

830nm Laser Diode

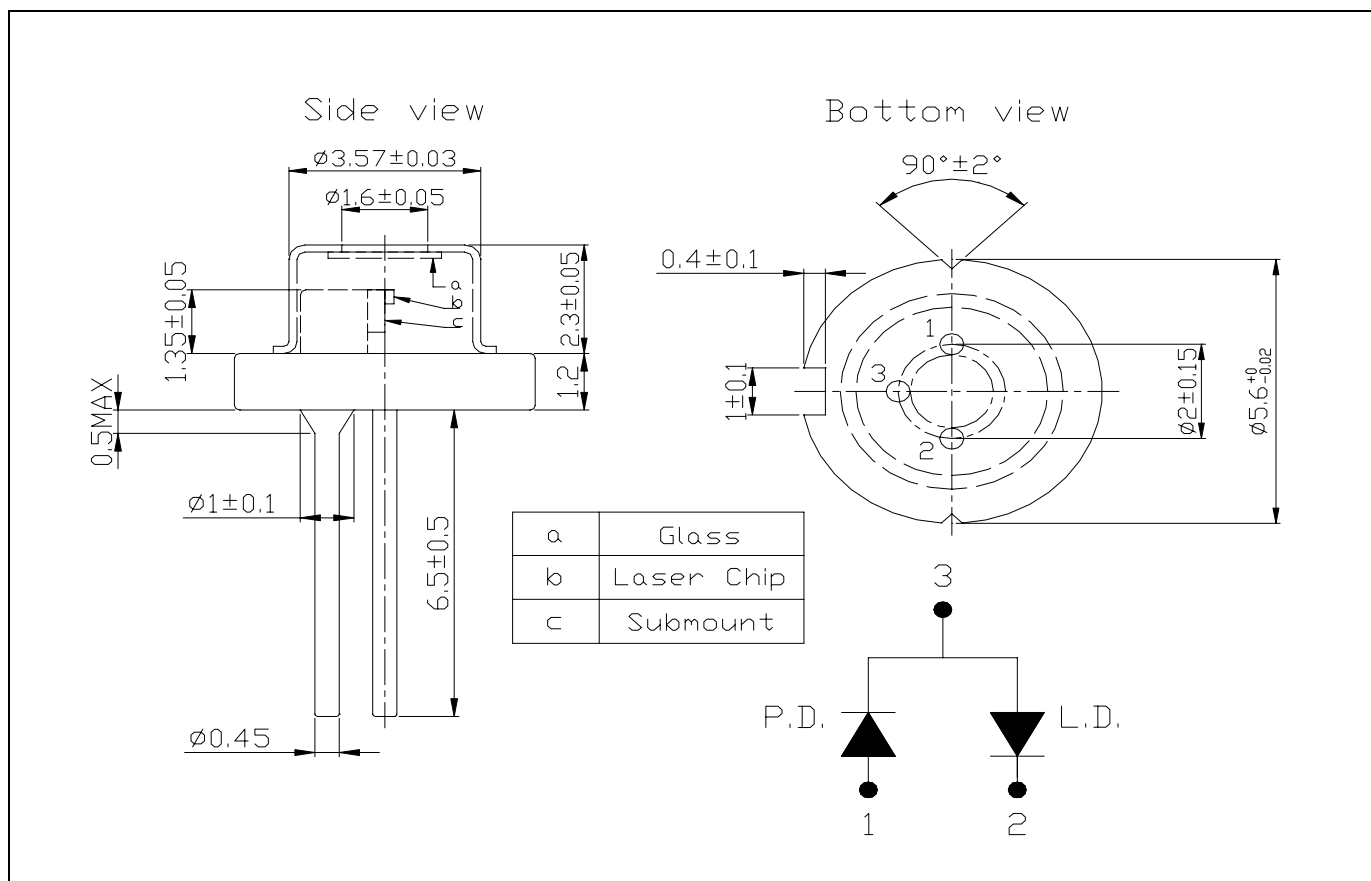
RLD83000030

■ 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	Symbols	Ratings	Units
Optical Output	P_o	30	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}	-10 ~ +85	$^\circ\text{C}$

