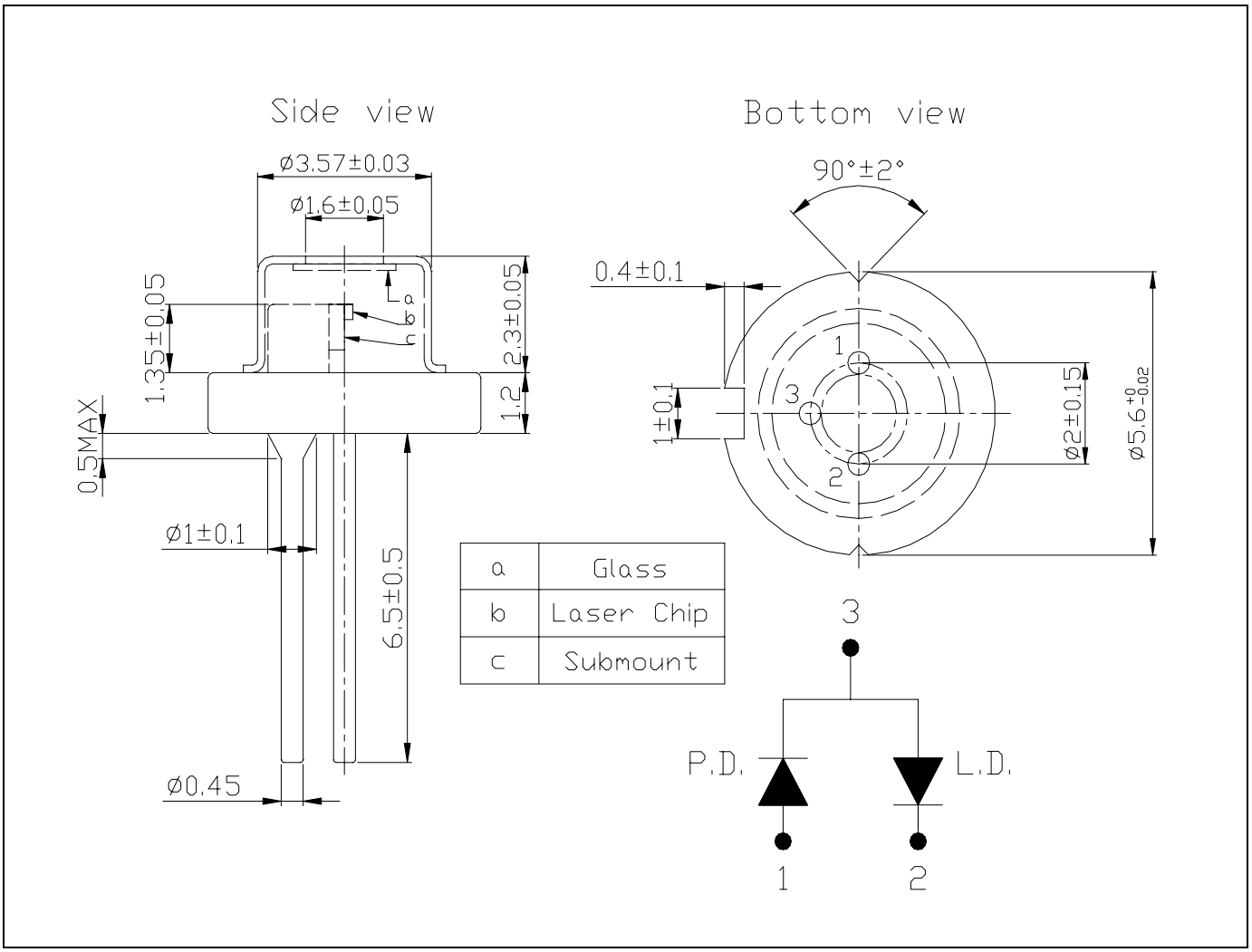
850nm Laser Diode
RLD85000100

■Specifications

(1) Device: Laser Diode

(2) Structure: TO-18(ϕ 5.6mm)

■External dimensions(Unit : mm)



■Absolute Maximum Ratings(Tc=25℃)

