

650nm Red Laser Diode

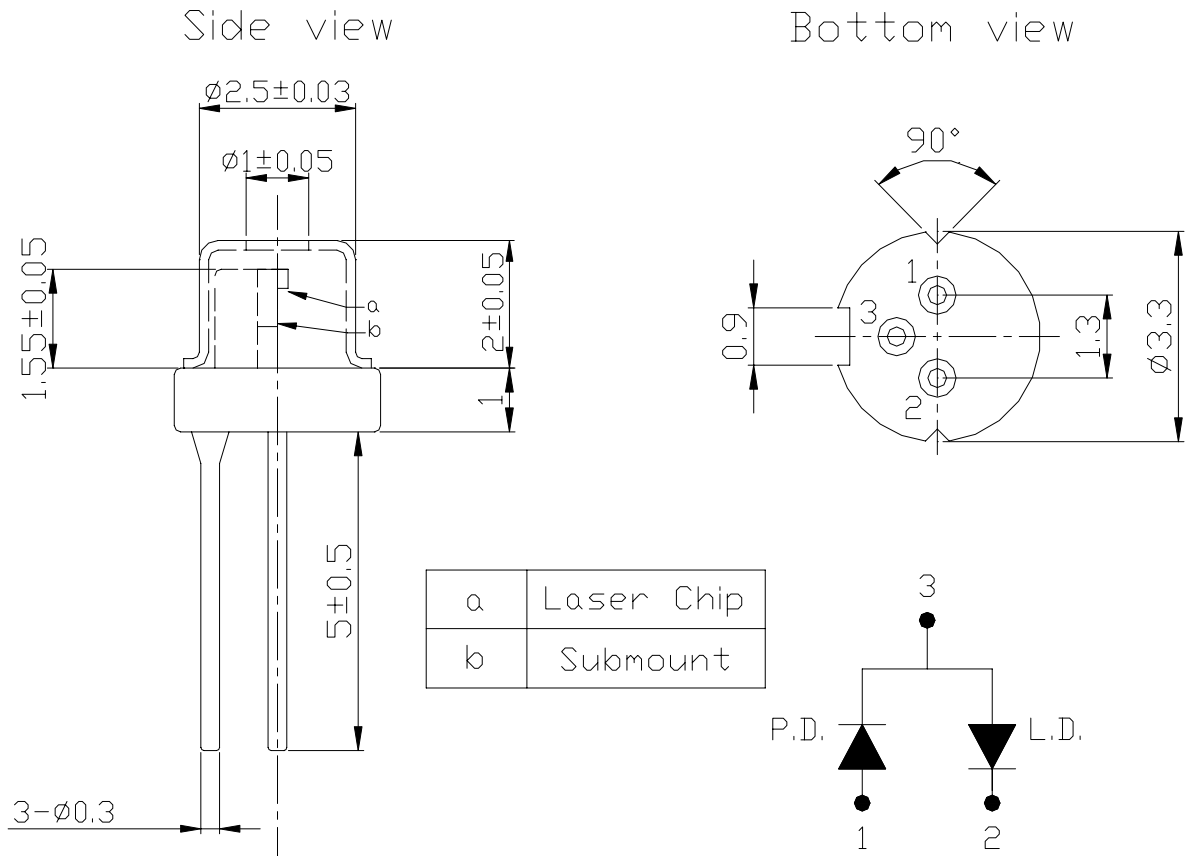
RLD65000501

■ Specifications

(1) Device: Laser Diode

(2) Structure: (ϕ 3.3mm), With Pb free, PD

■ External dimensions(Unit : mm)



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

Parameter	Symbol	Value	Unit
Optical Output	P_o	5	mW
Reverse Voltage	Laser	V_r	2
	PIN PD	$V_r(\text{PIN})$	30
Operating Temperature	T_{op}	-10 ~ +40	$^\circ\text{C}$
Storage Temperature	T_{stg}	-15 ~ +85	$^\circ\text{C}$

