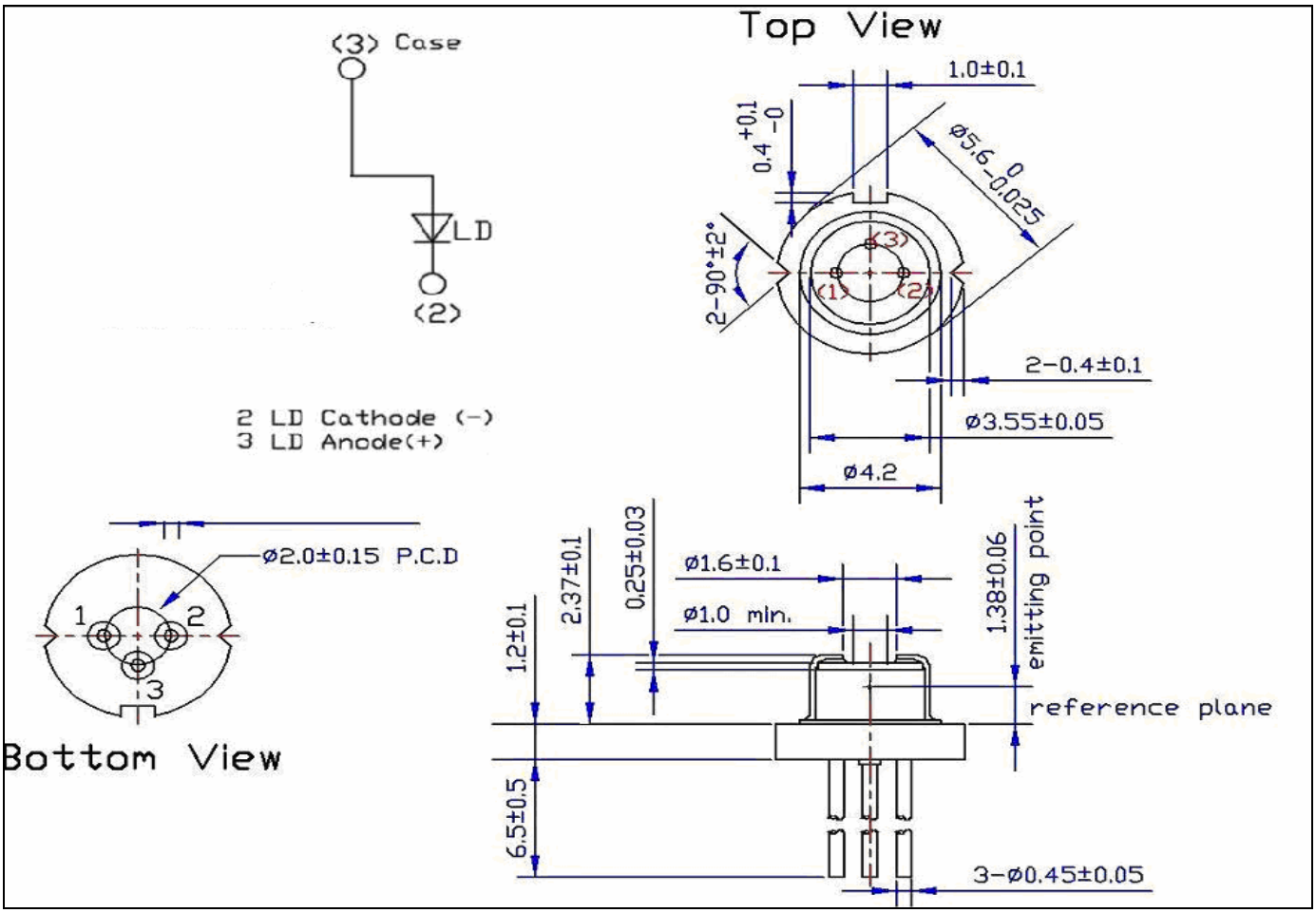
980nm Laser Diode
RLD98003001

■Specifications

(1) Device: Laser Diode

(2) Structure: TO-18(ϕ 5.6mm),With Pb free glass cap, no PD

■External dimensions(Unit : mm)



■Absolute Maximum Ratings(Tc=25℃)

