

## LCU831061Ap/Cp

LCU83xx SERIES LASER DIODE

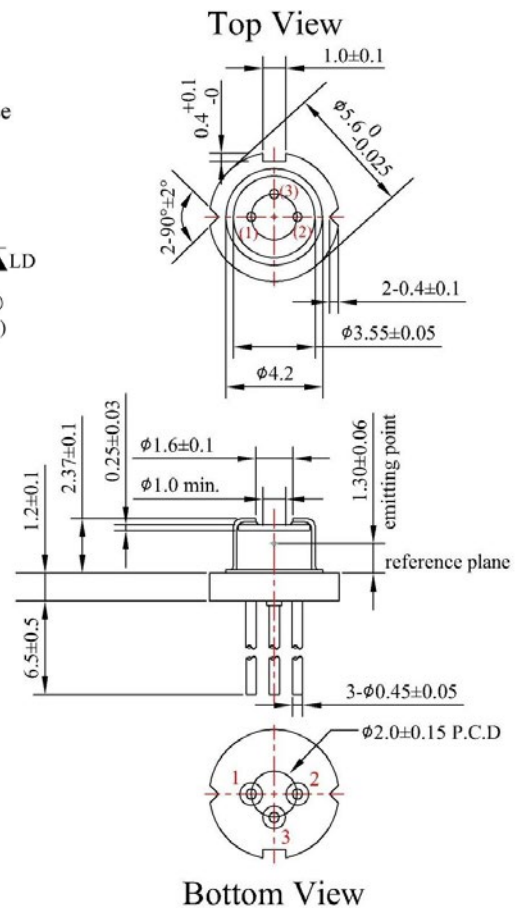
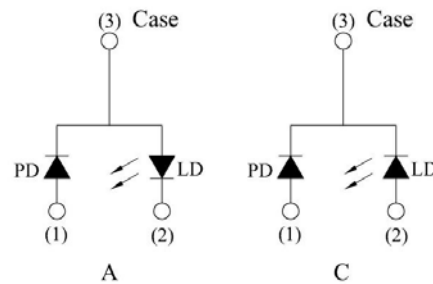
### ■ Features

1. Peak wavelength at 25°C : 830 nm (typical)
2. Standard light output : 10mW (CW)
3. TO-18 ( $\phi$  5.6mm) Packaged, cap window with flat Pb-free lens, monitor PD inside.
4. Small perpendicular divergence angle
5. Lateral single mode lasing

### ■ Applications

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

### ■ External dimensions(Unit : mm)



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### ■ Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Rating	Unit
Optical Output	Po	<b>15</b>	mW
Reverse Voltage	Vr	<b>2</b>	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	Po=10mW	-	<b>8</b>	<b>13</b>	mA
Operating Current	Iop	Po=10mW	-	<b>23</b>	<b>28</b>	mA
Operating Voltage	Vop	Po=10mW	-	<b>1.9</b>	<b>2.1</b>	Volts
Slope Efficiency	$\eta$	Po=2.5-7.5mW	-	<b>0.65</b>	-	mW/mA
Monitor Current	Im	Po=10mW	<b>0.3</b>	<b>0.6</b>	<b>1.2</b>	mA
Beam Divergence (FWHM)	Parallel	$\theta_{\parallel}$	-	<b>11</b>	-	deg.
	Perpendicular	$\theta_{\perp}$	-	<b>20</b>	-	deg.
Lasing Wavelength	$\lambda$	Po=10mW	<b>820</b>	<b>830</b>	<b>840</b>	nm

