

LCU85E061A

LCU850 SERIES LASER DIODE

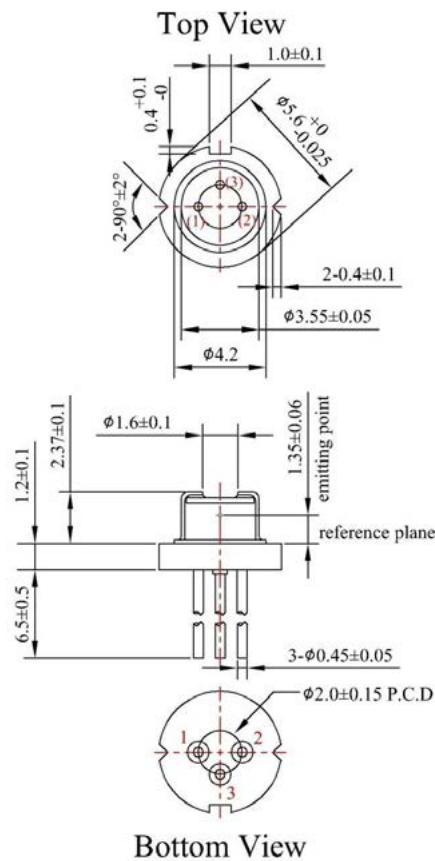
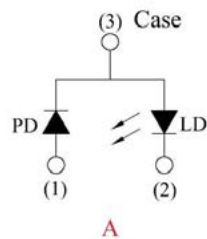
■ Features

1. Small perpendicular divergence angle
2. Standard optical power output : 500mW (CW)
3. TO-56 (ϕ 5.6mm) package, with Pb-free window cap.
4. Built-in Photo Diode for monitoring laser diode.

■ Applications

1. Motion sensor
2. 3D depth sensor
3. Illumination
4. Industry
5. Medical application

■ External dimensions(Unit : mm)



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■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Optical Output (Tc=25°C)	Po	500	mW
LD Reverse Voltage (Tc=25°C)	Vr_LD	2	V
PD Reverse Voltage (Tc=25°C)	Vr_PD	30	V
Operating Temperature (Case)	Top	-10~+60	°C
Storage Temperature	Tstg	-40~+85	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	Ith	-	-	160	180	mA	
Operating Current	Iop	Po=500mW	-	680	720	mA	
Operating Voltage	Vop	Po=500mW	-	1.9	2.2	V	
Slope Efficiency	η	Po=125-375mW	-	0.95	-	mW/mA	
Monitor Current	Im	Po=500mW	0.1	0.9	1.5	mA	
Beam Divergence (FWHM)	Parallel	$\theta_{//}$	Po=500mW	-	8	13	deg.
	Perpendicular	θ_{\perp}	Po=500mW	-	18	23	deg.
Lasing Wavelength	λ	Po=500mW	840	850	860	nm	

