

830nm Laser Diode

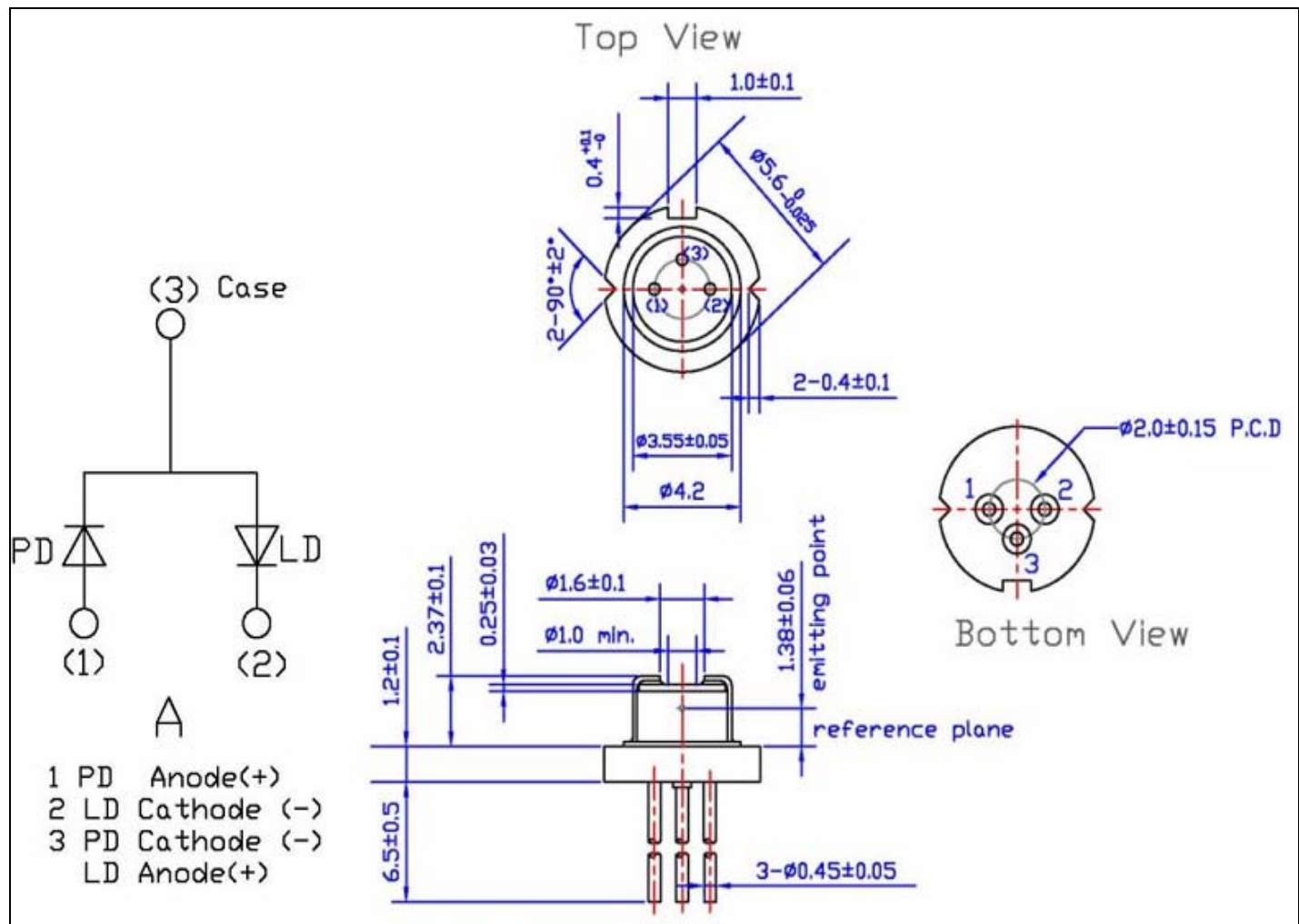
RLD83000050

■ 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(Tc=25°C)

Parameter		Symbols	Ratings	Units
Optical Output		Po	50	mW
Reverse Voltage	Laser	Vr	2	V
	PIN PD	Vr(PIN)	30	V
Operating Temperature		Top	-10~+50	°C
Storage Temperature		Tstg	-40~+85	°C