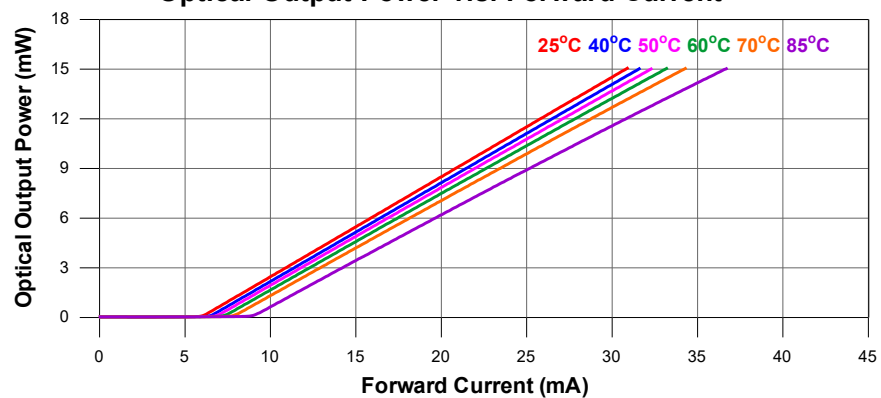
©  $\theta_{\parallel}$  and  $\theta_{\perp}$  are defined as the angle within which the intensity is 50% of the peak value.

### ■ Quality Notice

This device is still under product development.

### ■ Typical characteristic curves

Optical Output Power v.s. Forward Current

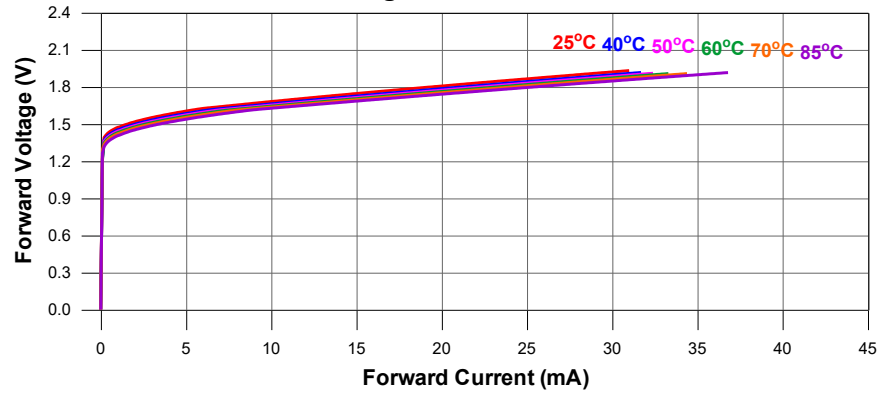


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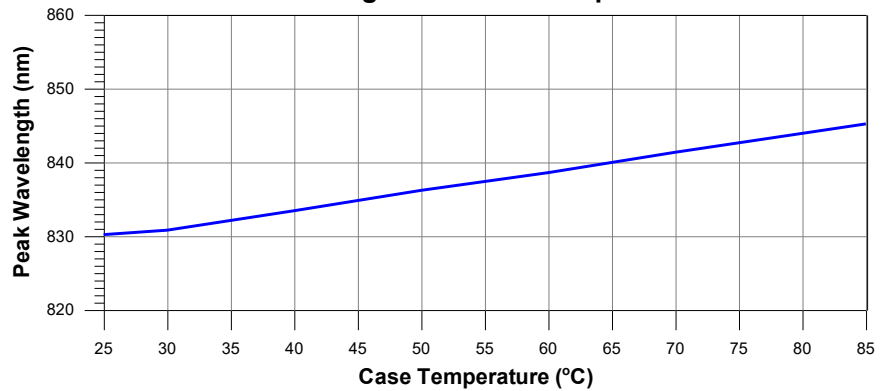
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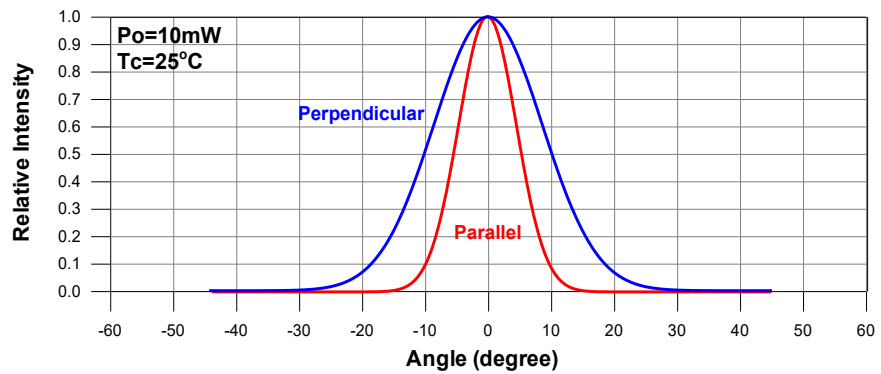
Forward Voltage v.s. Forward Current



