

830nm Laser Diode

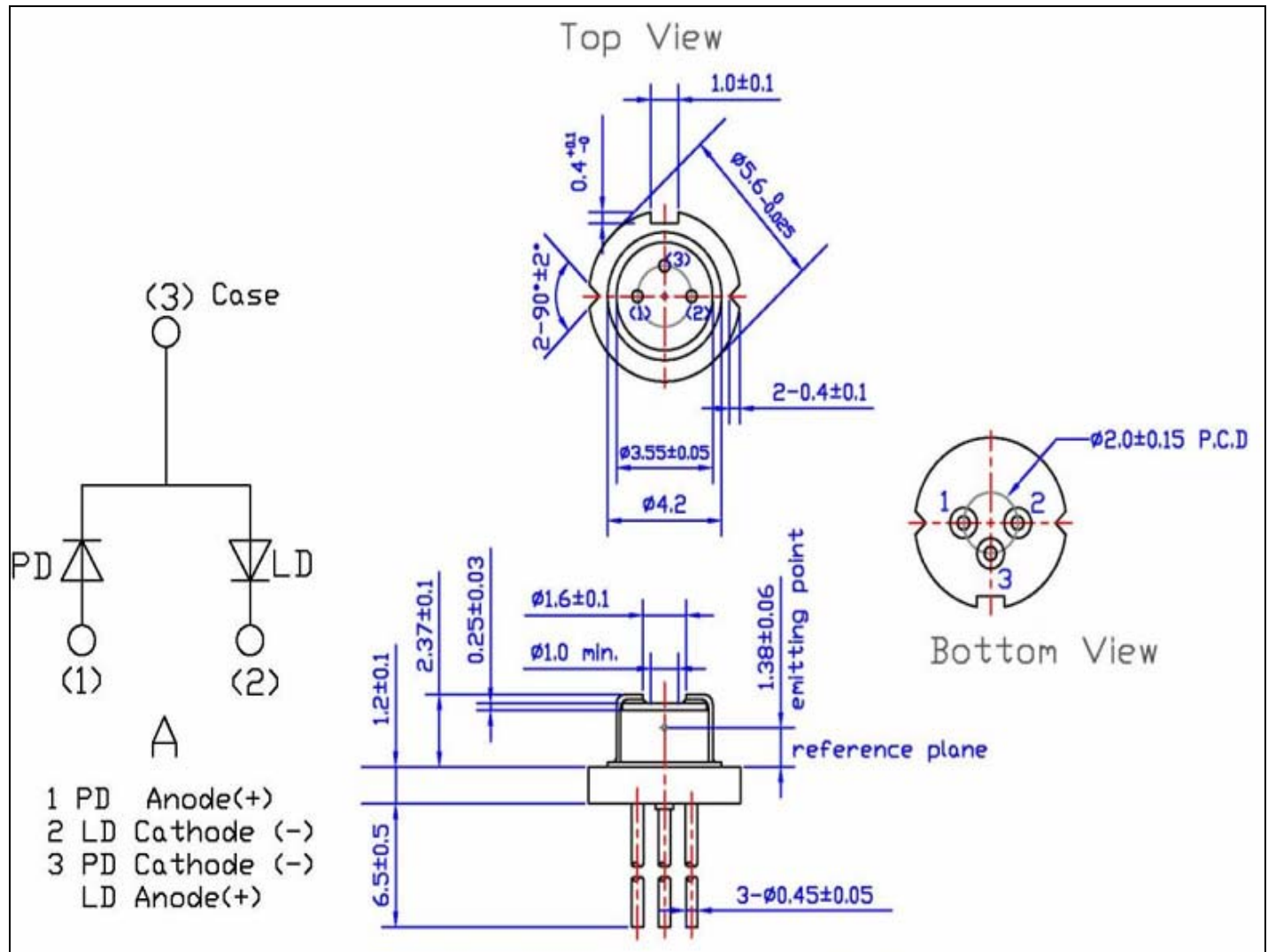
RLD83000300

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	300	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