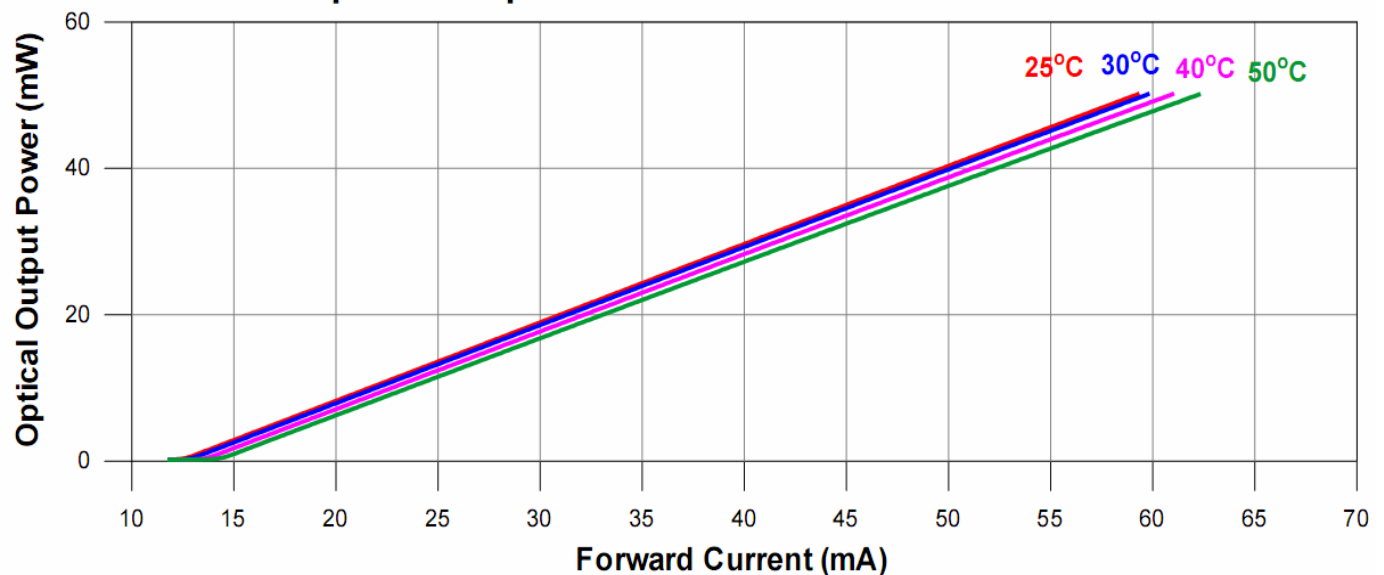
■ Electrical and Optical Characteristics(Tc=25°C)

Parameter		Symbols	Conditions	Min.	Typ.	Max.	Units
Threshold Current		I _{th}	-	-	14	18	mA
Operating Current		I _{op}	Po=50mW	-	62	75	mA
Operating Voltage		V _{op}	-	-	1.9	2.6	Volts
Slope Efficiency		η	37.5mW-12.5mW	-	1	-	mW/mA
			I _{37.5mW} -I _{12.5mW}				
Monitor Current		I _m	Po=50mW	0.05	0.12	0.5	mA
Beam Divergence (FWHM)	Parallel	θ //	Po=50mW	-	11	16	deg.
	Perpendicular	θ ⊥	Po=50mW	-	18	23	deg.
Lasing Wavelength*		λ	Po=50mW	820	830	840	nm