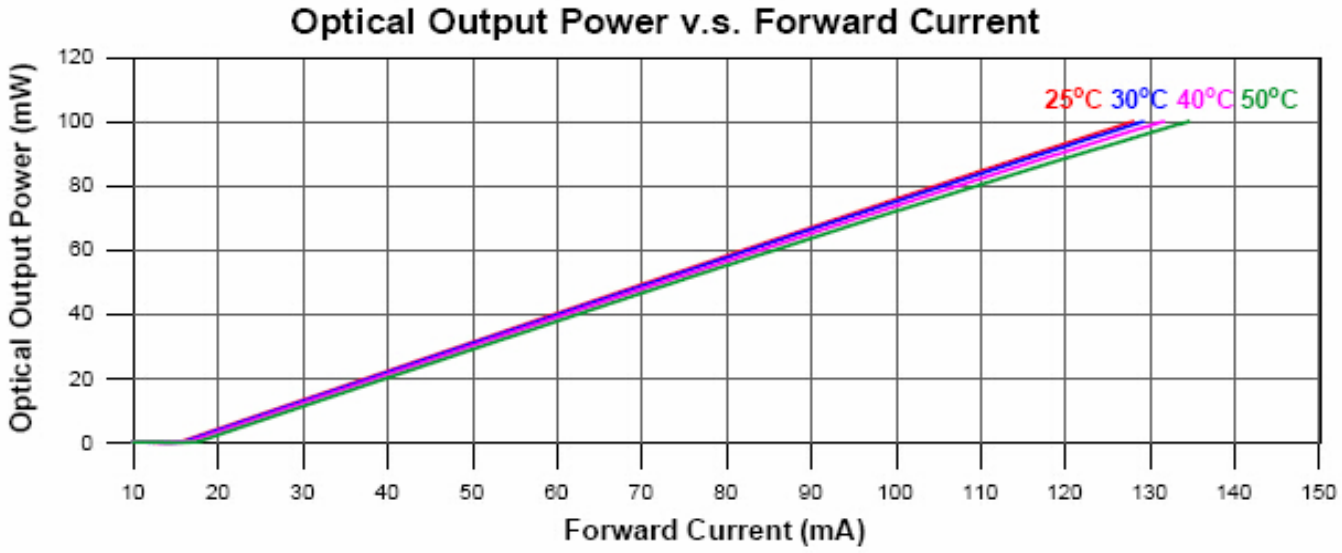
Parameter		Symbols	Ratings	Units
Optical Output		Po	**100**	mW
Reverse Voltage	Laser	Vr	**2**	V
	PIN PD	Vr(PIN)	**30**	V
Operating Temperature		Top	-10～+50	℃
Storage Temperature		Tstg	-40～+85	℃

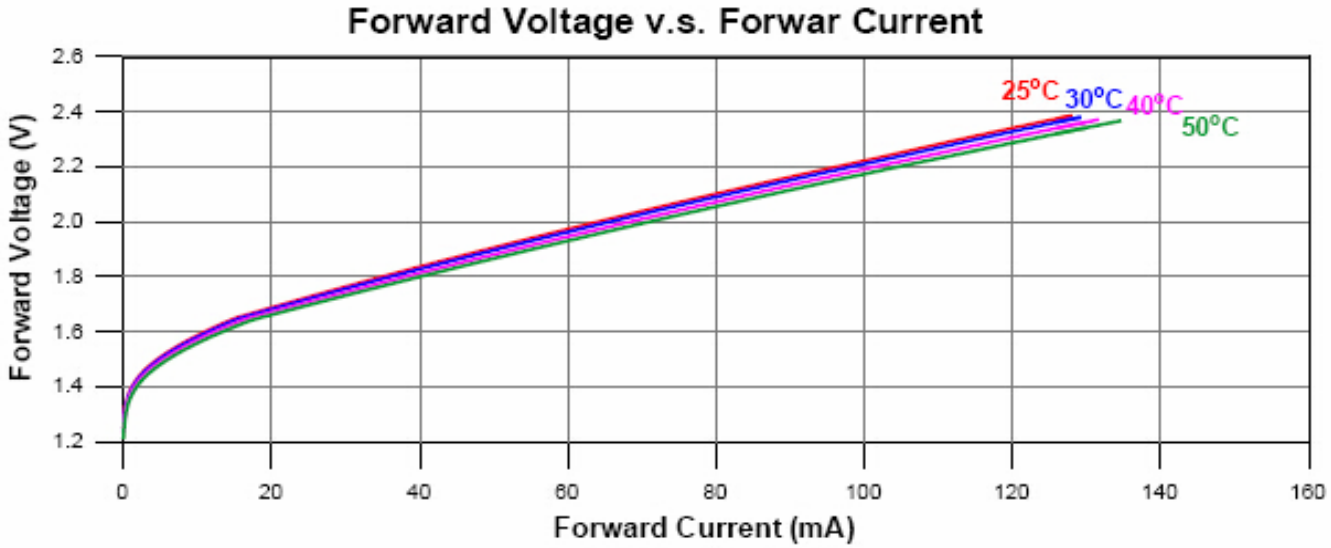
■Electrical and Optical Characteristics(Tc=25℃)

