U-LD-105071A

Features

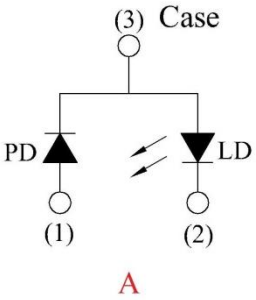
1. Single-mode
2. Low operation current
3. High reliability
4. Standard optical power output：50mW (CW)
5. TO-56 (ϕ 5.6mm) Package, cap window with flat Pb-free lens.

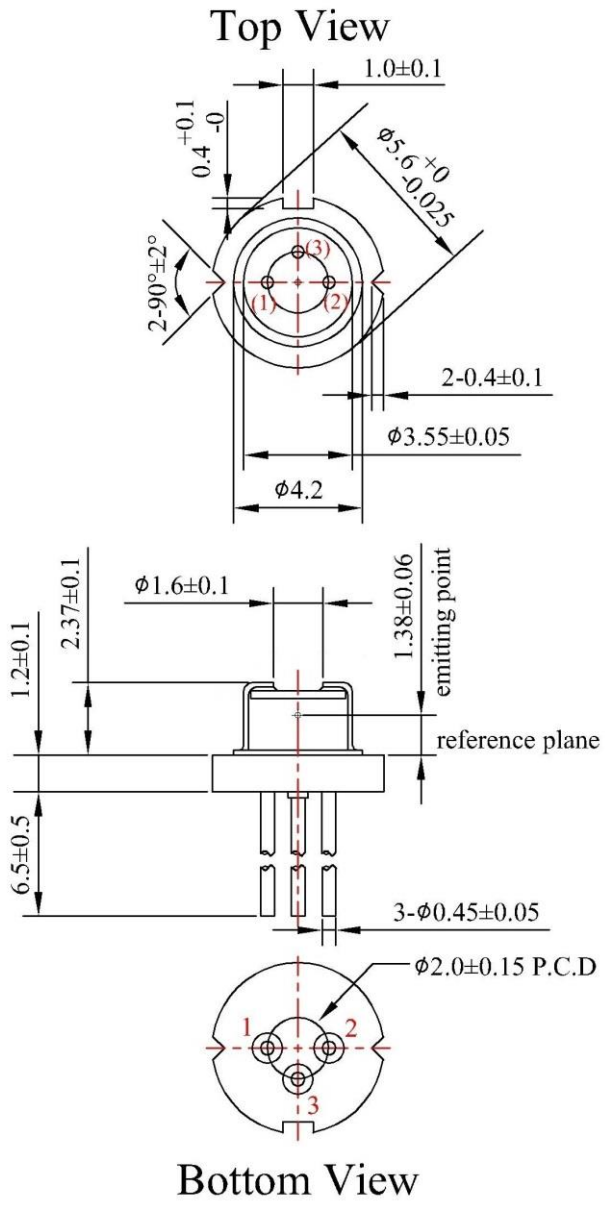
Applications

1. Phototherapy

External dimensions(Unit : mm

Pin configuration





Ver.01

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Optical Output (Tc=25℃)	Po	**55**	mW
LD Reverse Voltage (Tc=25℃)	Vr_LD	**2**	V
PD Reverse Voltage (Tc=25℃)	Vr_PD	**30**	V
Operating Temperature (Case)	Top	-10～+70	℃
Storage Temperature	Tstg	-40～+85	℃