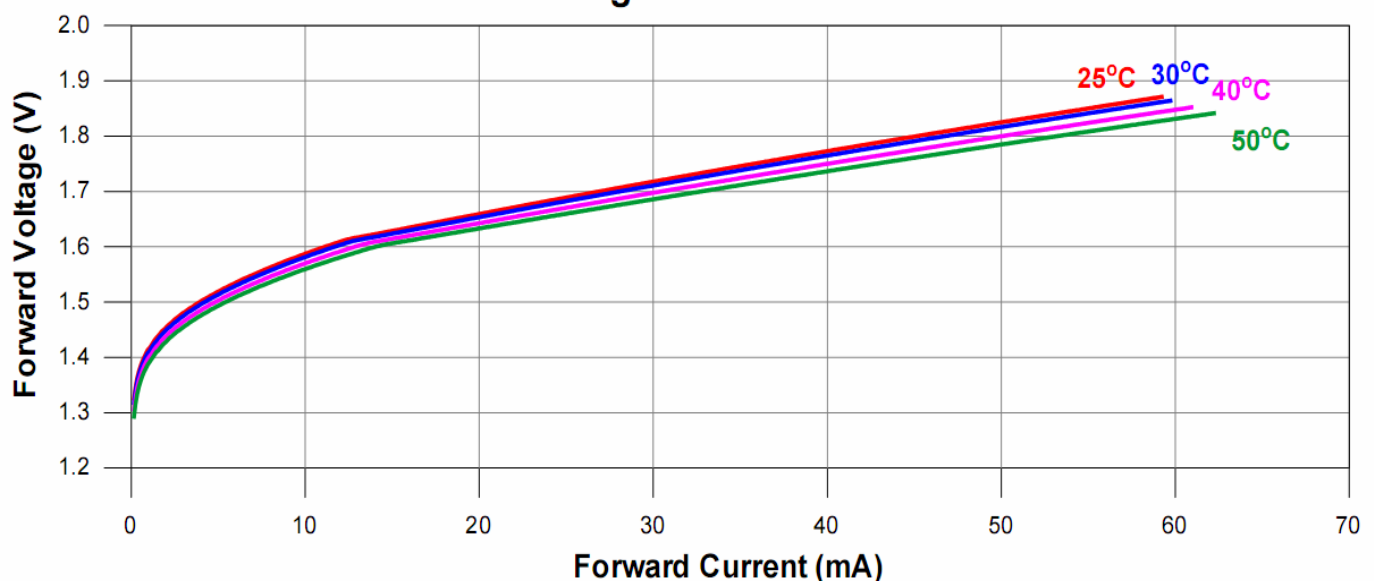
◎ θ // and θ $\perp$ are defined as the angle within which the intensity is 50% of the peak value.

