

LCU98E042Ap

LCU98xx SERIES LASER DIODE

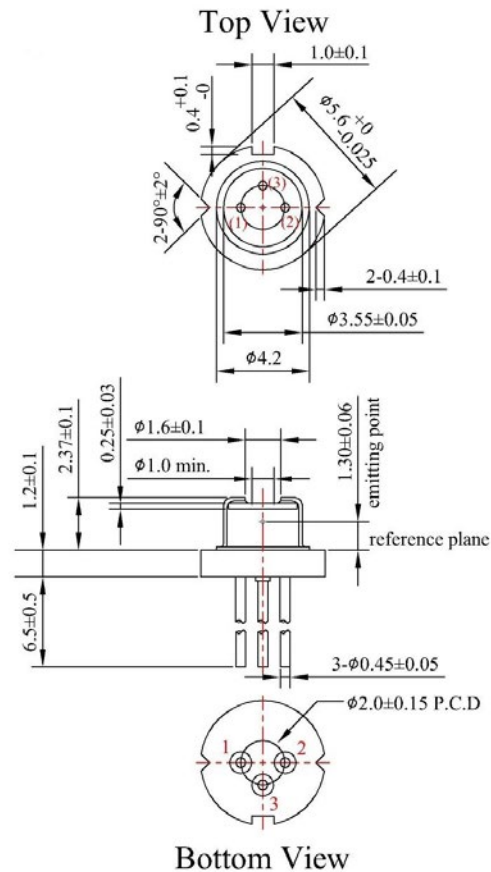
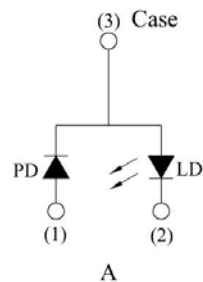
■ Features

1. Low operation current
2. Standard optical power output : 500mW (CW)
3. TO-56 (ϕ 5.6mm) Packaged, with Pb-free window cap.
4. Built-in Photo Diode for monitoring laser diode.

■ Applications

1. Industrial optical module
2. Light source for counterfeit banknotes detection
3. Infrared illumination
4. Medical laser treatment

■ External dimensions(Unit : mm)



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■ Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Rating	Unit
Optical Output	Po	500	mW
Reverse Voltage	Vr	2	V
Operating Temperature (Case)	Top	-10~+40	°C
Storage Temperature	Tstg	-40~+85	°C

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

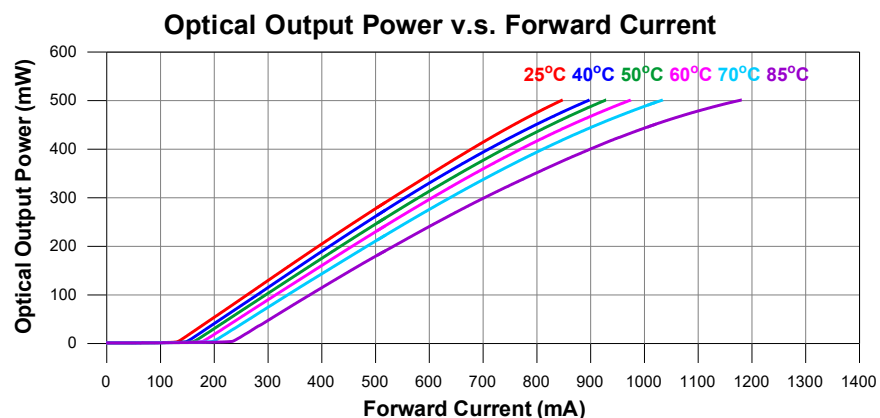
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	Po=500mW	-	120	170	mA
Operating Current	Iop	Po=500mW	-	850	1000	mA
Operating Voltage	Vop	Po=500mW	-	1.6	2.3	Volt
Slope Efficiency	η	Po=125-375mW	0.6	0.7	-	mW/mA
Monitor current	Im	Po=500mW	0.1	1.0	3.0	mA
Beam Divergence (FWHM)	Parallel	$\theta_{//}$	-	12	-	deg.
	Perpendicular	θ_{\perp}	-	38	-	deg.
Lasing Wavelength	λ	Po=500mW	970	980	990	nm

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

■ Quality Notice

This device is still under product development.