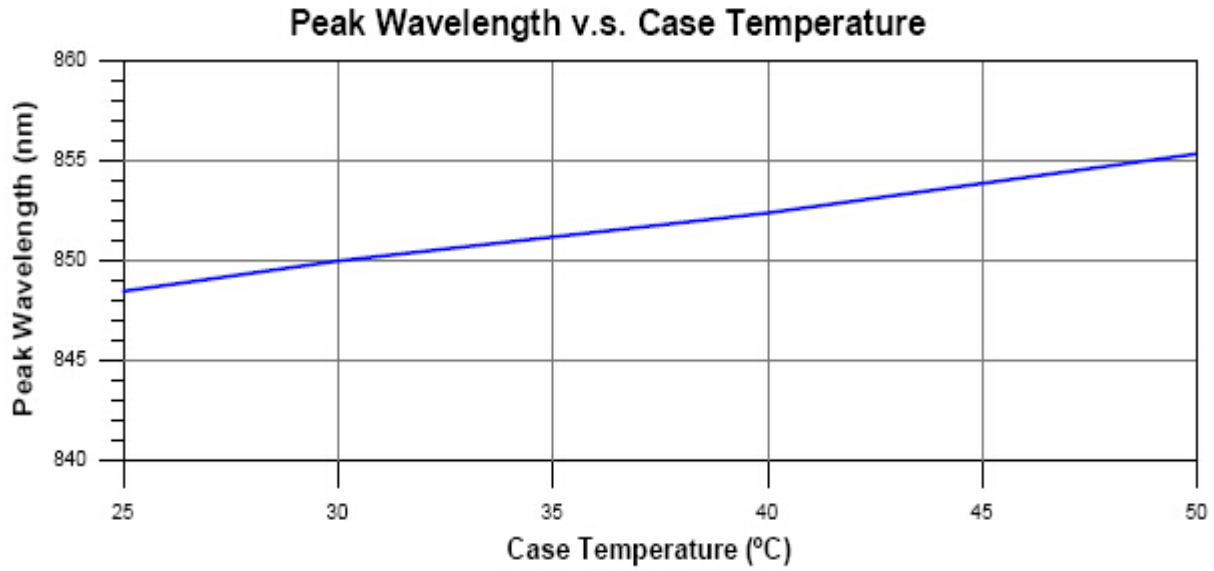
Parameter		Symbols	Conditions	Min.	Typ.	Max.	Units
Threshold Current		Ith	-	-	18	25	mA
Operating Current		Iop	Po=100mW	-	127	150	mA
Operating Voltage		Vop	-	-	2.4	2.8	Volts
Slope Efficiency		η	75mW-25mW / I_{75mW}-I_{25mW}	-	0.90	-	mW/mA
Monitor Current		Im	Po=100mW	0.1	0.25	1	mA
Beam Divergence (FWHM)	Parallel	θ //	Po=100mW	-	10	15	deg.
	Perpendicular	θ ⊥	Po=100mW	-	18	23	deg.
Lasing Wavelength*		λ	Po=100mW	840	850	860	nm