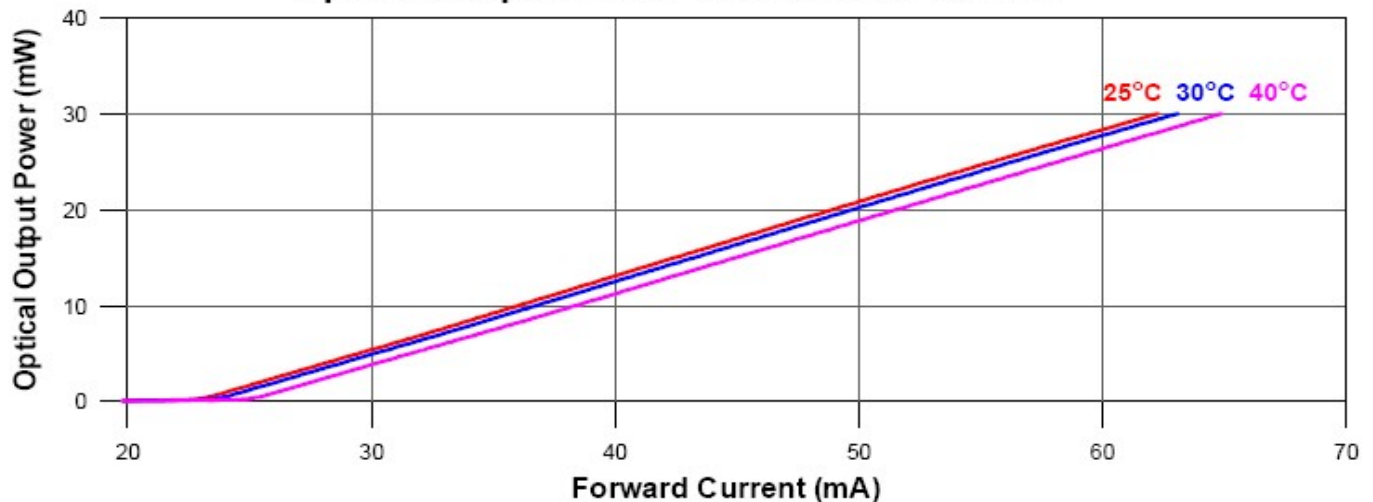
■ Electrical and Optical Characteristics (Tc=25°C)

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Units	
Threshold Current	I _{th}	-	-	23	30	mA	
Operating Current	I _{op}	P _o =30mW	-	63	73	mA	
Operating Voltage	V _{op}	-	-	1.7	2.3	Volts	
Slope Efficiency	η	22.5mW-7.5mW	0.3	0.7	-	mW/mA	
		I _{22.5mW} -I _{7.5mW}					
Monitor Current	I _m	P _o =30mW	-	0.3	-	mA	
Beam Divergence (FWHM)	Parallel	$\theta //$	P _o =30mW	-	10	-	deg.
	Perpendicular	$\theta \perp$	P _o =30mW	-	36	-	deg.
Lasing Wavelength*	λ	P _o =30mW	820	830	840	nm	