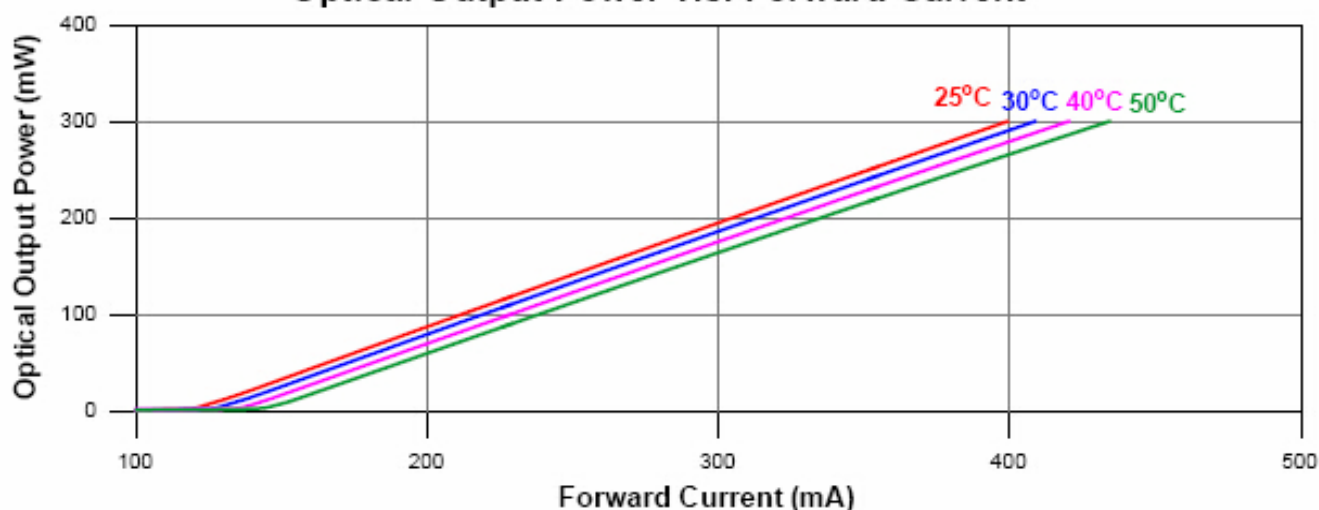
Electrical and Optical Characteristics(Tc=25°C)

Parameter		Symbols	Conditions	Min.	Typ.	Max.	Units
Threshold Current		I _{th}	-	-	115	130	mA
Operating Current		I _{op}	P _o =300mW	-	410	450	mA
Operating Voltage		V _{op}	-	-	1.85	2	Volts
Slope Efficiency		η	225mW-75mW	-	1.0	-	mW/mA
			I _{225mW} -I _{75mW}				
Monitor Current		I _m	P _o =300mW	0.1	0.5	1	mA
Beam Divergence (FWHM)	Parallel	θ //	P _o =300mW	-	9	14	deg.
	Perpendicular	θ ⊥	P _o =300mW	-	17	22	deg.
Lasing Wavelength*		λ	P _o =300mW	820	830	840	nm

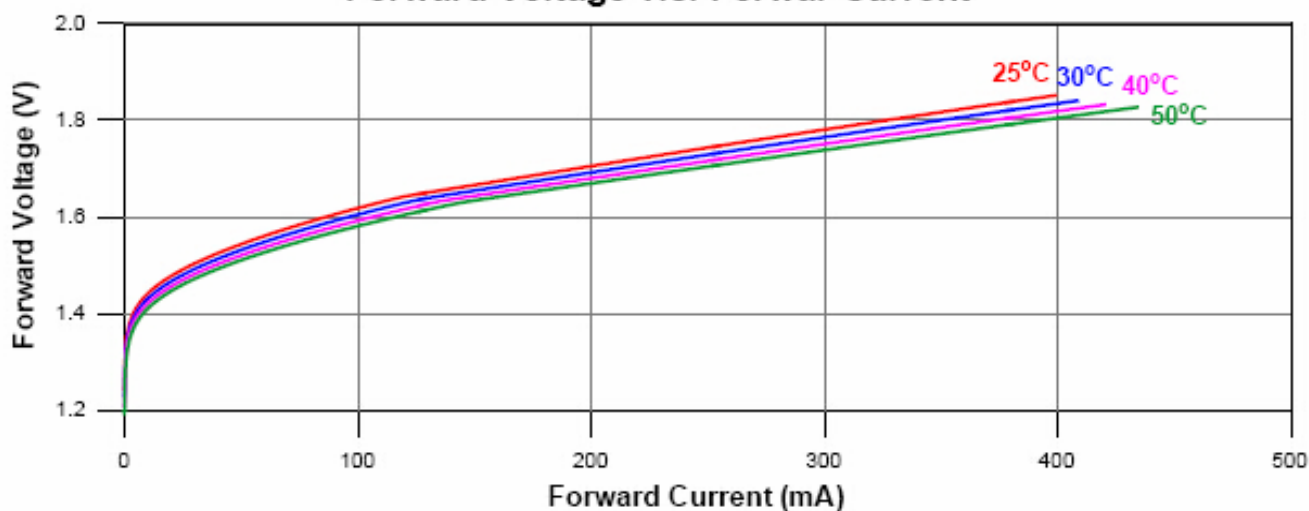
◎ $\theta //$ and $\theta \perp$ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