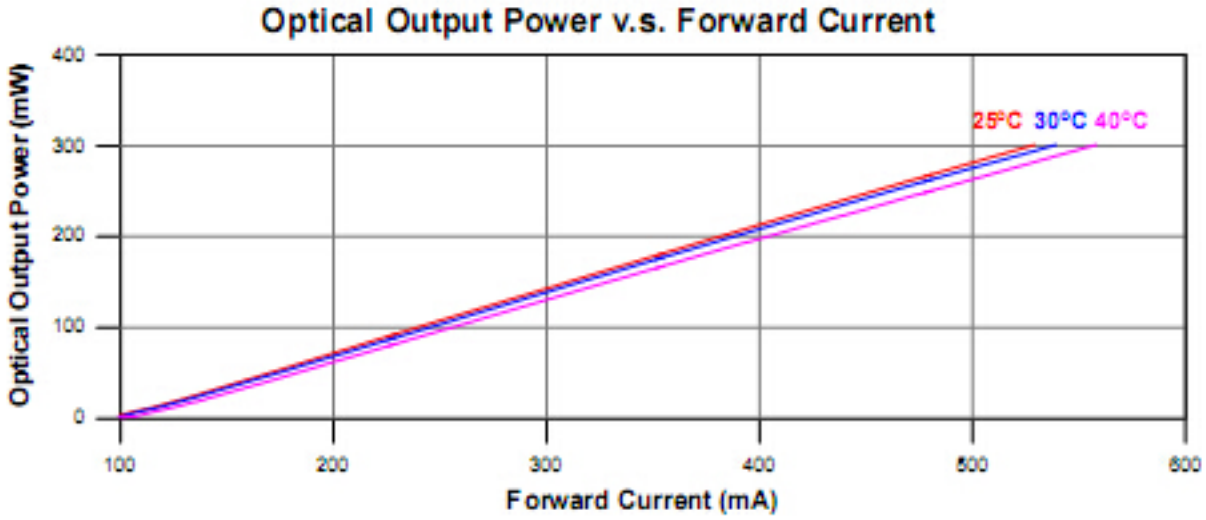
Parameter		Symbol	Rating	Unit
Optical Output		Po	**300**	mW
Reverse	Laser	Vr	**2**	V
Operating Temperature		Top	-10～+40	℃
Storage Temperature		Tstg	-15～+85	℃

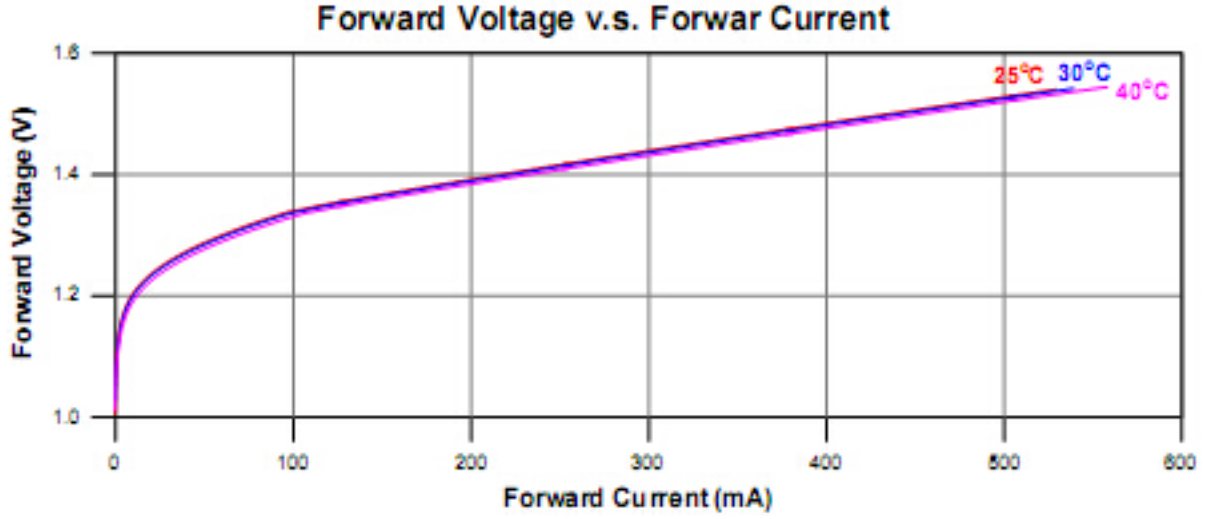
■Electrical and Optical Characteristics(Tc=25℃)