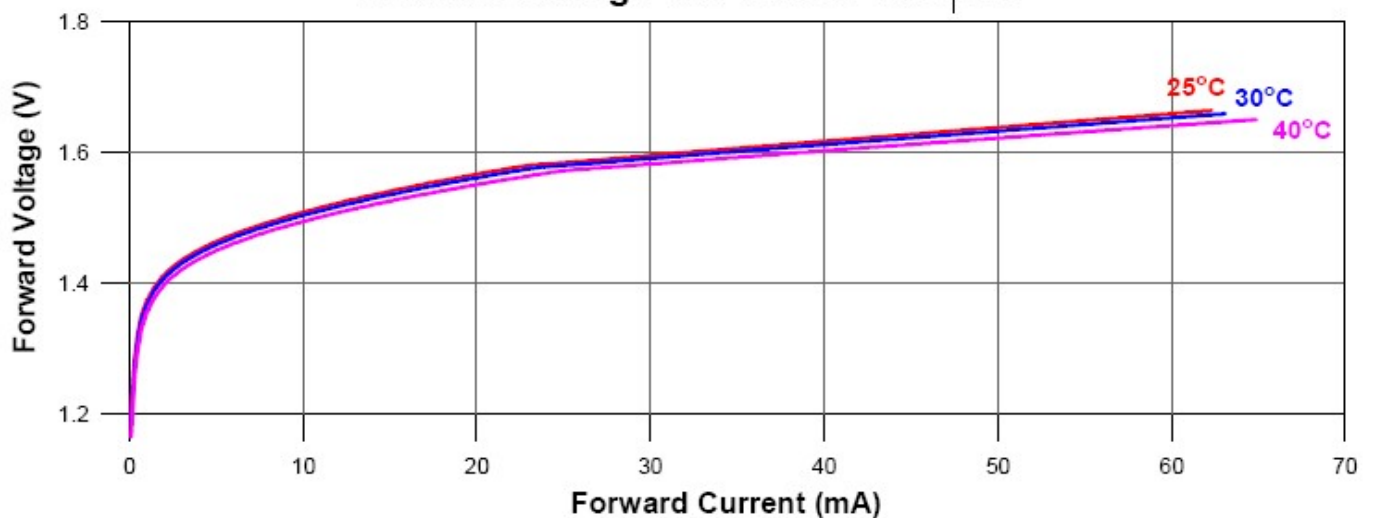
◎ $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

■ Typical characteristic curves

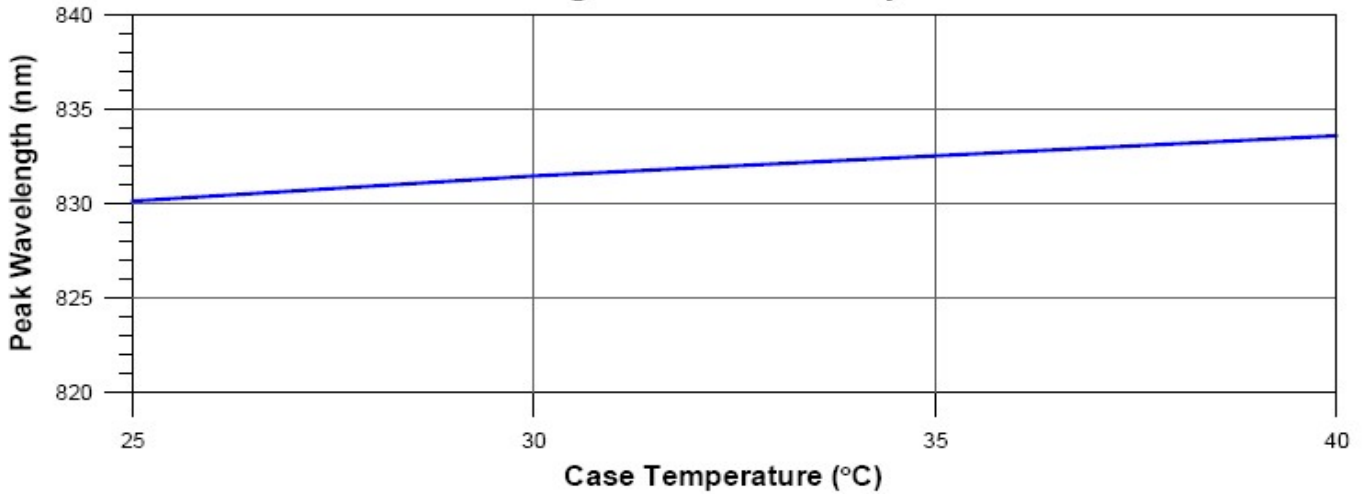
Optical Output Power v.s. Forward Current