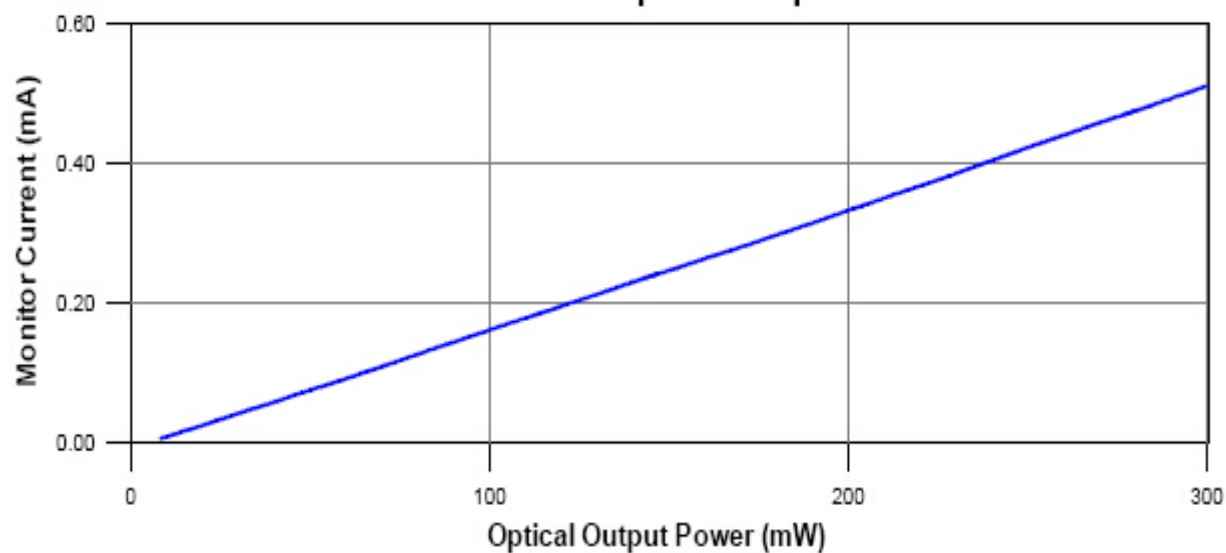
Optical Output Power v.s. Forward Current



