

## LCU80E052Ap/Dp

LCU80xx SERIES LASER DIODE

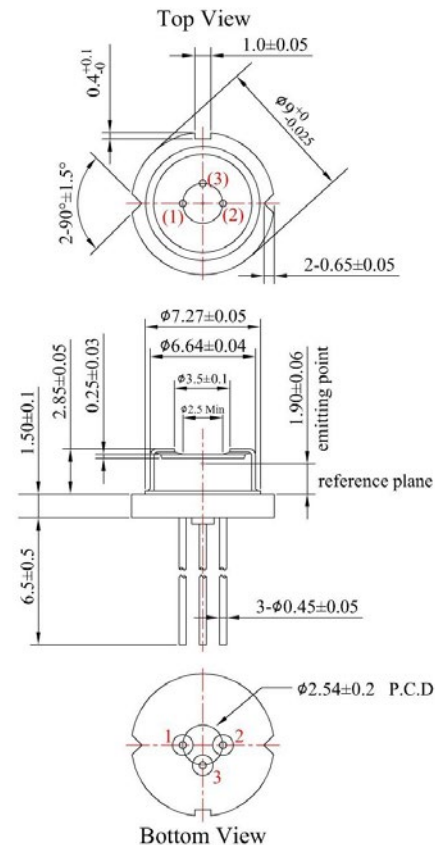
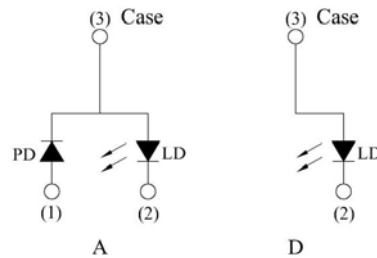
### ■ Features

1. Low operation current
2. High reliability
3. Low divergence angle
4. Standard optical power output : 500mW (CW)
5. TO-9 ( $\phi$  9.0mm) Packaged, with Pb-free window cap.

### ■ Applications

1. Motion sensor
2. Medical application
3. Pumping source for solid state laser
4. Infrared illumination
5. Industrial application

### ■ External dimensions(Unit : mm)



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### Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Rating	Unit
Optical Output	Po	<b>600</b>	mW
Reverse Voltage	Vr	<b>2</b>	V
Operating Temperature ( Case )	Top	-10~+50	°C
Storage Temperature	Tstg	-10~+85	°C

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

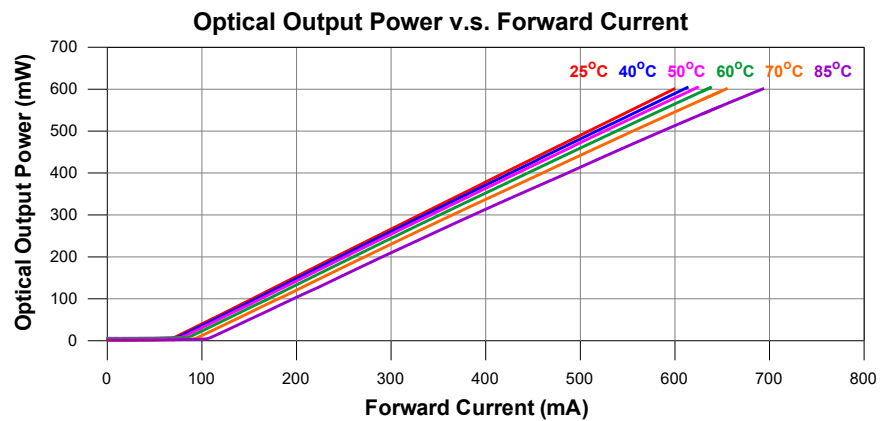
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	Po=500mW	-	<b>70</b>	-	mA
Operating Current	Iop	Po=500mW	-	<b>520</b>	<b>550</b>	mA
Operating Voltage	Vop	Po=500mW	-	<b>1.92</b>	<b>2.1</b>	Volts
Slope Efficiency	$\eta$	Po=125-375mW	<b>0.95</b>	<b>1.1</b>	-	mW/mA
Monitor Current	Im	Po=500mW		<b>0.6</b>	<b>2.5</b>	mA
Beam Divergence (FWHM)	Parallel	$\theta_{//}$	-	<b>8</b>	-	deg.
	Perpendicular	$\theta_{\perp}$	-	<b>28</b>	-	deg.
Lasing Wavelength	$\lambda$	Po=500mW	<b>805</b>	<b>808</b>	<b>811</b>	nm

©  $\theta_{//}$  and  $\theta_{\perp}$  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