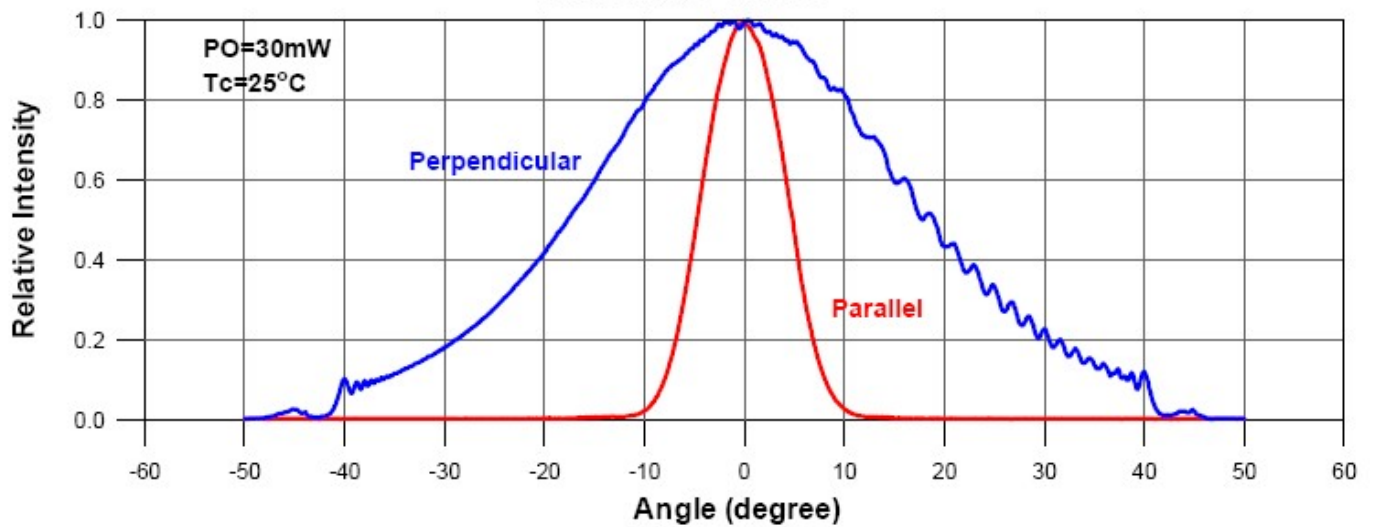
Forward Voltage v.s. Forward Current



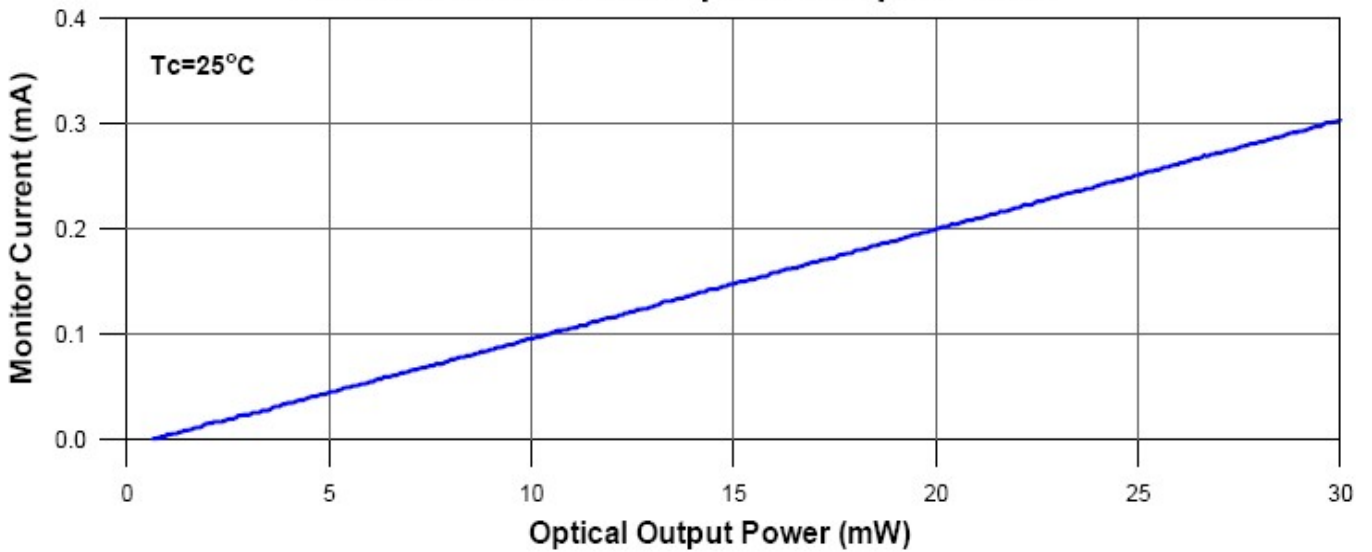