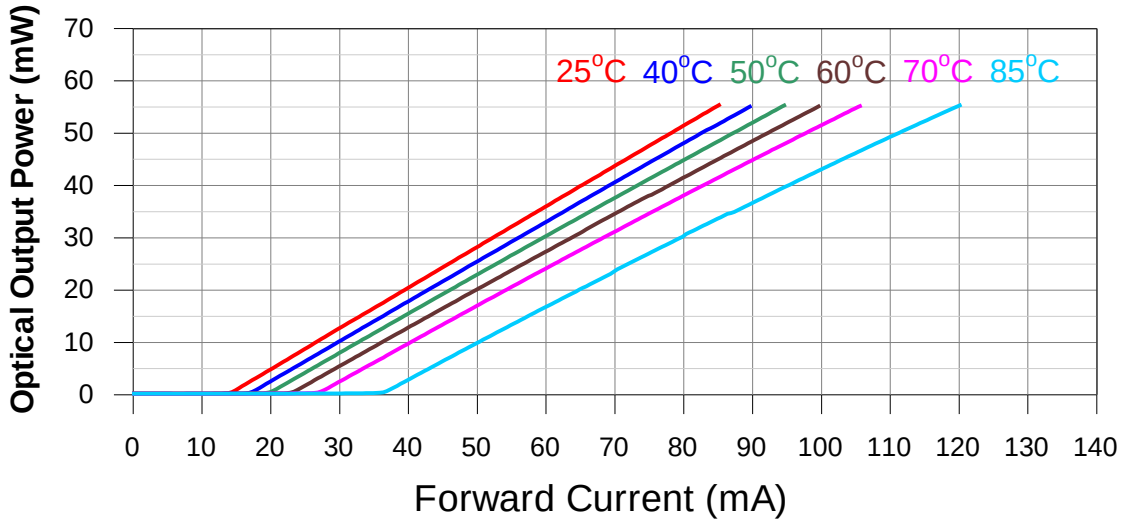
■ Electrical and Optical Characteristics(Tc=25℃)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	-	-	**14**	-	mA
Operating Current		Iop	Po=50mW	-	**80**	**90**	mA
Operating Voltage		Vop	Po=50mW	-	**1.4**	-	V
Slope Efficiency		η	Po=12.5-37.5mW	-	**0.76**	-	mW/mA
Monitor Current		Im	Po=50mW, V_{RD}=5V	**0.1**	**0.7**	**3.0**	mA
Beam Divergence (FWHM)	Parallel	$\theta_{//}$	Po=50mW	-	**10**	-	deg.
	Perpendicular	$\theta_{\perp}$	Po=50mW	-	**32**	-	deg.
Lasing Wavelength		λ	Po=50mW	**1050**	**1060**	**1075**	nm

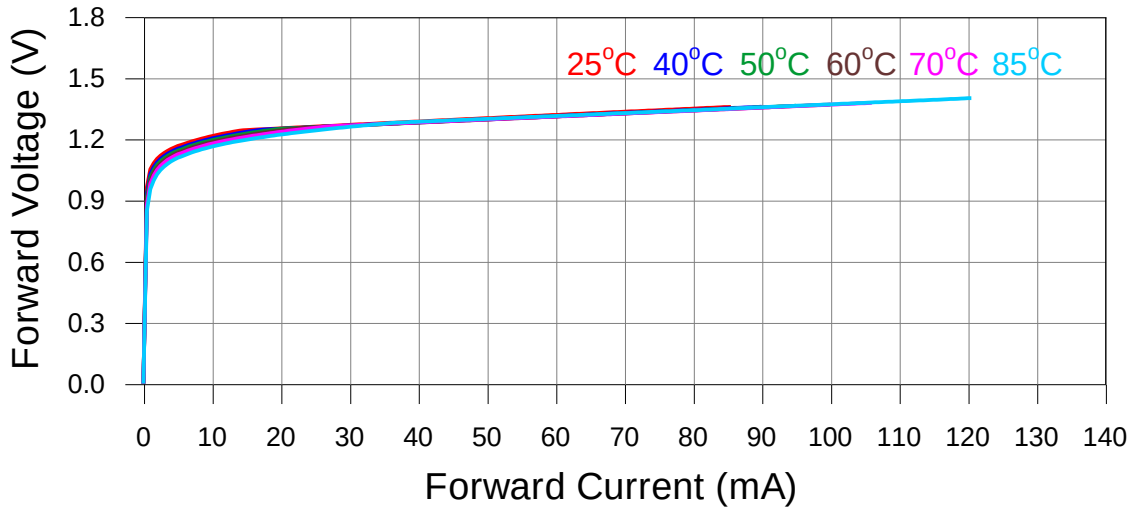
◎ $\theta_{//}$ and $\theta_{\perp}$ are defined as the angle within which the intensity is 50% of the peak value.

Typical characteristic curves

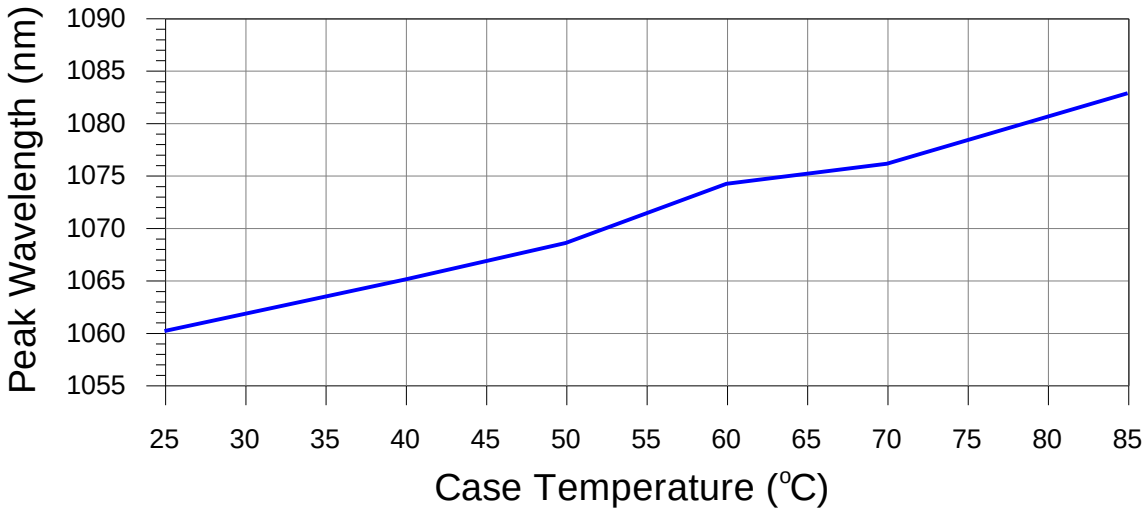
Optical Output Power v.s. Forward Current