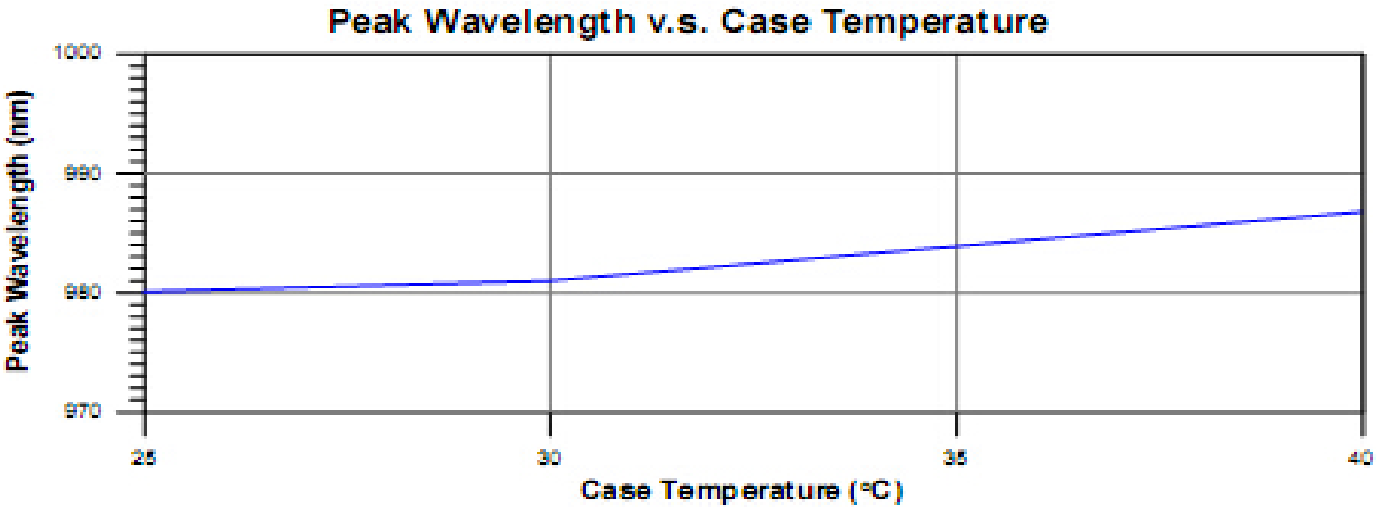
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	-	-	105	140	mA
Operating Current		Iop	Po=300mW	-	530	740	mA
Operating Voltage		Vop	-	1.2	1.6	2.3	Volt
Slope Efficiency		η	225mW-75mW / I_{225mW}-I_{75mW}	0.5	0.7	-	mW/mA
Beam Divergence (FWHM)	Parallel	θ //	Po=300mW	-	7	-	deg.
	Perpendicular	θ ⊥	Po=300mW	28	31	42	deg.
Lasing Wavelength		λ	Po=300mW	980	980	990	nm

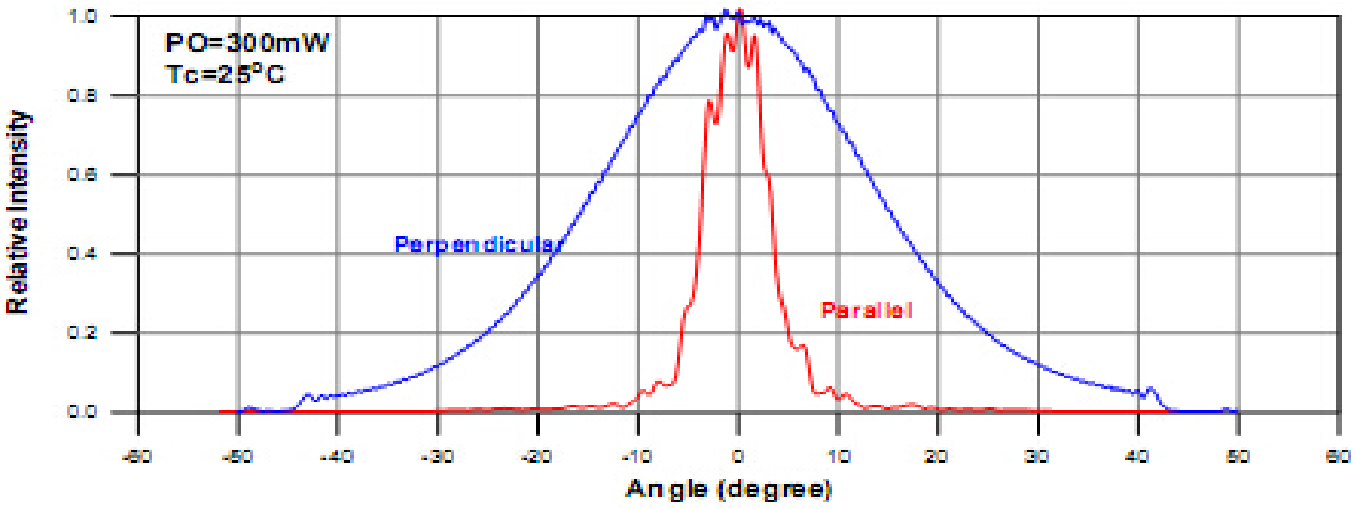
◎θ ⊥ are defined as the angle within which the intensity is 50% of the peak value.