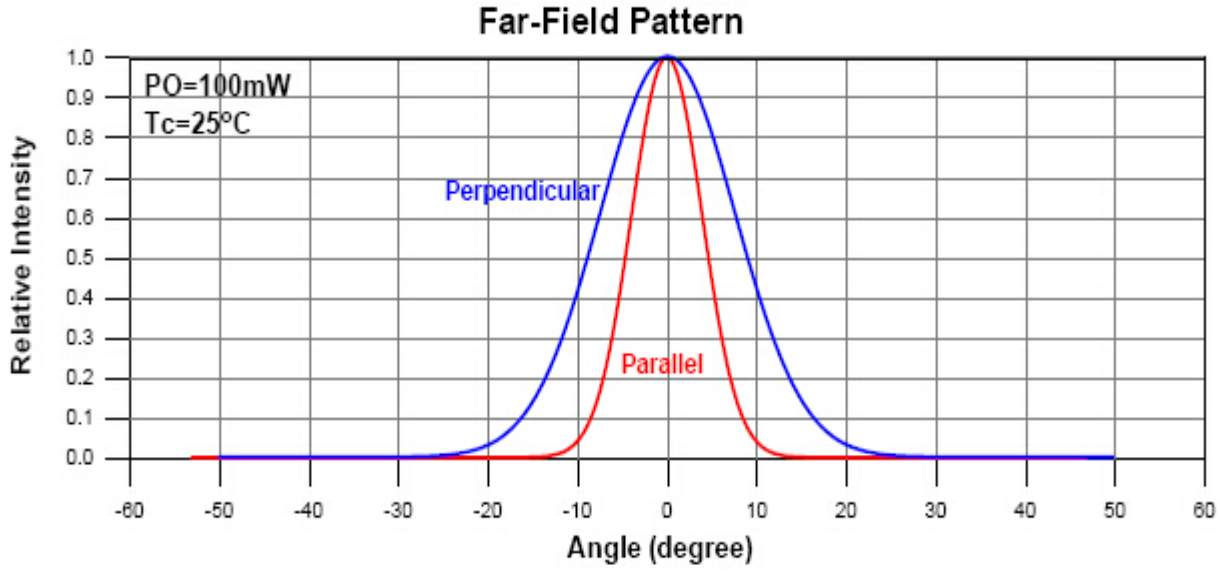
◎θ // and θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

