

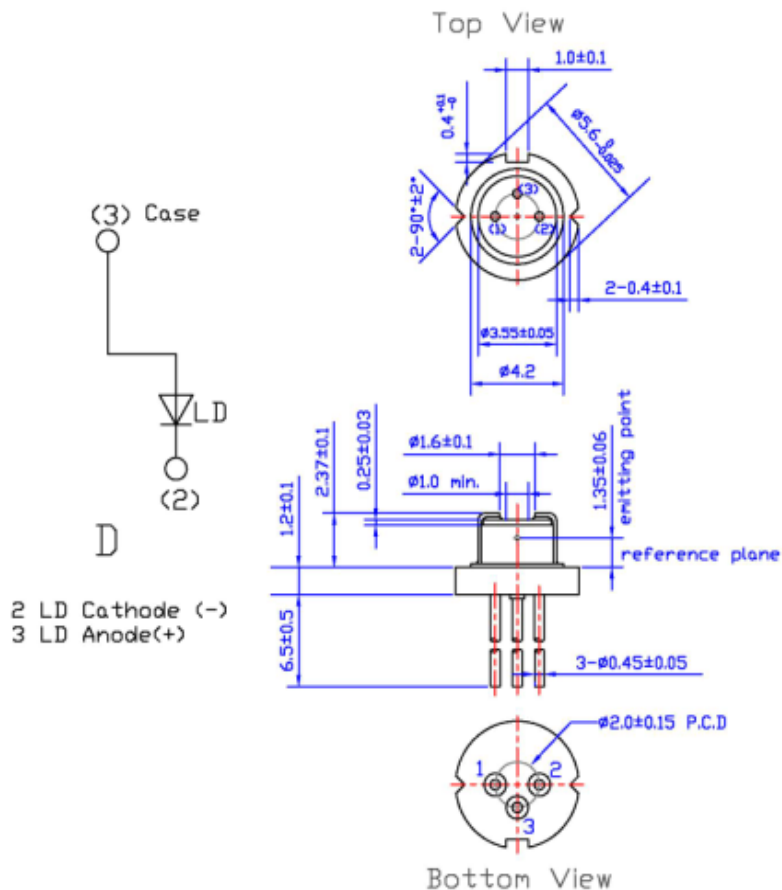
## 980nm Laser Diode

# 980nm Laser Diode LCU98B046D-preliminary

### ■ Specifications

- (1) Device: Laser Diode  
 (2) Structure: TO-18( $\phi$  5.6mm), With Pb free glass cap, no PD

### ■ External dimensions(Unit : mm)



### ■ Absolute Maximum Ratings( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Rating	Unit
Optical Output	Po	<b>200</b>	mW
Reverse Voltage	Laser Vr	<b>2</b>	V
Operating Temperature	Top	-10 ~ +40	$^\circ\text{C}$
Storage Temperature	Tstg	-15 ~ +85	$^\circ\text{C}$