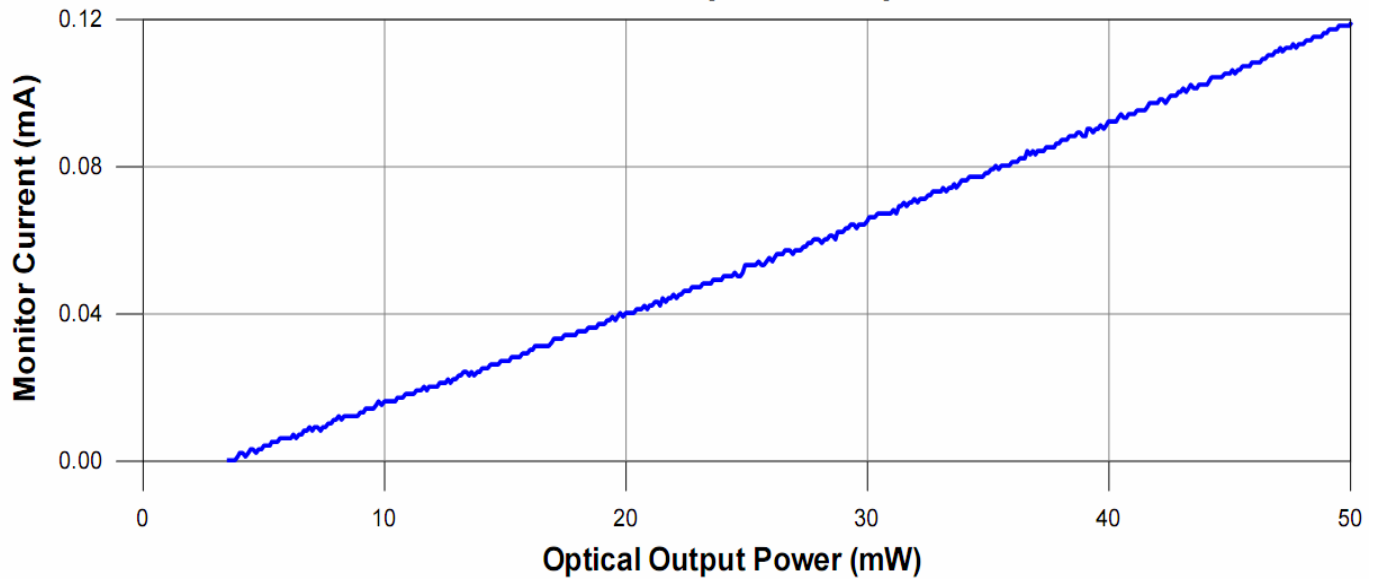
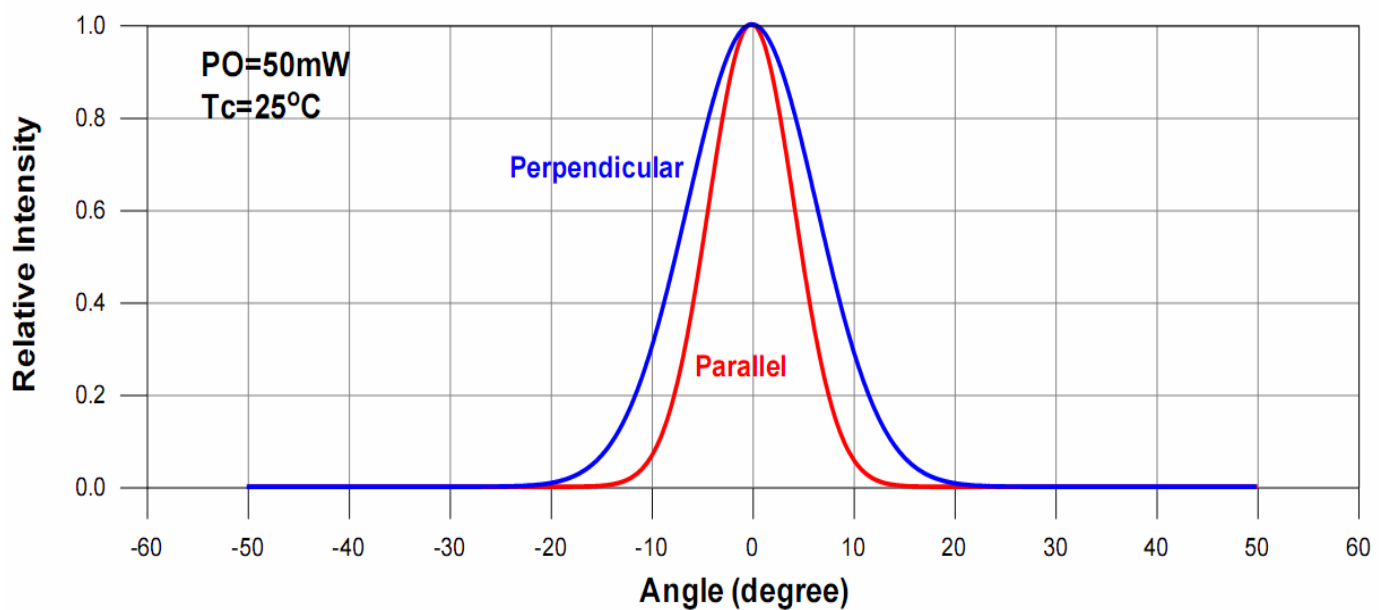
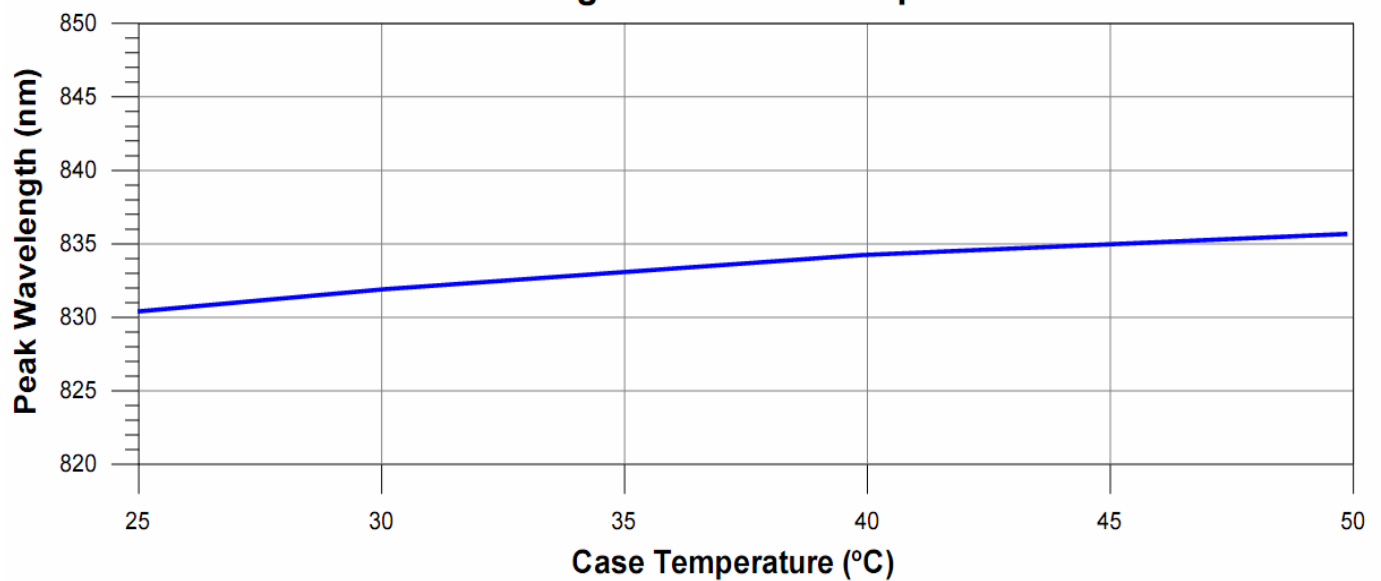
■ Typical characteristic curves