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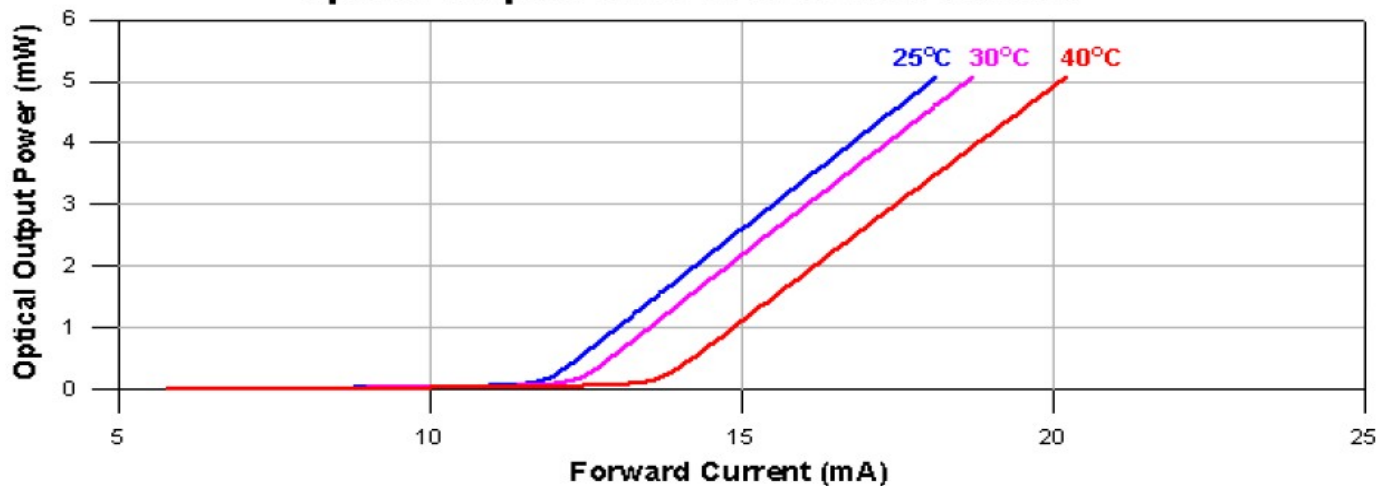
■ Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I _{th}	P _o =5mW	-	12	25	mA	
Operating Current	I _{op}	P _o =5mW	-	18	25	mA	
Operating Voltage	V _{op}	-	-	2.1	2.5	Volt	
Slope Efficiency	η	4mW-1mW	0.4	0.8	-	mW/mA	
		I _{4mW} -I _{1mW}					
Monitor Current	I _m	P _o =5mW	0.05	0.3	0.5	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P _o =5mW	5	9	12	deg.
	Perpendicular	$\theta \perp$	P _o =5mW	30	36	42	deg.
Lasing Wavelength	λ	P _o =5mW	640	655	660	nm	