Peak Wavelength v.s. Case Temperature



Far-Field Pattern

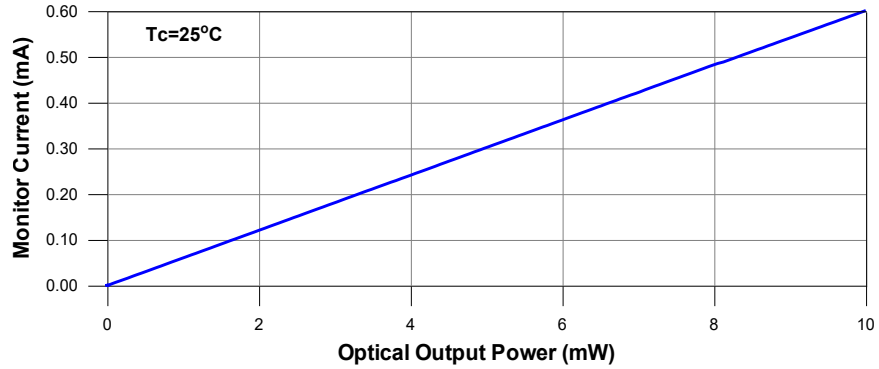


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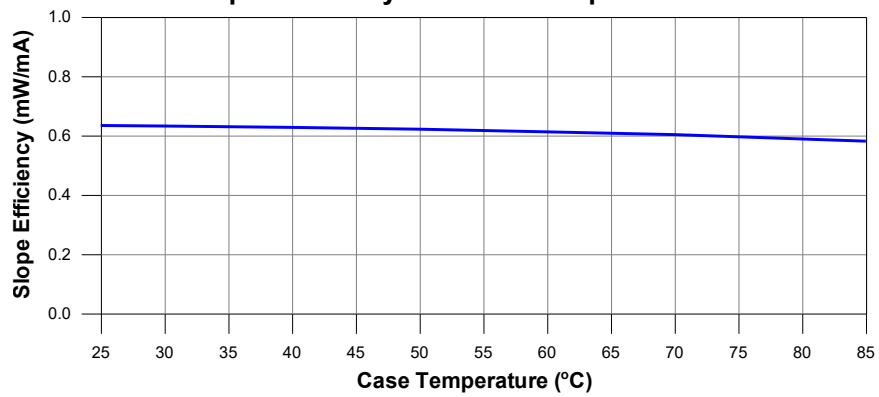
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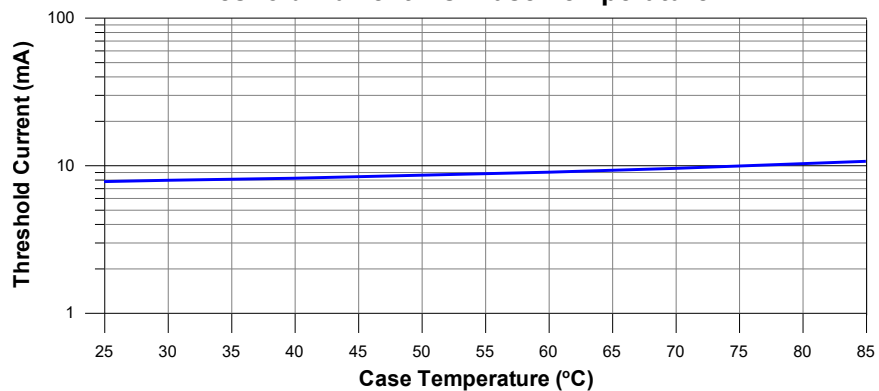
Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature



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**SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.**