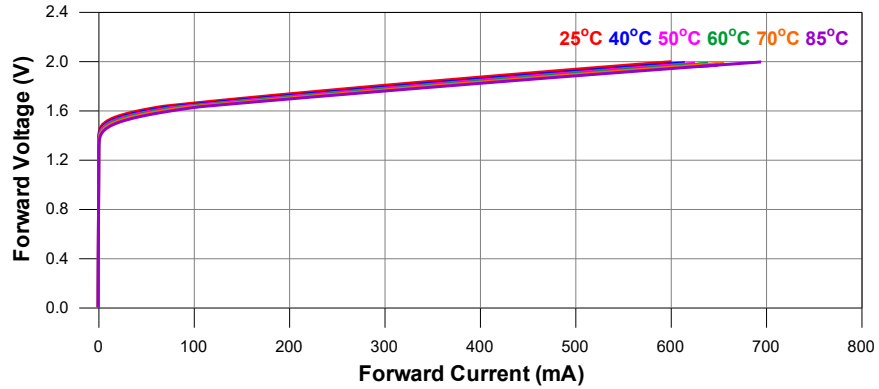


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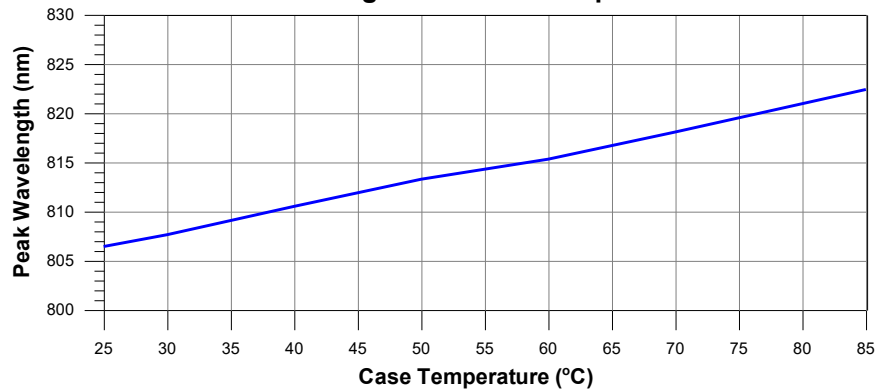
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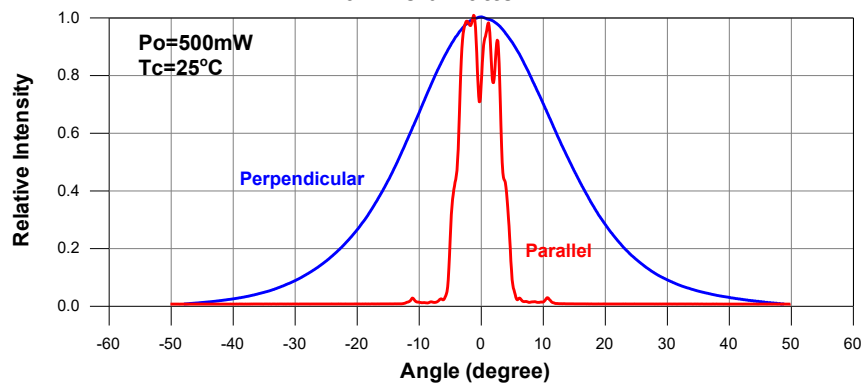
Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern

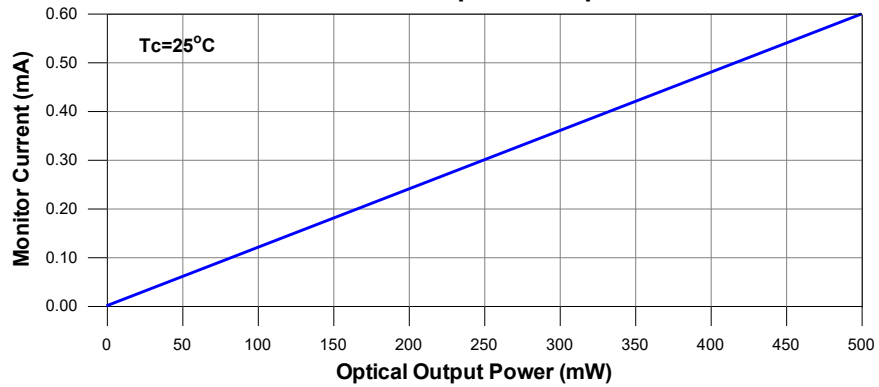


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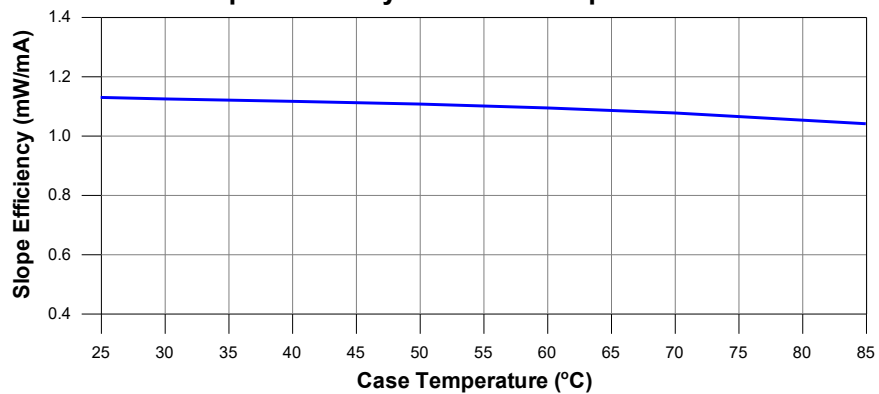
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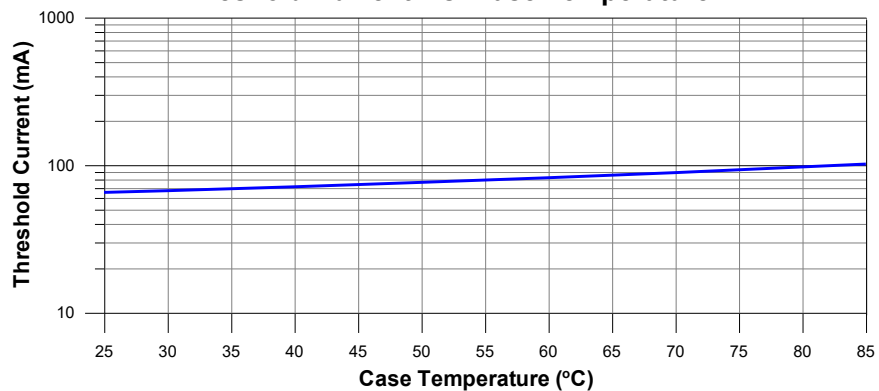
Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature



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