■ Typical characteristic curves

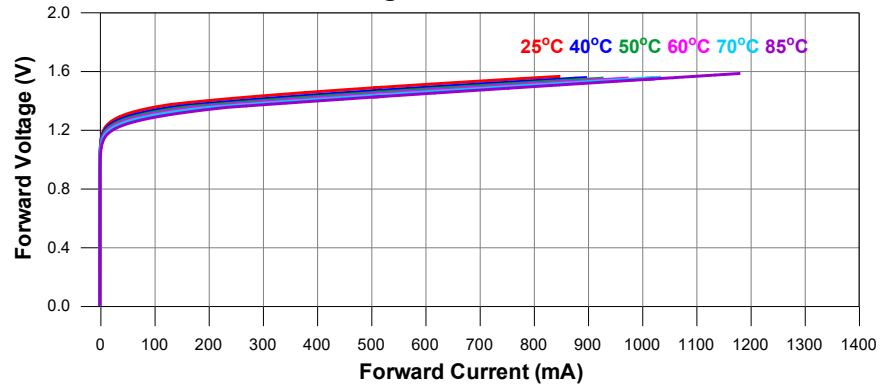


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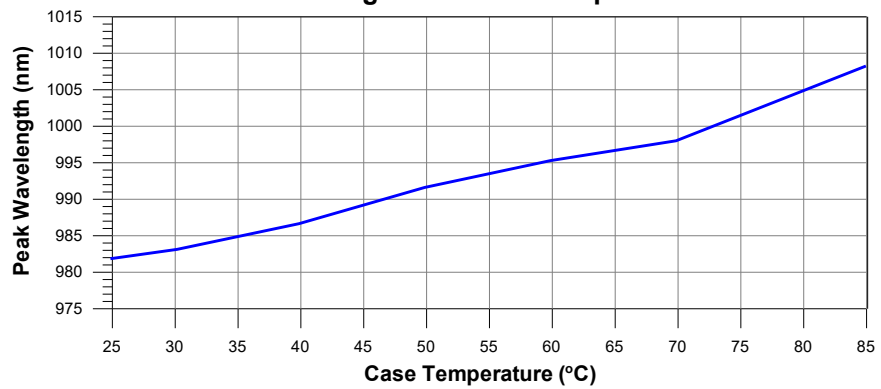
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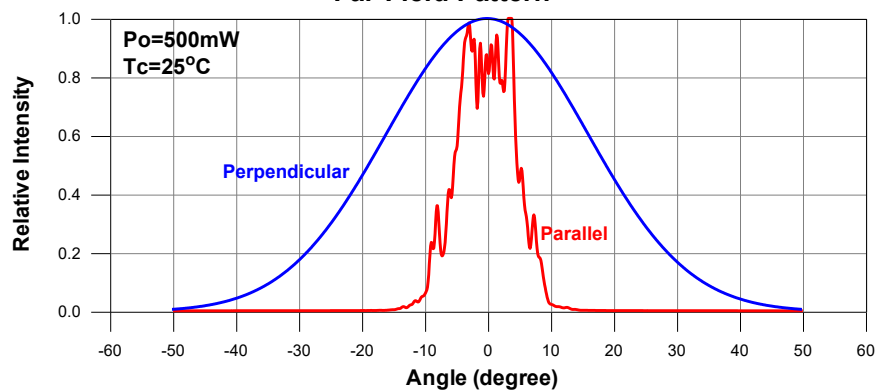
Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern

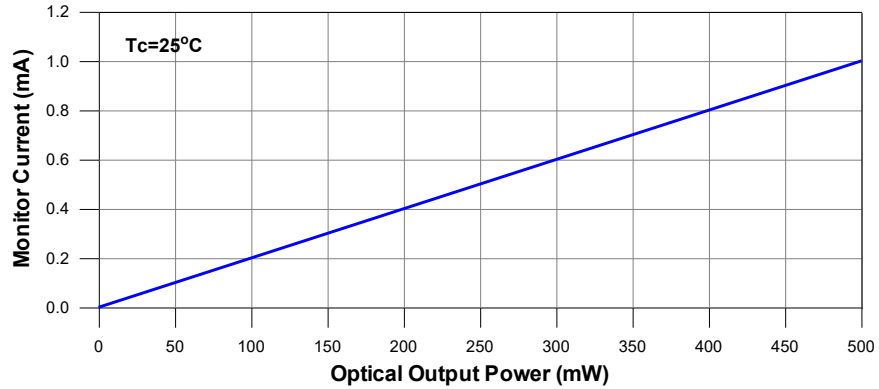


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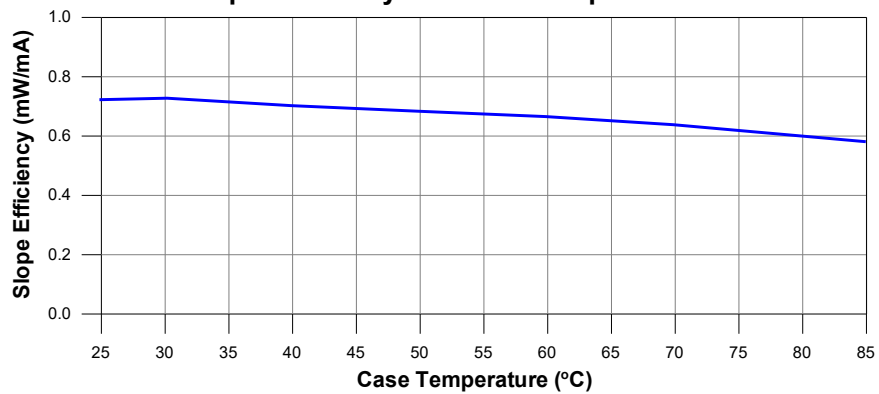
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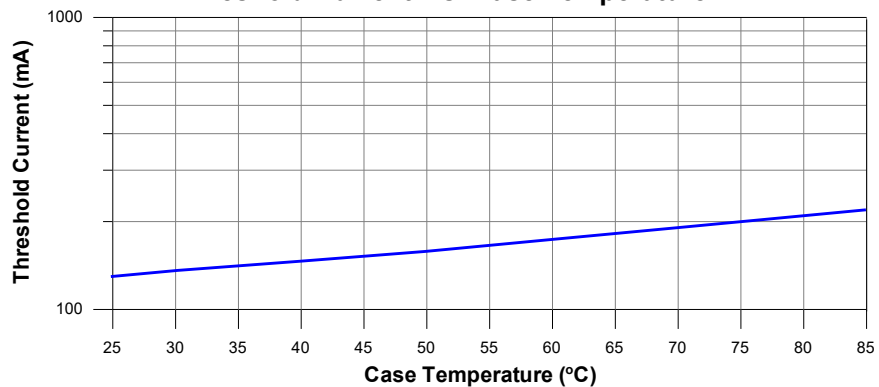
Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature



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