Ver.2 2009/09

## 980nm Laser Diode

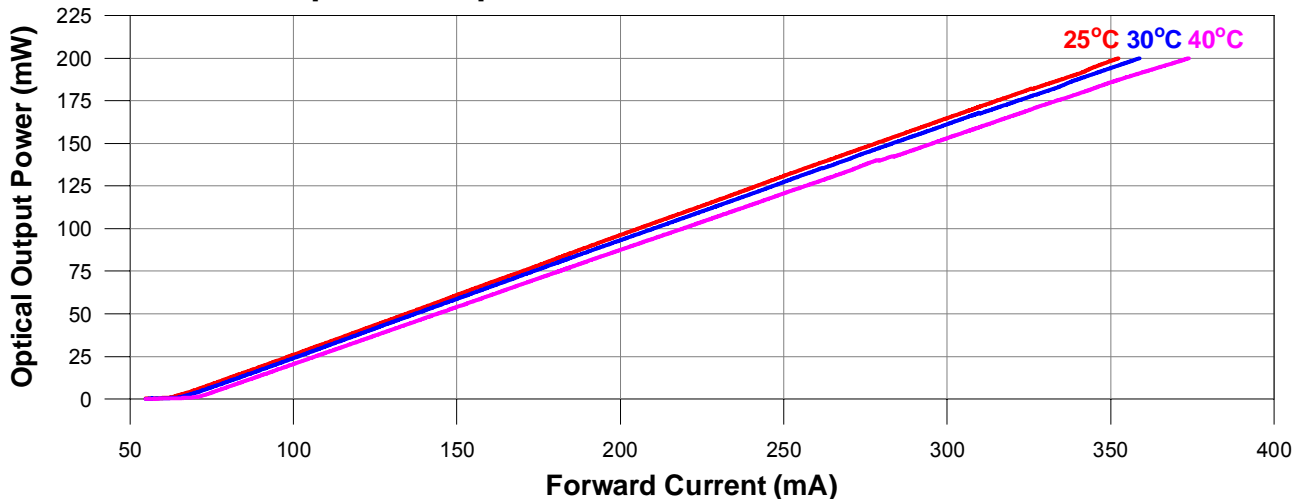
### Electrical and Optical Characteristics(Tc=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I <sub>th</sub>	-	-	<b>60</b>	<b>80</b>	mA	
Operating Current	I <sub>op</sub>	P <sub>o</sub> =200mW	-	<b>355</b>	<b>400</b>	mA	
Operating Voltage	V <sub>op</sub>	-	<b>1</b>	<b>1.5</b>	<b>2.1</b>	Volt	
Slope Efficiency	$\eta$	150mW-50mW	<b>0.5</b>	<b>0.7</b>	-	mW/mA	
		I <sub>150mW</sub> -I <sub>50mW</sub>					
Beam Divergence (FWHM)	Parallel	$\theta //$	P <sub>o</sub> =200mW	-	<b>6</b>	-	deg.
	Perpendicular	$\theta \perp$	P <sub>o</sub> =200mW	<b>27</b>	<b>30</b>	<b>37</b>	deg.
Lasing Wavelength	$\lambda$	P <sub>o</sub> =200mW	<b>970</b>	<b>980</b>	<b>990</b>	nm	

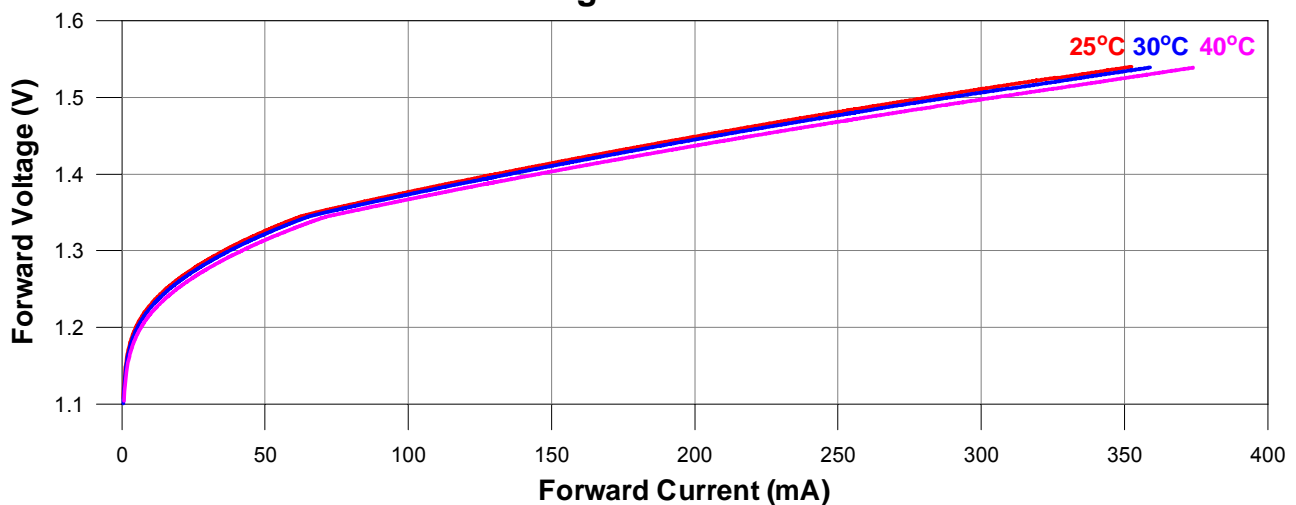
©  $\theta \perp$  are defined as the angle within which the intensity is 50% of the peak value.