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

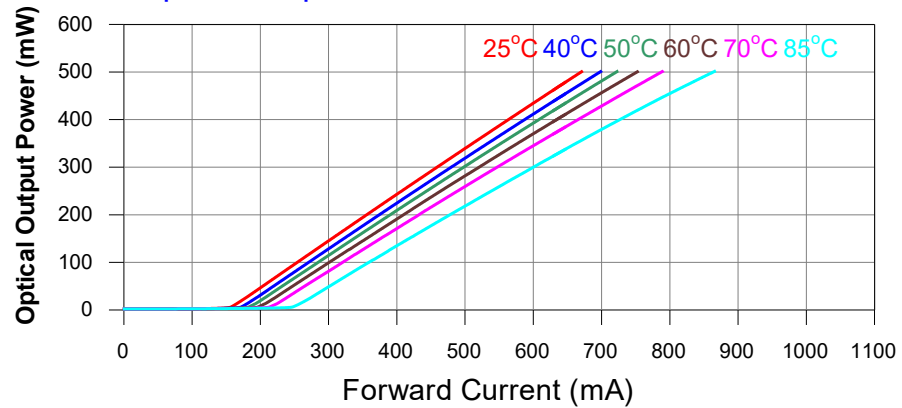
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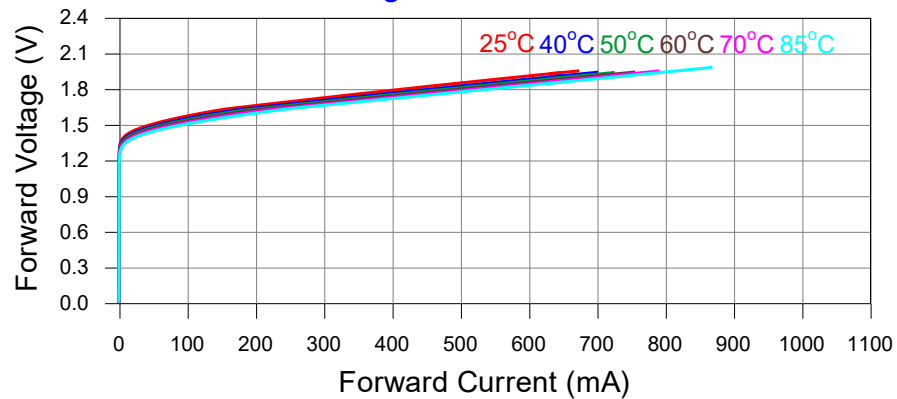
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■ Typical characteristic curves

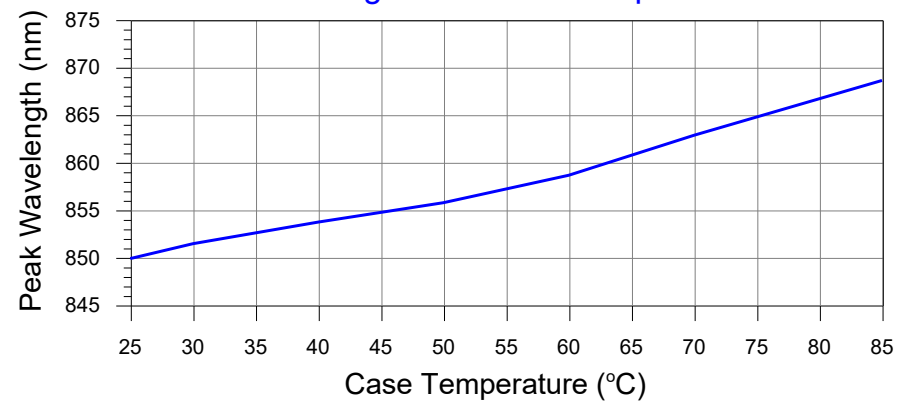
Optical Output Power v.s. Forward Current



Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature

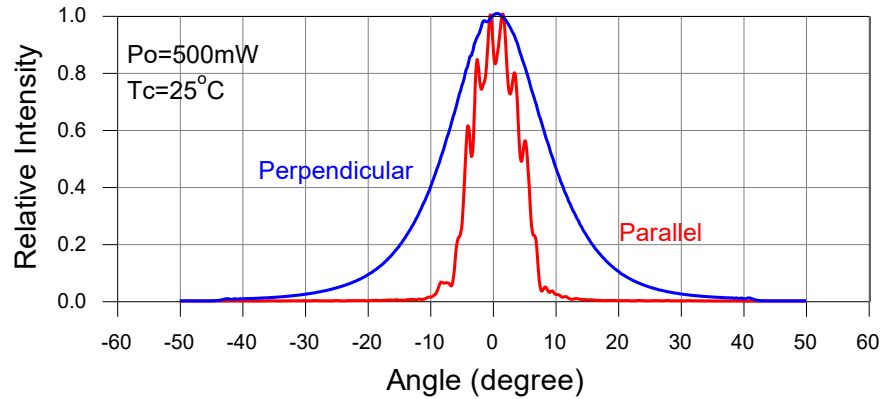


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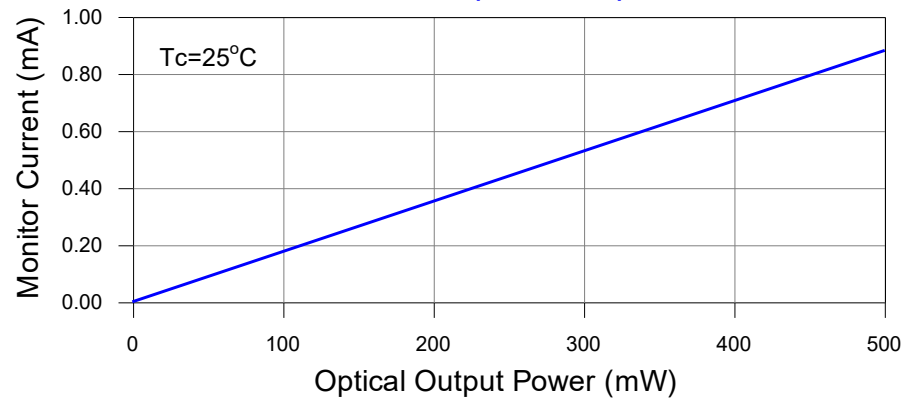
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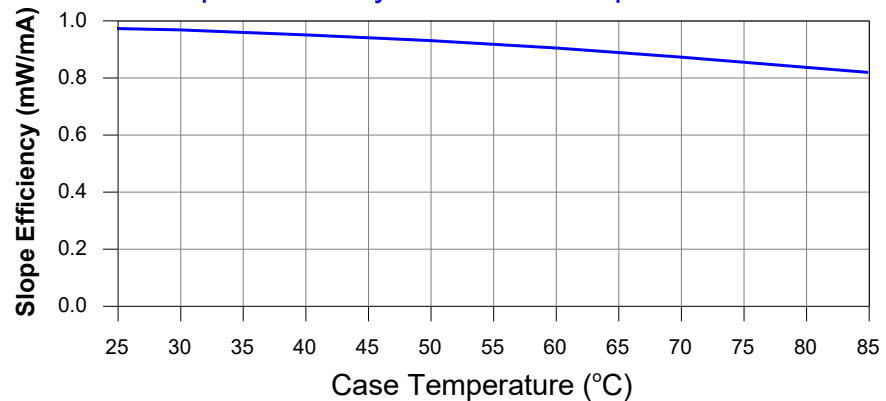
Far-Field Pattern



Monitor Current v.s. Optical Output Power



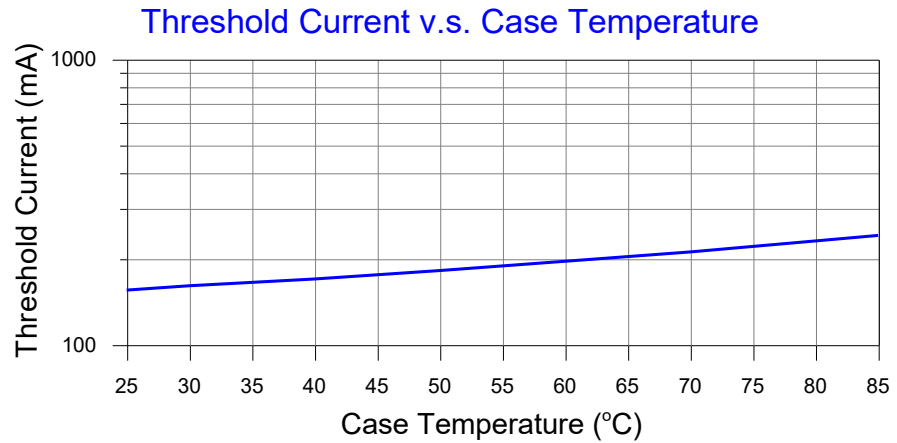
Slope Efficiency v.s. Case Temperature



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