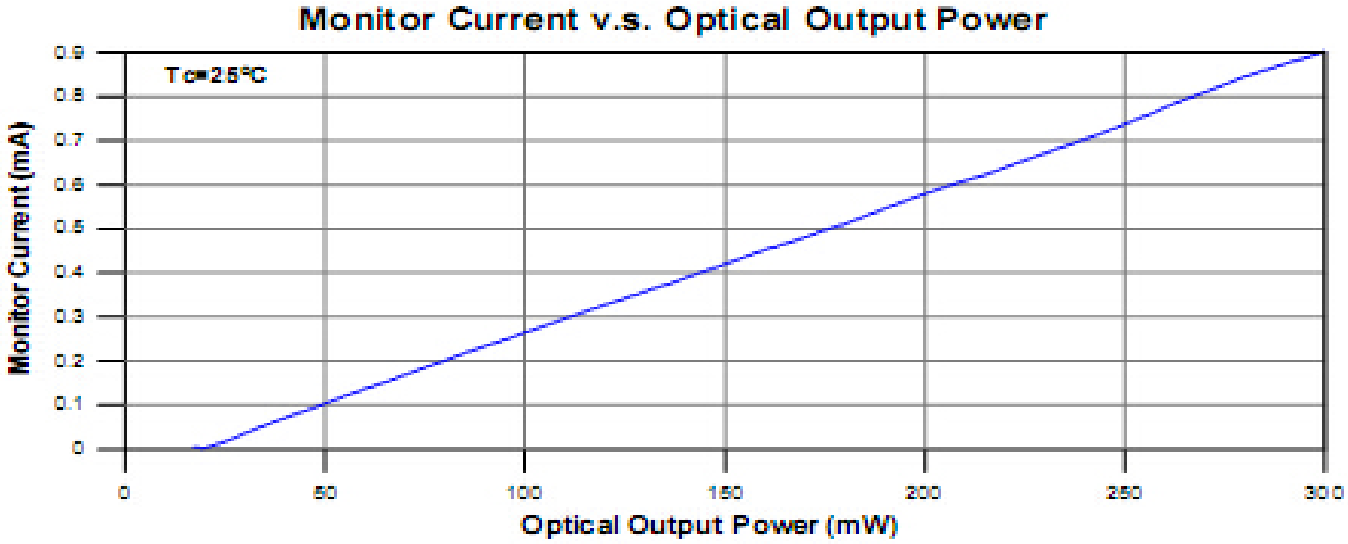
■Typical characteristic curves

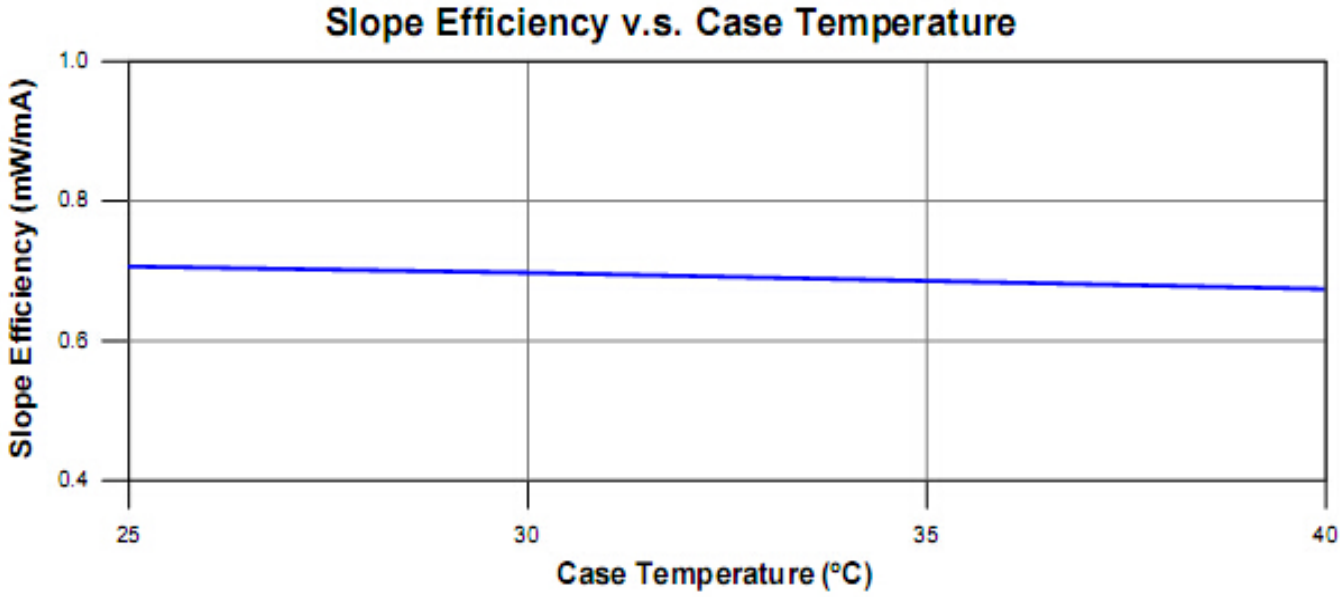


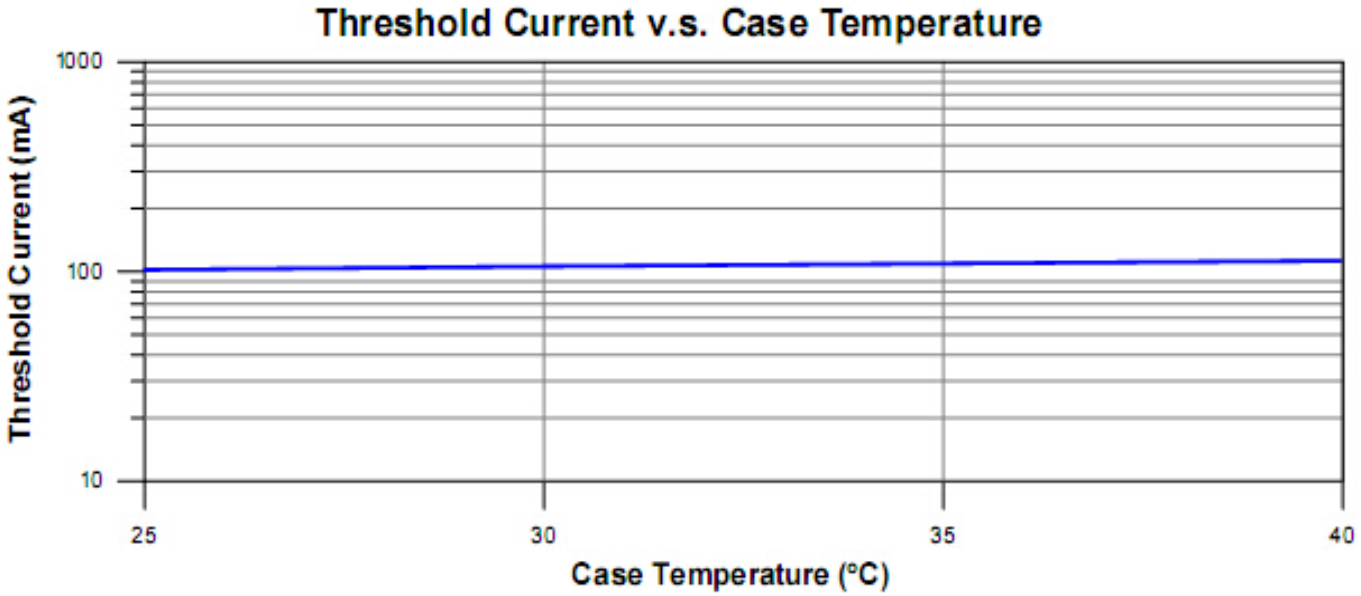



Peak Wavelength v.s. Case Temperature
Peak Wavelength (nm)
1000
990
980
970
25
30
35
40
Case Temperature (°C)


PO=300mW
Tc=25°C
Perpendicular
Parallel
Relative Intensity
1.0
0.8
0.6
0.4
0.2
0.0
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
Angle (degree)


Monitor Current v.s. Optical Output Power
Tc=25°C
Monitor Current (mA)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
250
300
Optical Output Power (mW)


Slope Efficiency v.s. Case Temperature
Slope Efficiency (mW/mA)
1.0
0.8
0.6
0.4
25
30
35
40
Case Temperature (°C)


Threshold Current v.s. Case Temperature
Threshold Current (mA)
1000
100
10
25
30
35
40
Case Temperature (°C)