

## LCU80E053A/D

### LCU808 SERIES LASER DIODE

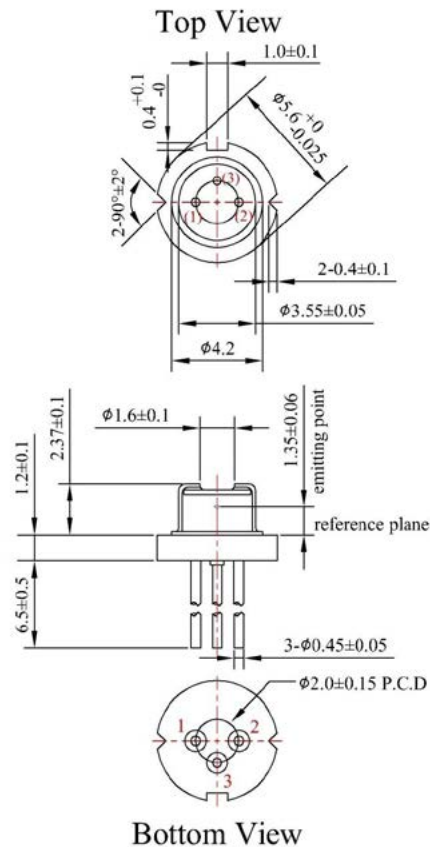
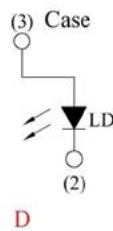
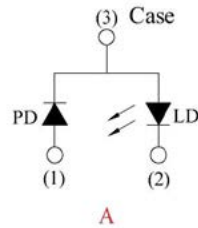
#### ■ Features

1. Low operation current
2. High reliability
3. Low divergence angle
4. Standard optical power output : 500mW (CW)
5. TO-56 ( $\phi$  5.6mm) 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

Parameter	Symbol	Rating	Unit
Optical Output (Tc=25°C)	Po	<b>600</b>	mW
LD Reverse Voltage (Tc=25°C)	Vr_LD	<b>2</b>	V
PD Reverse Voltage (Tc=25°C)	Vr_PD	<b>30</b>	V
Operating Temperature (Case)	Top	-10~+70	°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=125-250mW	-	<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>	V	
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	$\theta_{//}$	Po=500mW	-	<b>8</b>	-	deg.
	Perpendicular	$\theta_{\perp}$	Po=500mW	-	<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.

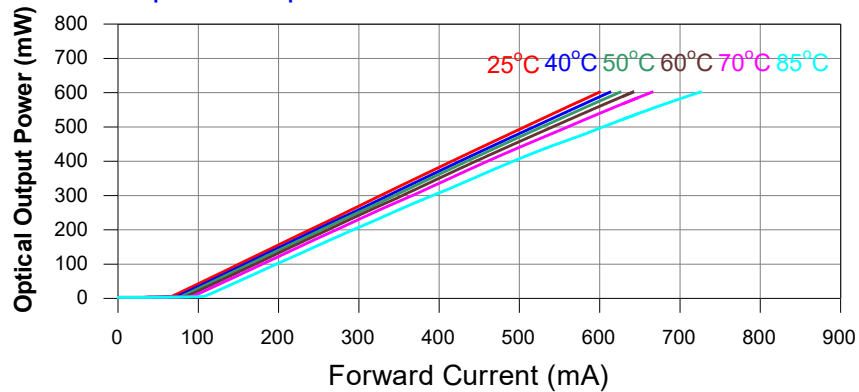
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## LCU80E053A/D

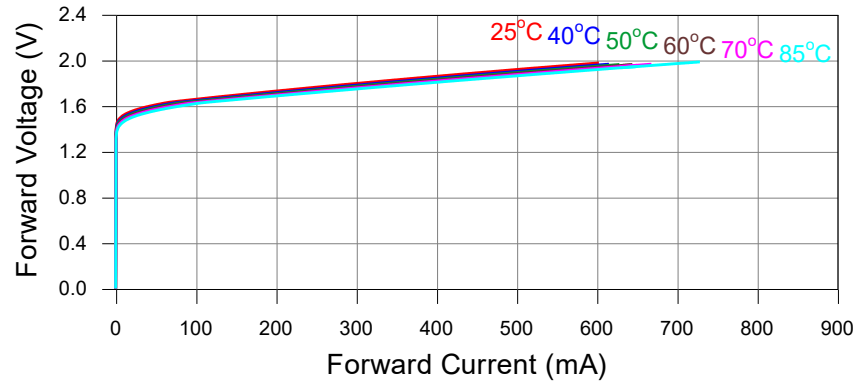
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### ■ Typical characteristic curves

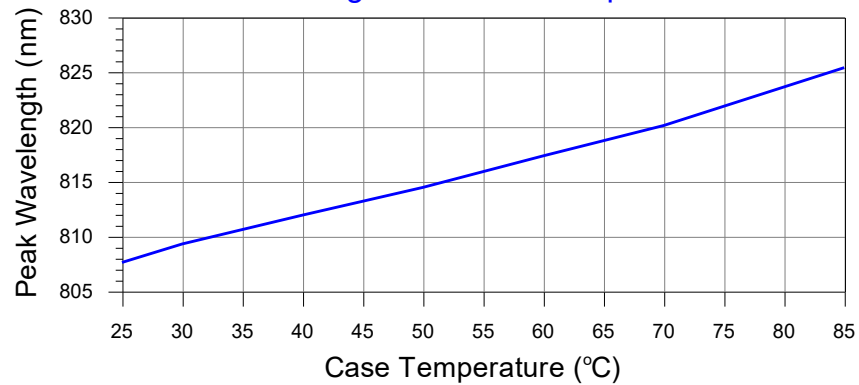
Optical Output Power v.s. Forward Current



Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature

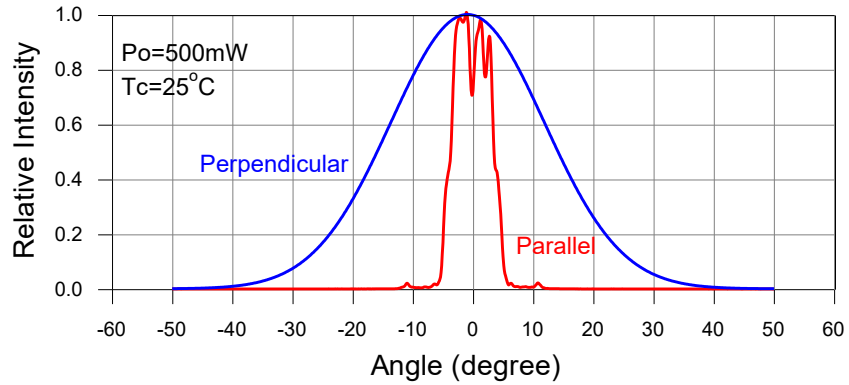


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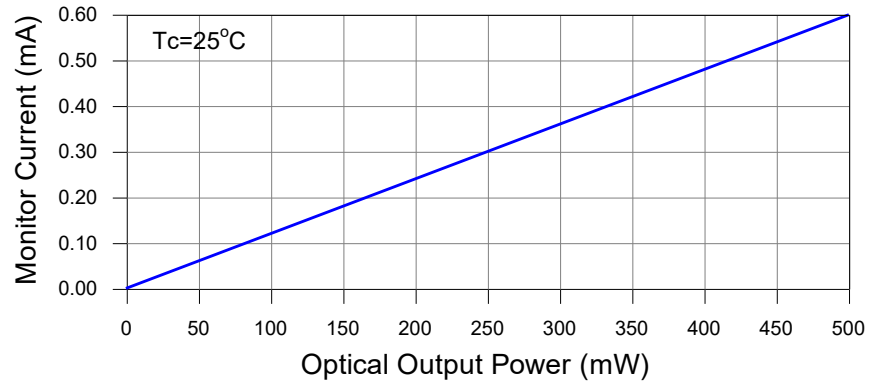
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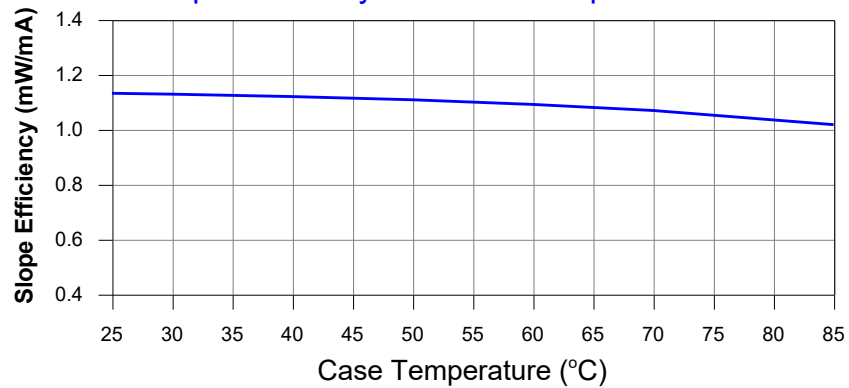
### Far-Field Pattern



### Monitor Current v.s. Optical Output Power



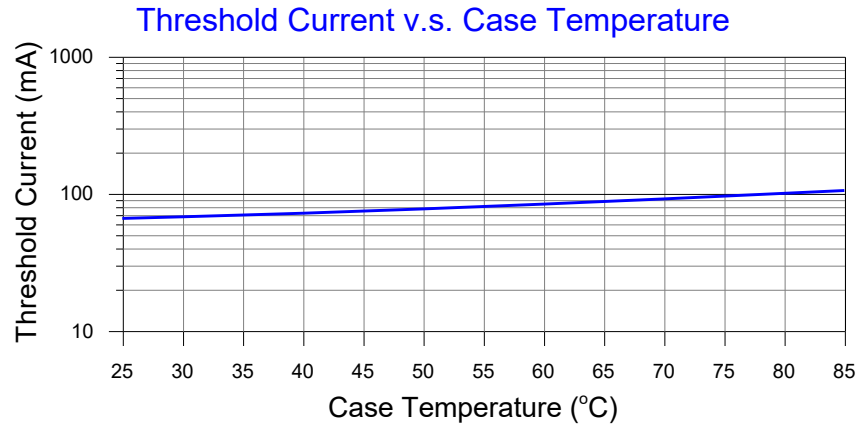
### Slope Efficiency v.s. Case Temperature



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