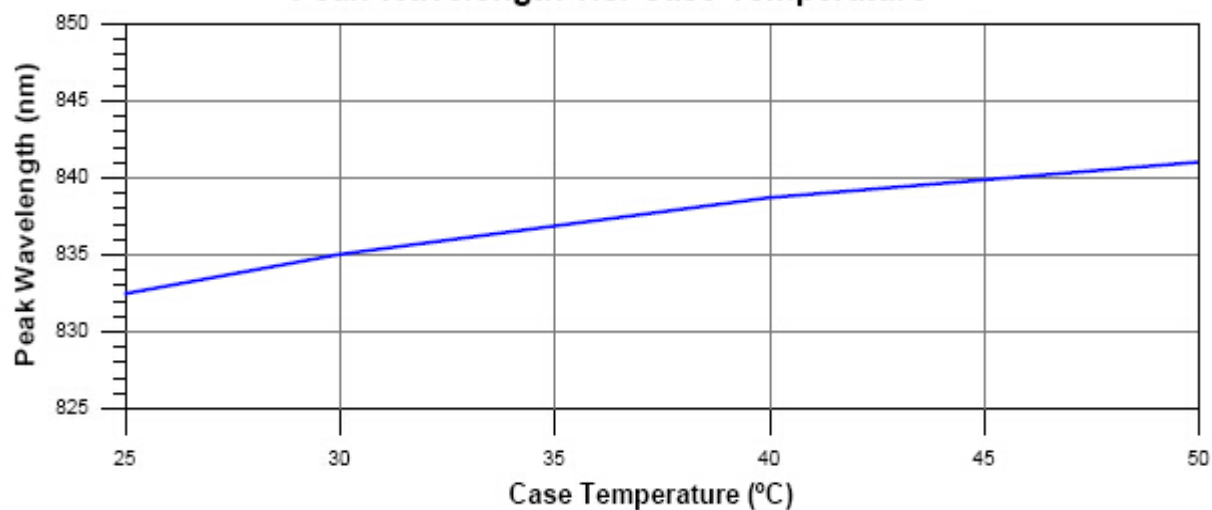
Forward Voltage v.s. Forward Current



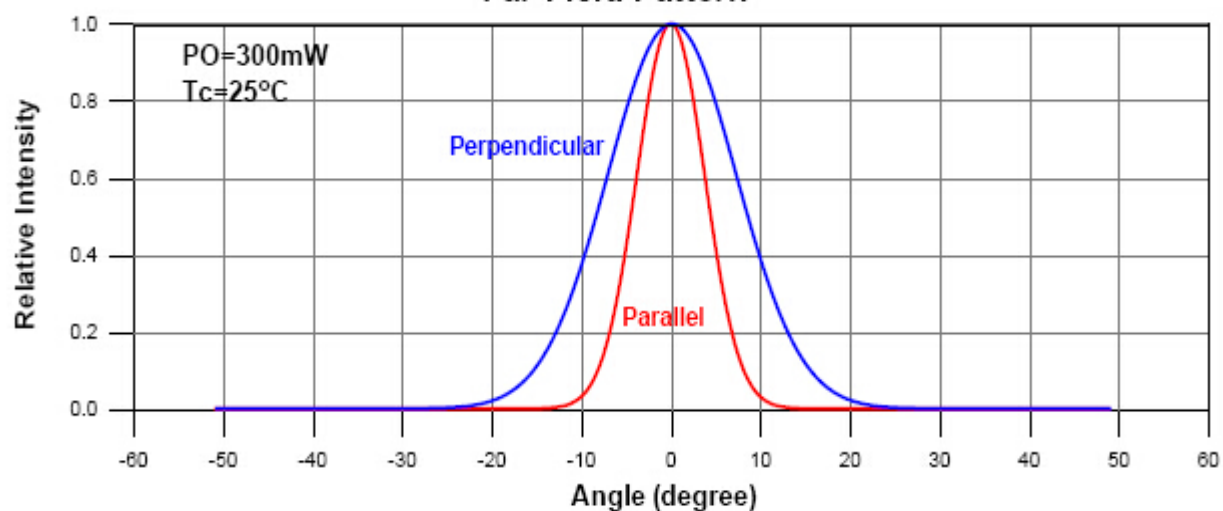
Monitor Current v.s. Optical Output Power



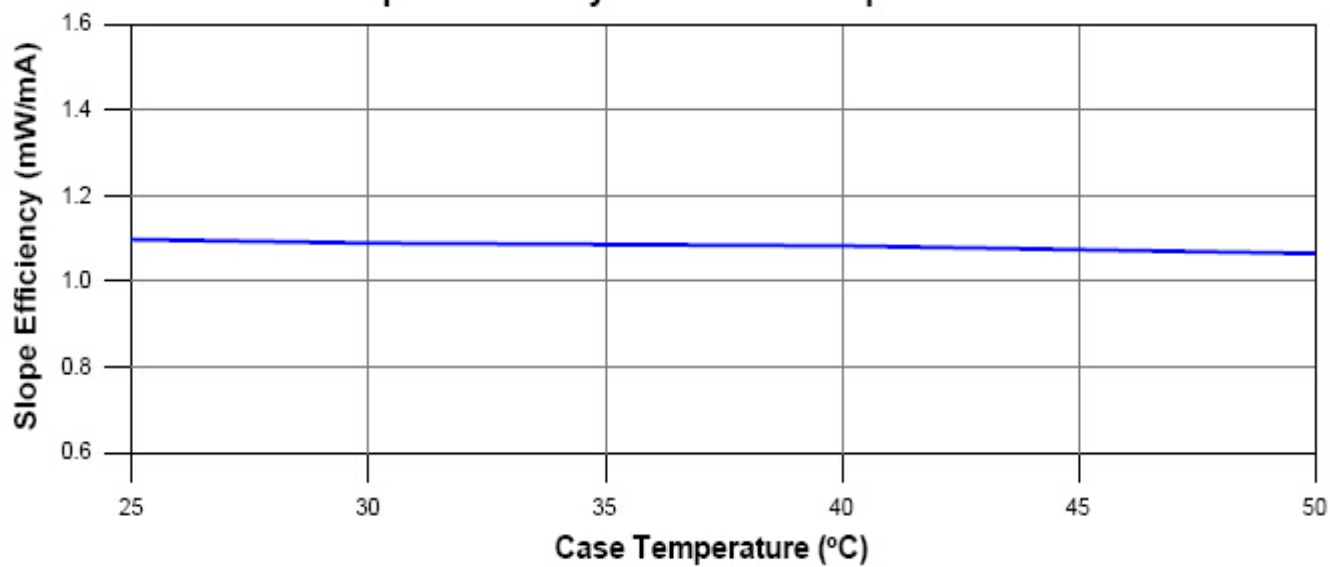
Peak Wavelength v.s. Case Temperature



Far-Field Pattern



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