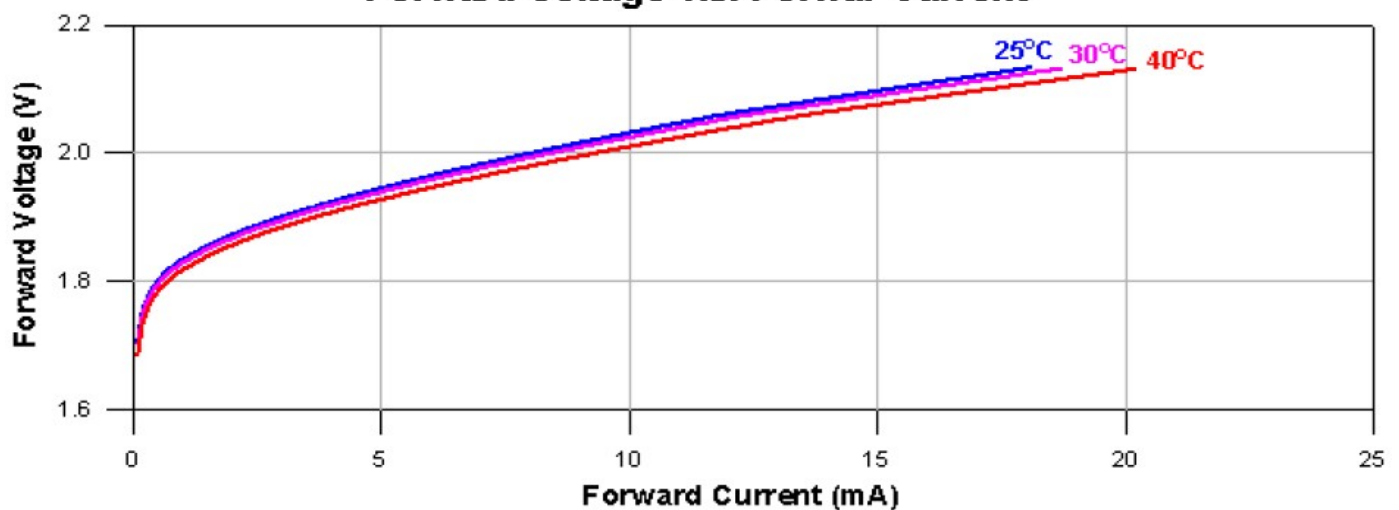
◎ $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

■ Typical characteristic curves

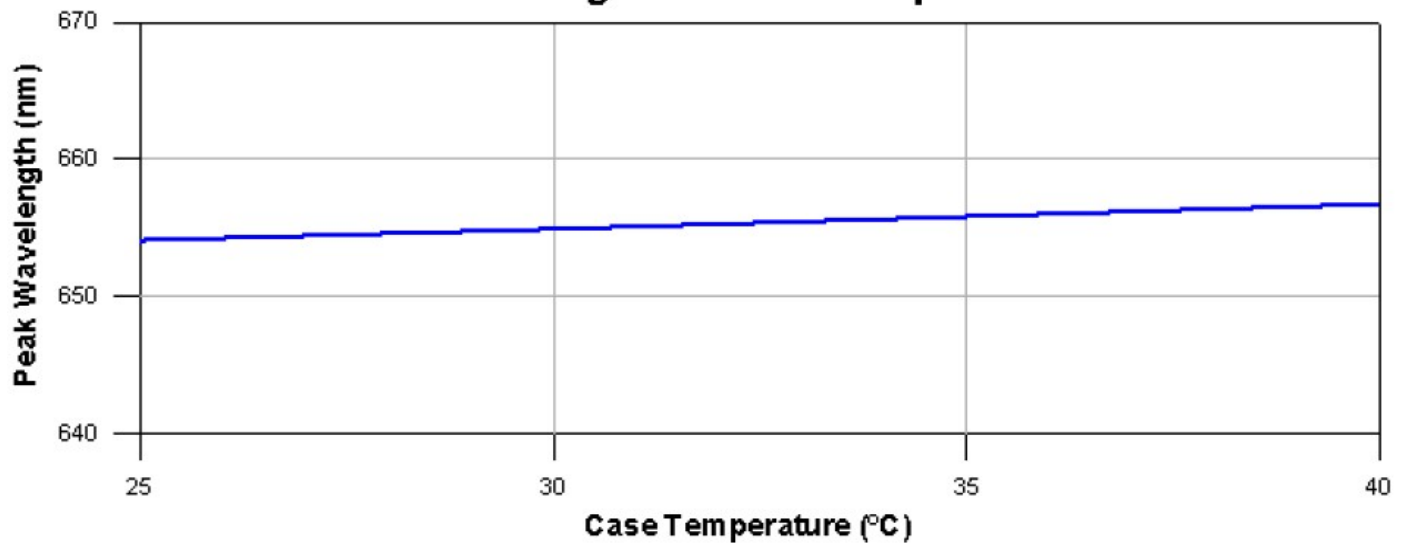
Optical Output Power v.s. Forward Current