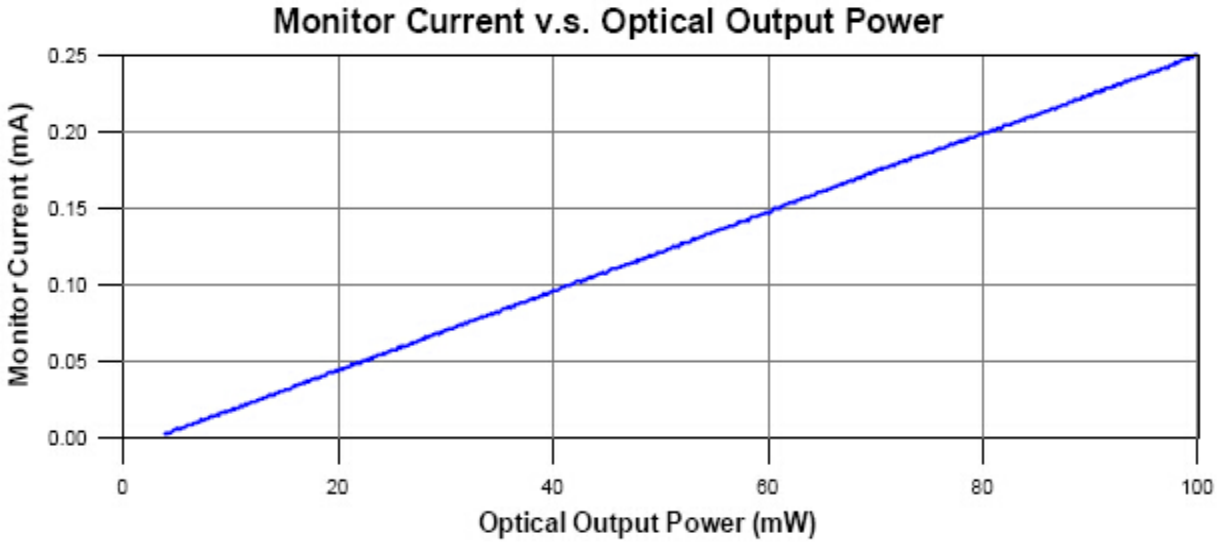
■Typical characteristic curves

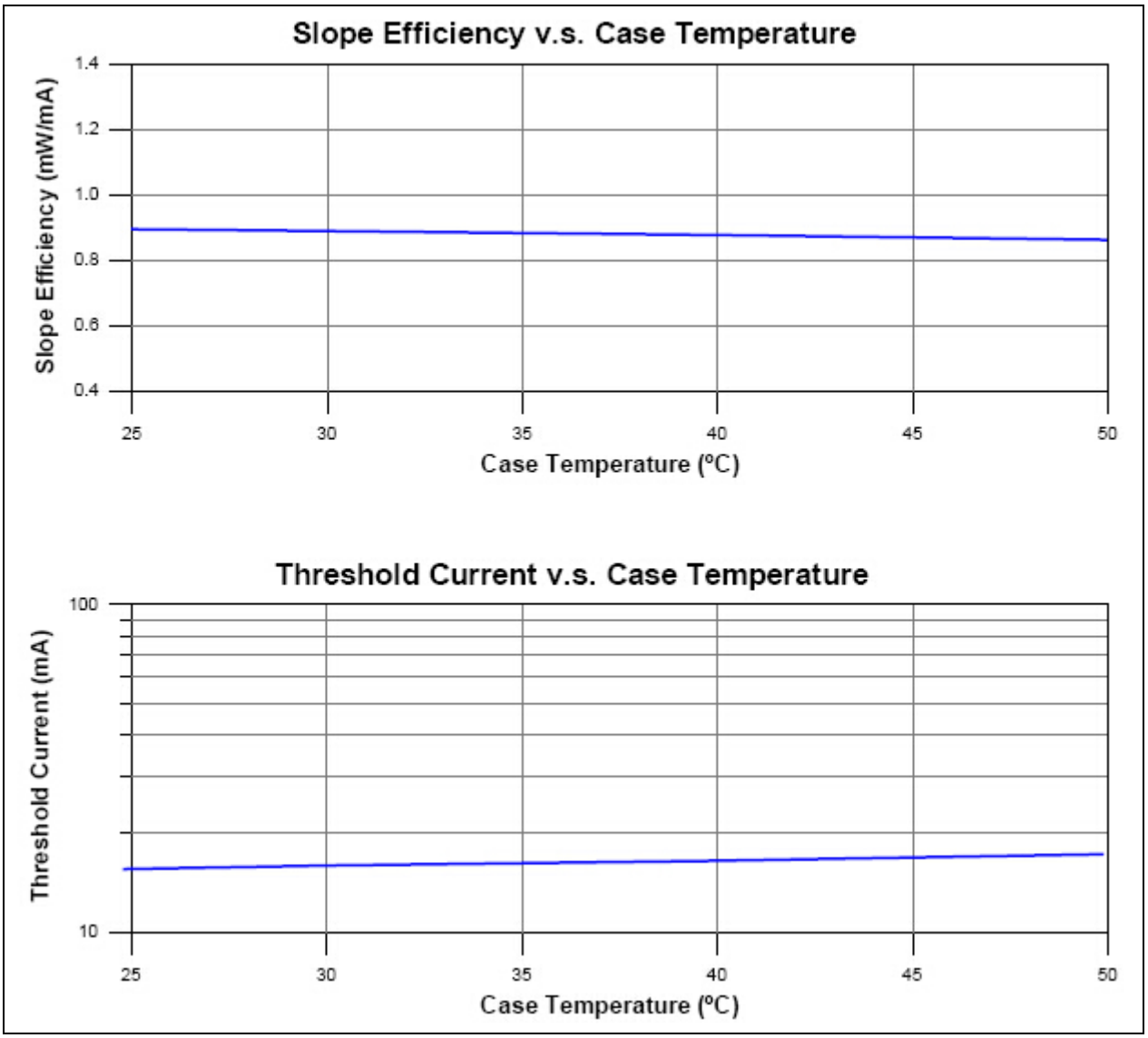





Peak Wavelength v.s. Case Temperature
Peak Wavelength (nm)
860
855
850
845
840
25
30
35
40
45
50
Case Temperature (°C)


Far-Field Pattern
PO=100mW
Tc=25°C
Perpendicular
Parallel
Relative Intensity
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
Angle (degree)


Monitor Current v.s. Optical Output Power
Monitor Current (mA)
0.25
0.20
0.15
0.10
0.05
0.00
0
20
40
60
80
100
Optical Output Power (mW)


Slope Efficiency v.s. Case Temperature
Slope Efficiency (mW/mA)
1.4
1.2
1.0
0.8
0.6
0.4
25
30
35
40
45
50
Case Temperature (ºC)
Threshold Current v.s. Case Temperature
Threshold Current (mA)
100
10
25
30
35
40
45
50
Case Temperature (ºC)