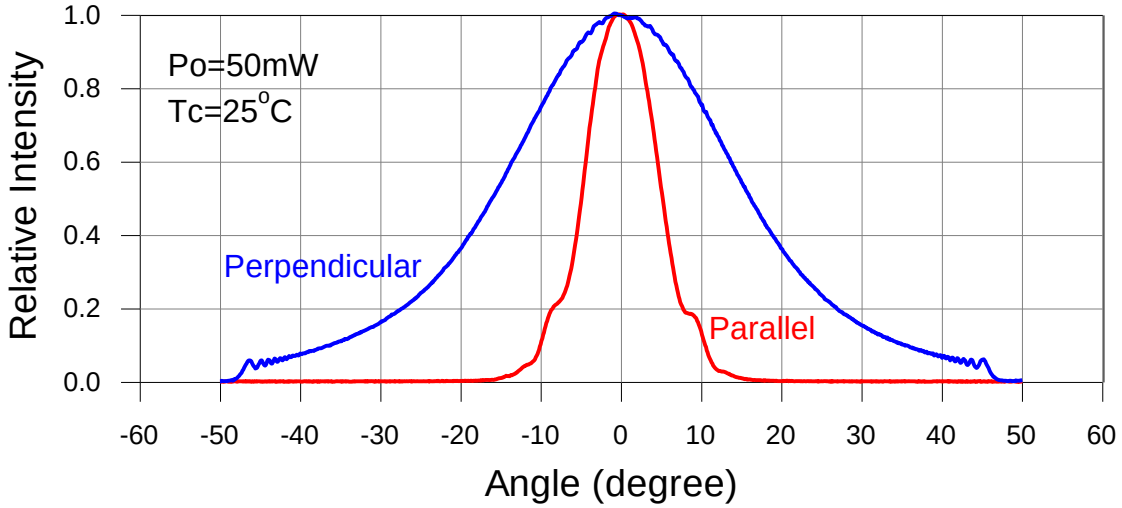
Forward Voltage v.s. Forward Current



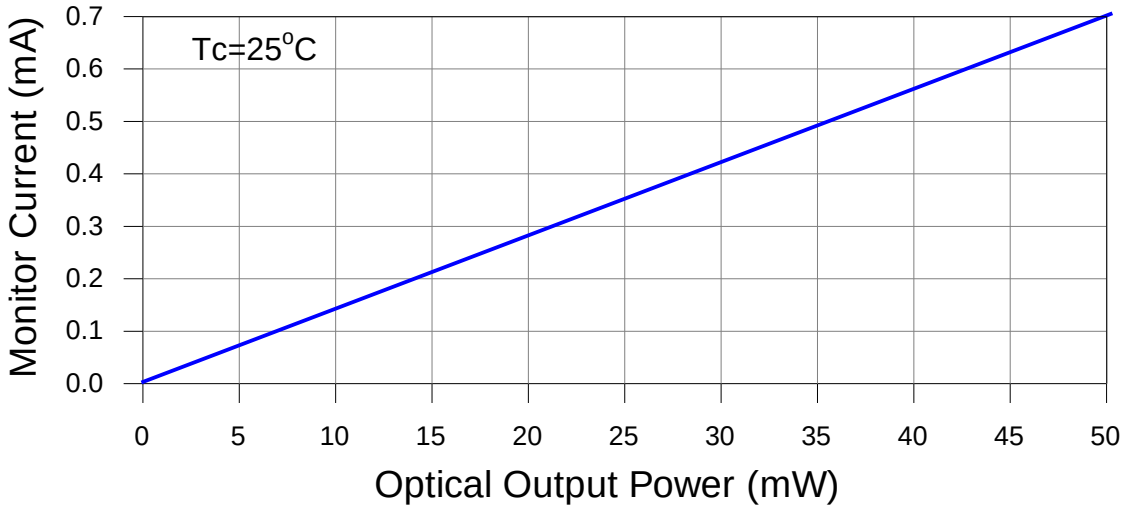
Peak Wavelength v.s. Case Temperature



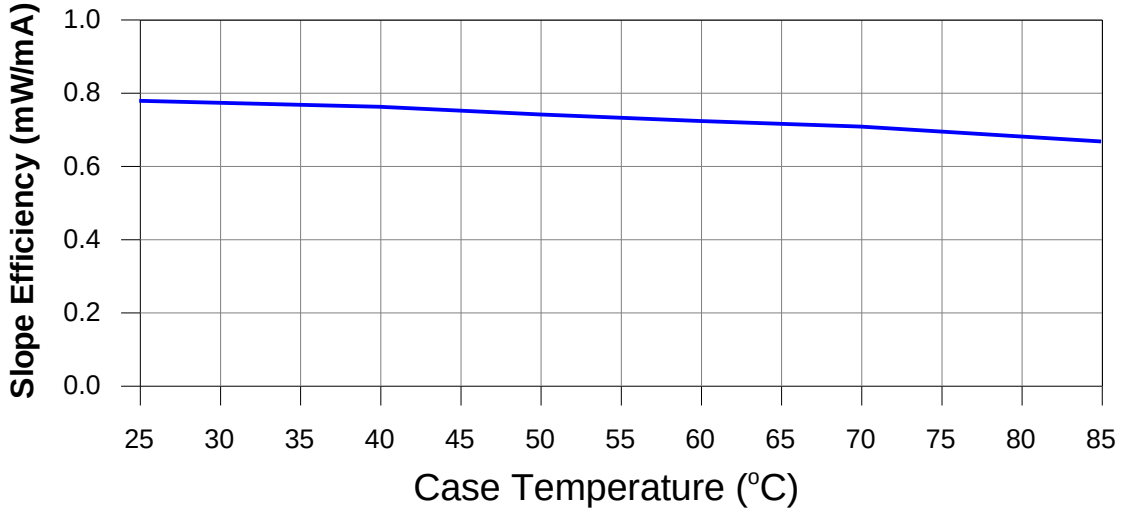
Far-Field Pattern