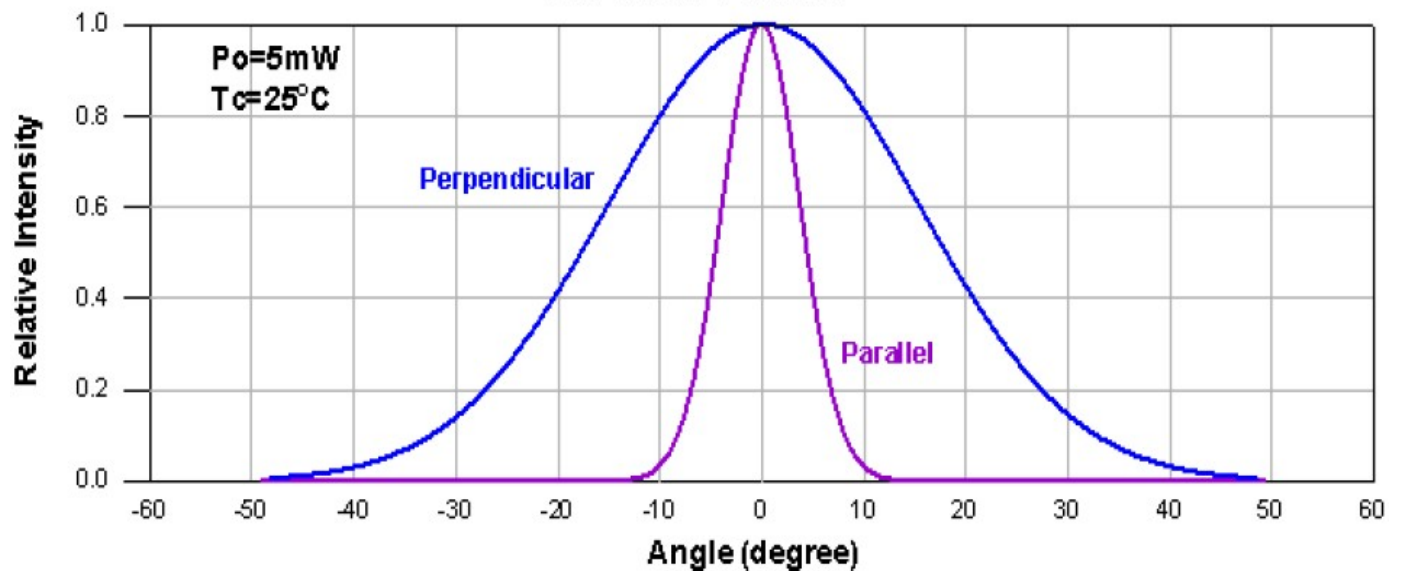
Forward Voltage v.s. Forward Current



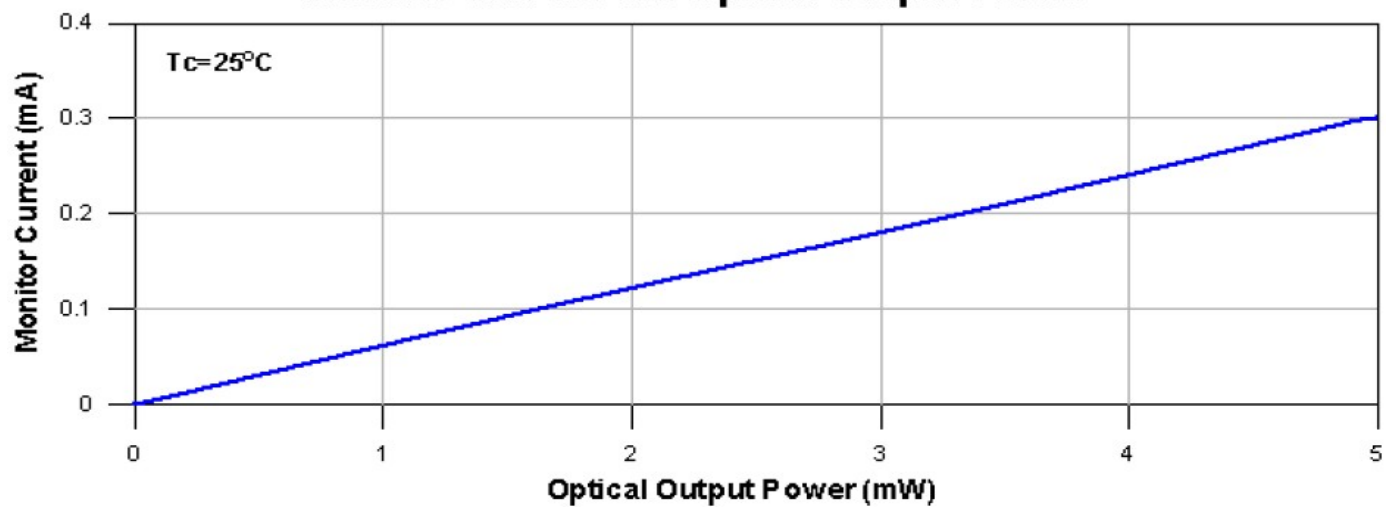