Optical Output Power v.s. Forward Current

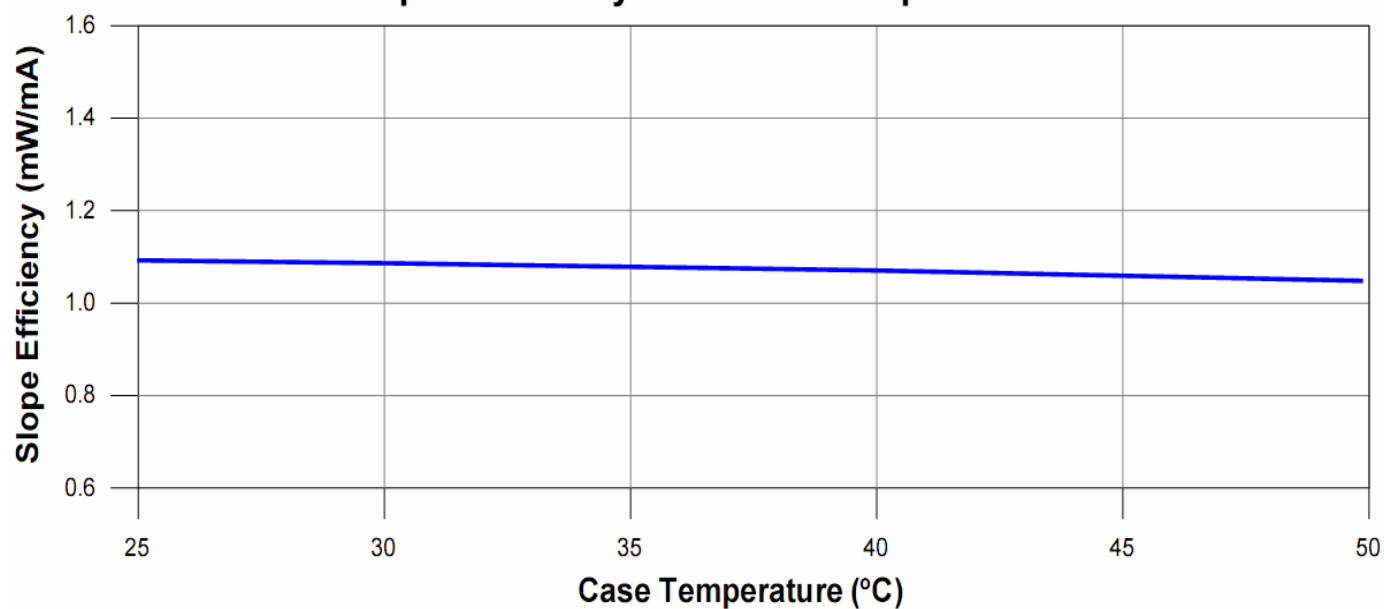


Forward Voltage v.s. Forward Current



Monitor Current v.s. Optical Output Power**Far-Field Pattern****Peak Wavelength v.s. Case Temperature**

Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

