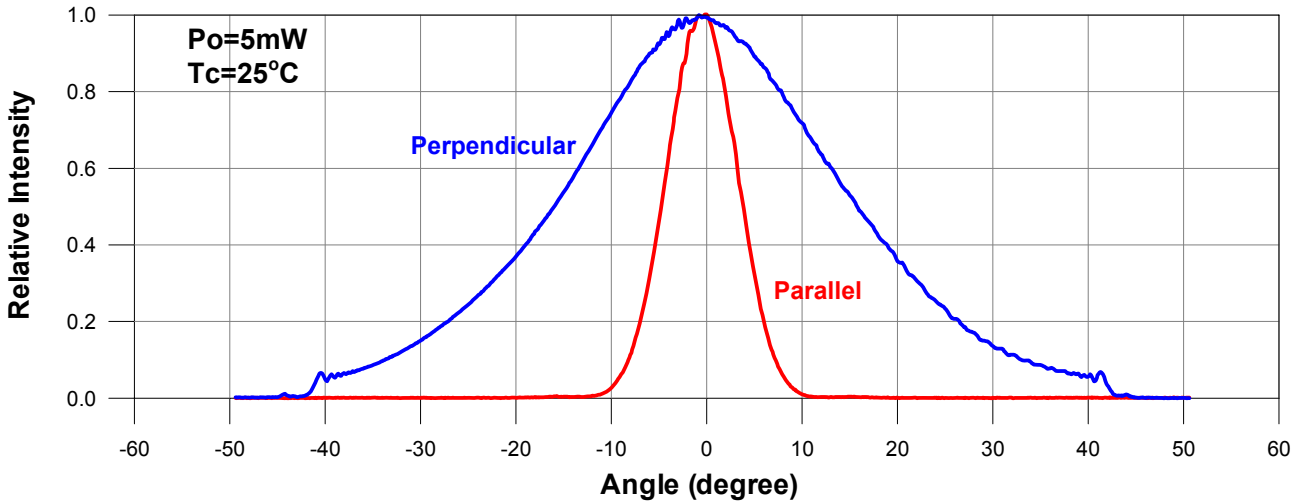
Forward Voltage v.s. Forward Current



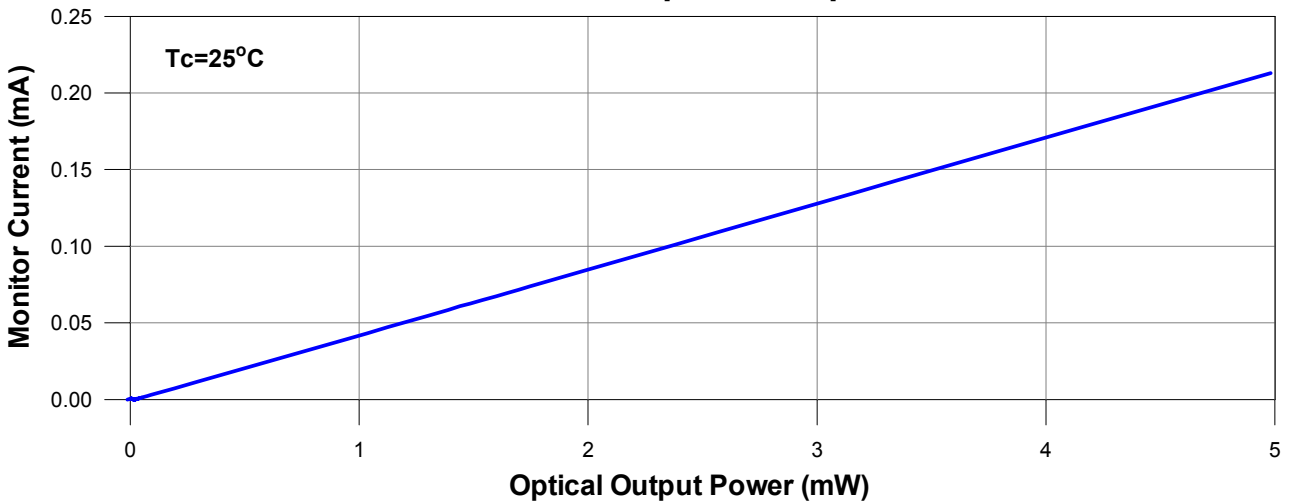
Peak Wavelength v.s. Case Temperature



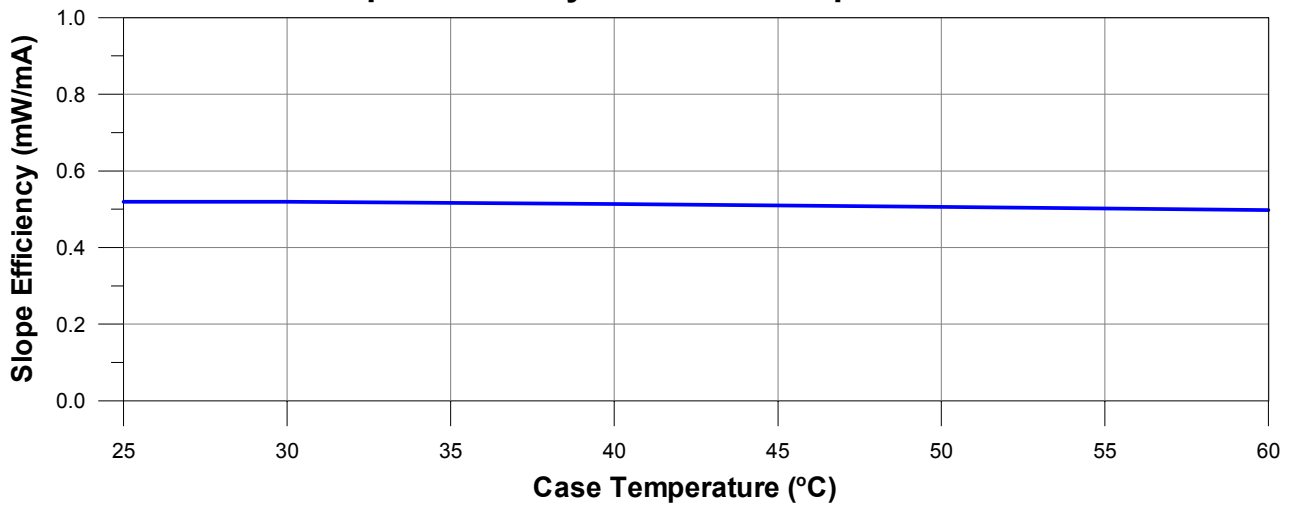
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