Peak Wavelength v.s. Case Temperature



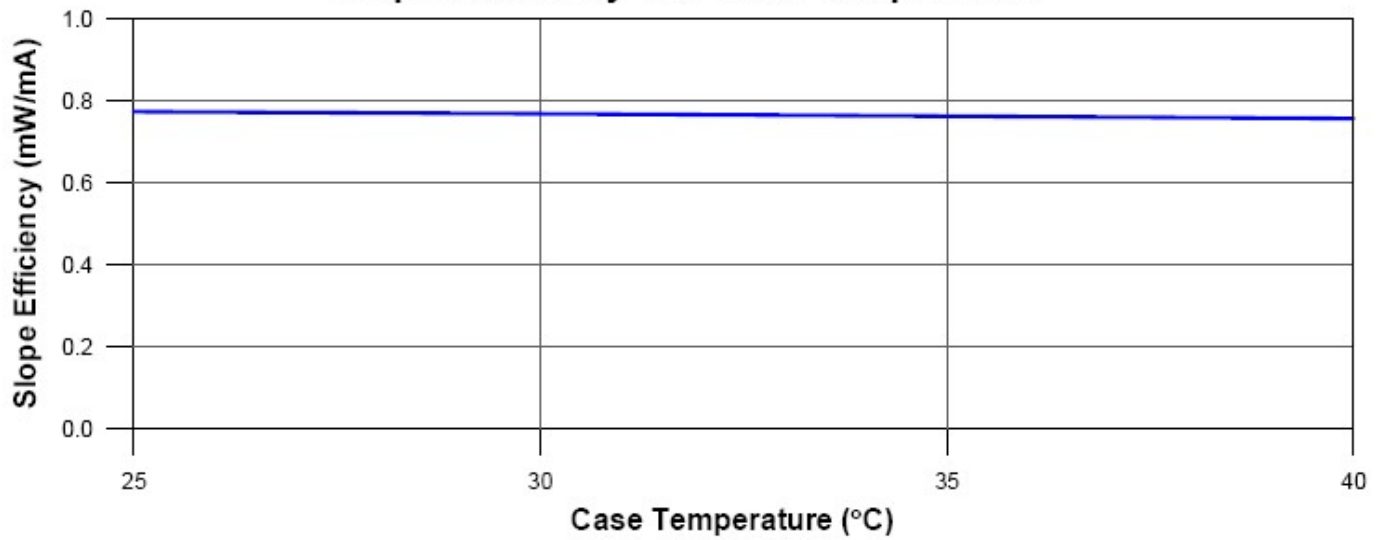
Far-Field Pattern



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

