

LCU98E042Ap

LCU98xx SERIES LASER DIODE

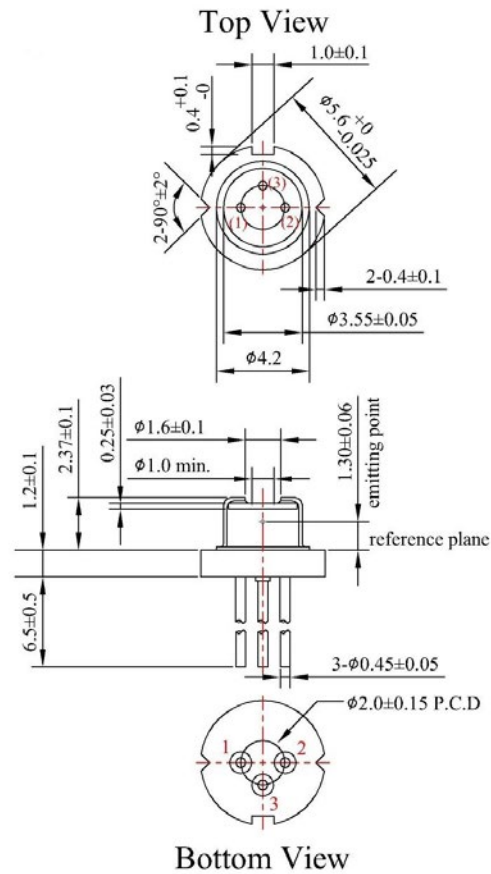
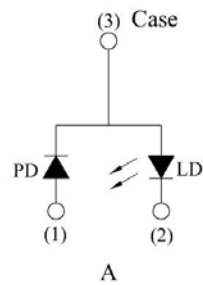
■ Features

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)



Ver.A

LCU98E042Ap

LCU98xx SERIES LASER DIODE

■ 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)

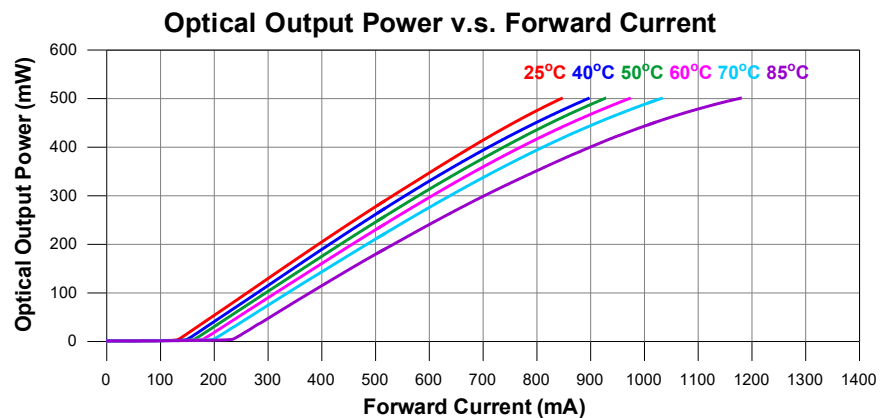
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	Po=500mW	-	120	170	mA
Operating Current	Iop	Po=500mW	-	850	1000	mA
Operating Voltage	Vop	Po=500mW	-	1.6	2.3	Volt
Slope Efficiency	η	Po=125-375mW	0.6	0.7	-	mW/mA
Monitor current	Im	Po=500mW	0.1	1.0	3.0	mA
Beam Divergence (FWHM)	Parallel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