Peak Wavelength v.s. Case Temperature



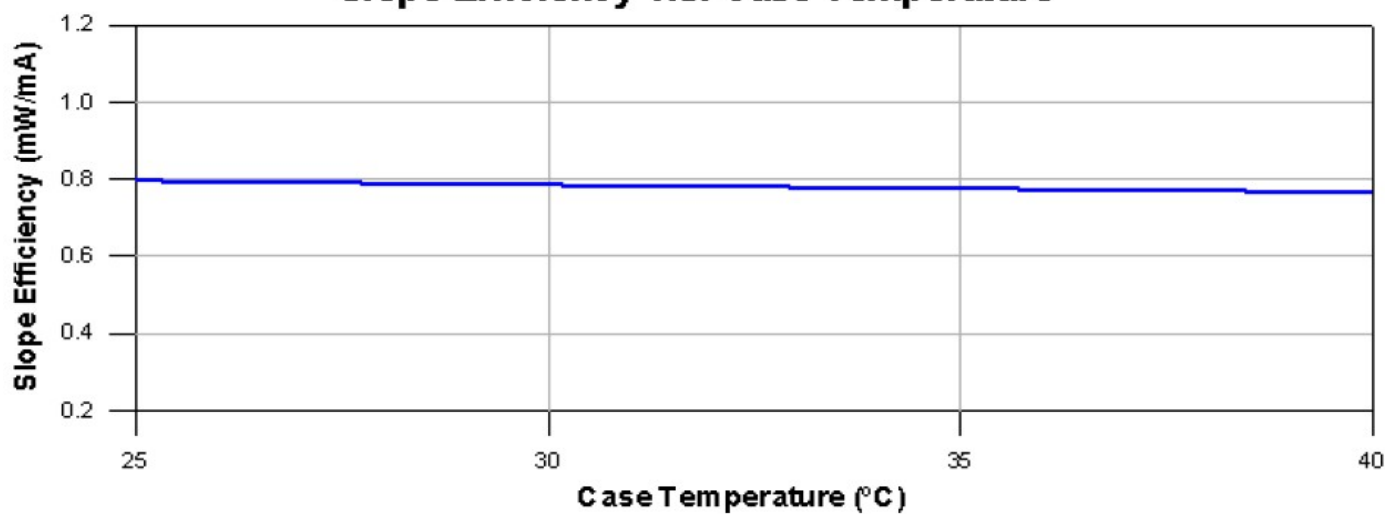
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