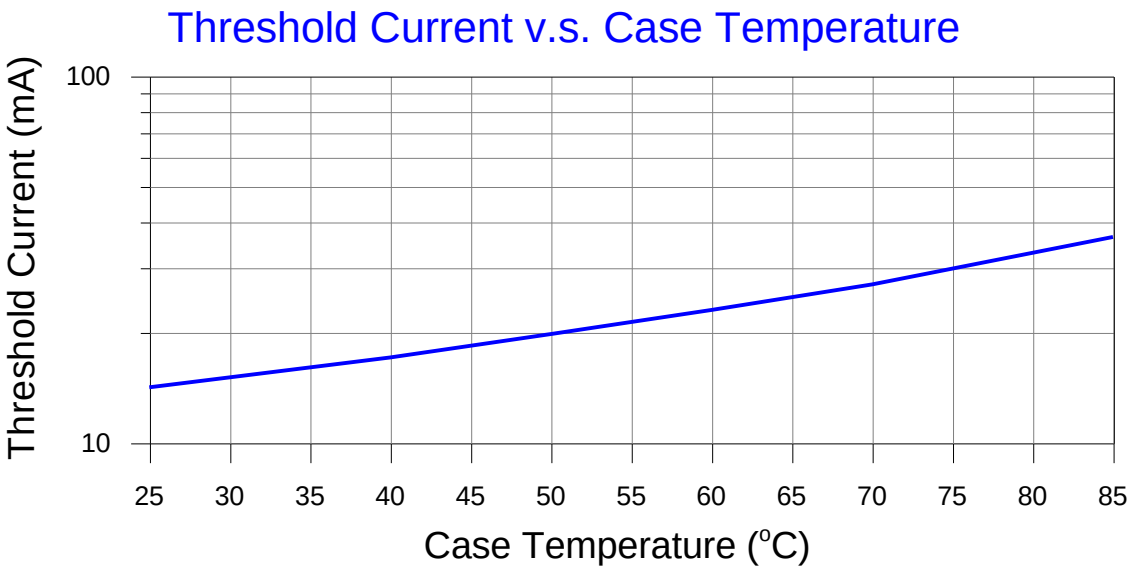


Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature




Threshold Current v.s. Case Temperature
Threshold Current (mA)
100
10
25
30
35
40
45
50
55
60
65
70
75
80
85
Case Temperature (°C)