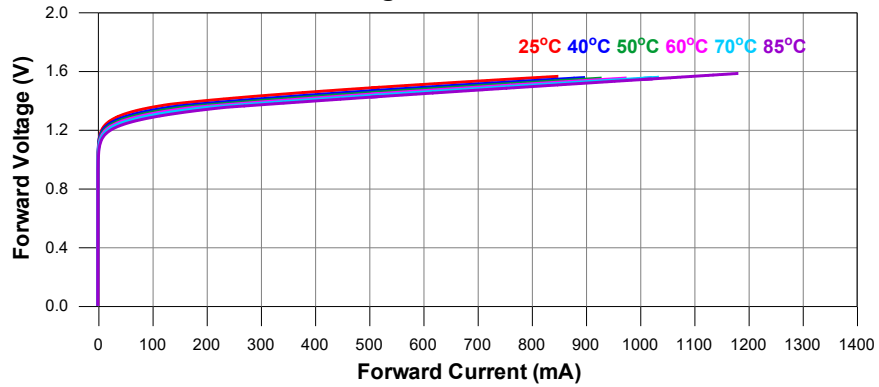


Ver.A

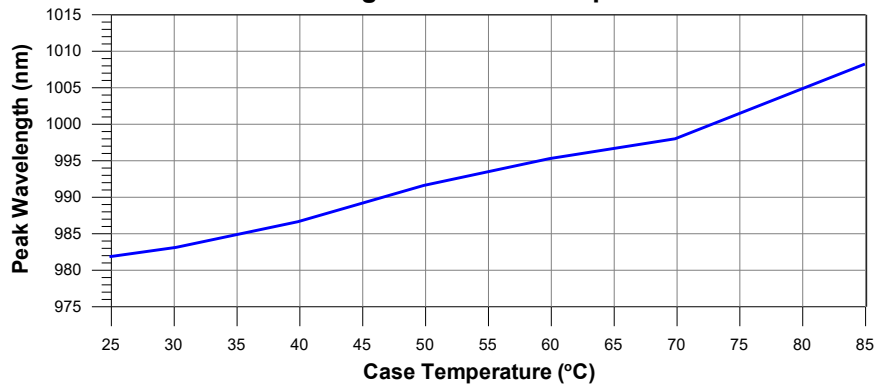
LCU98E042Ap

LCU98xx SERIES LASER DIODE

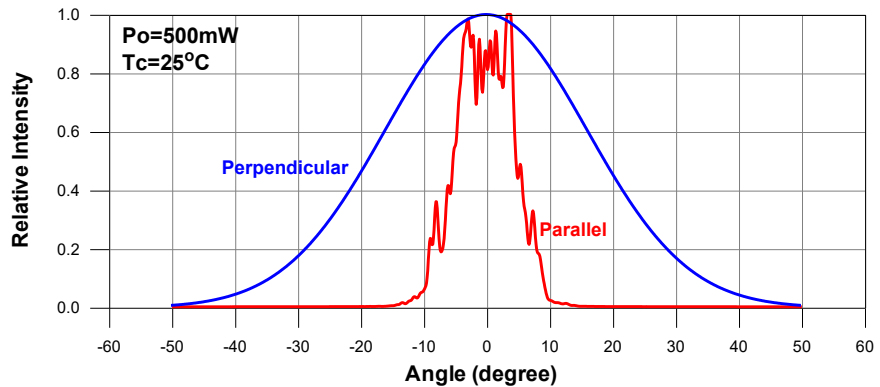
Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern

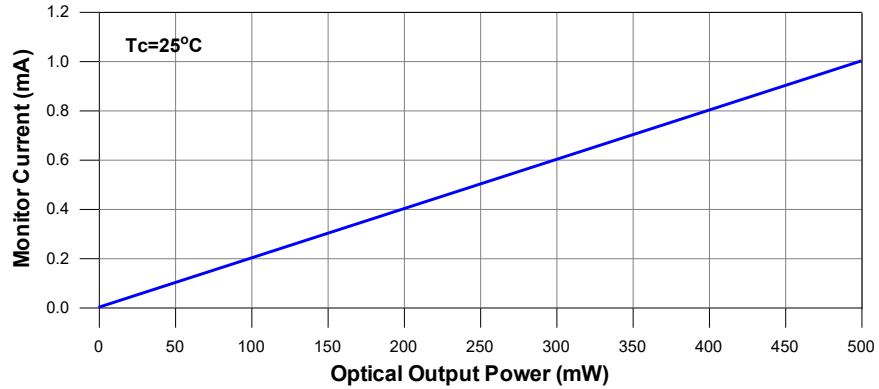


Ver.A

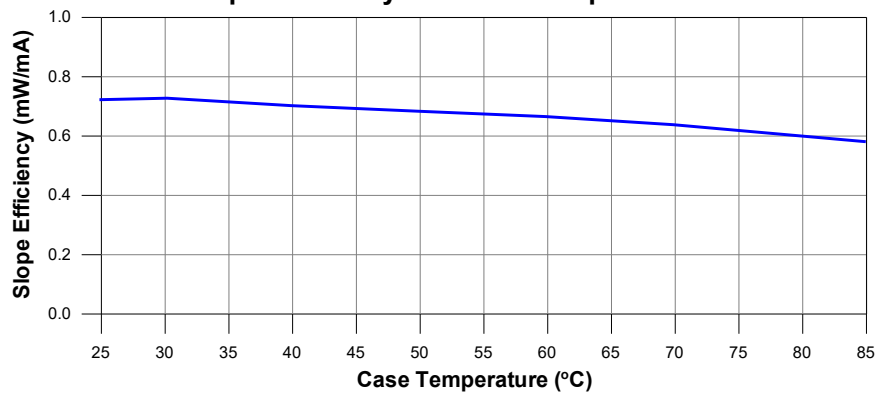
LCU98E042Ap

LCU98xx SERIES LASER DIODE

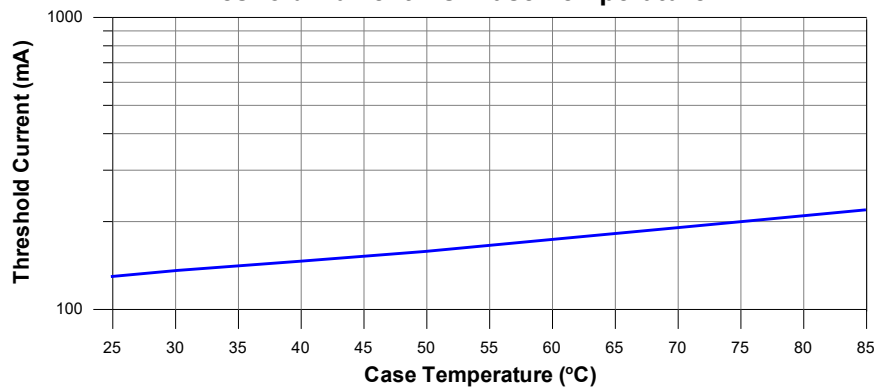
Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature



Ver.A

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.