### Typical characteristic curves

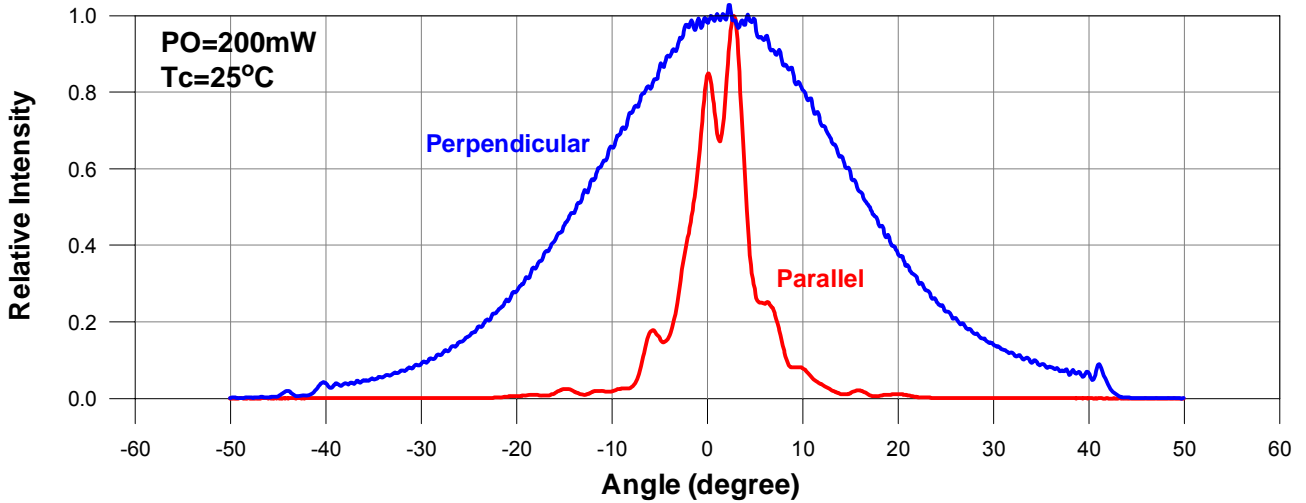
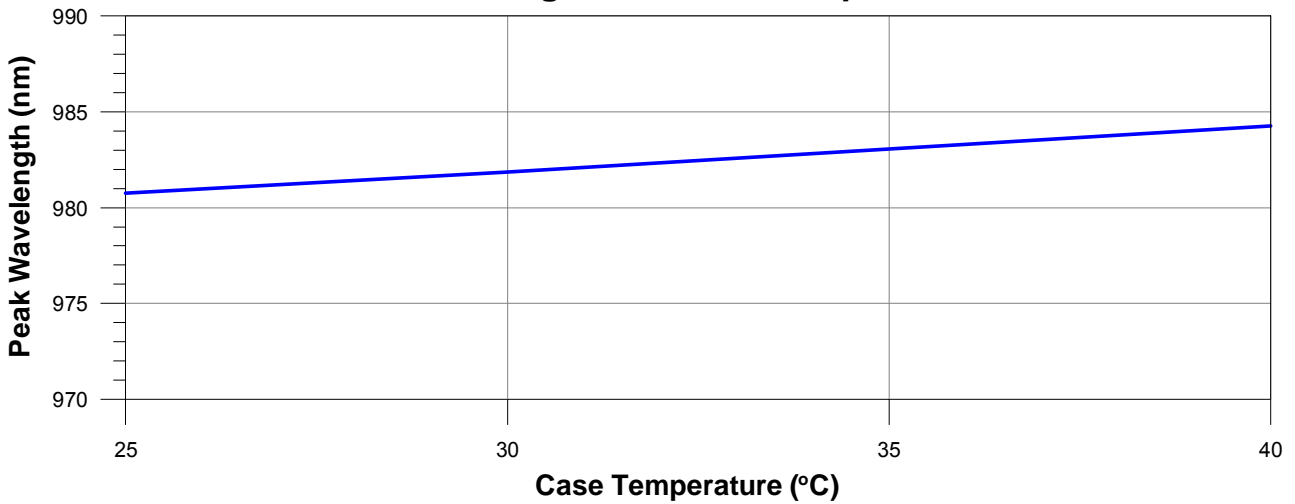
#### Optical Output Power v.s. Forward Current



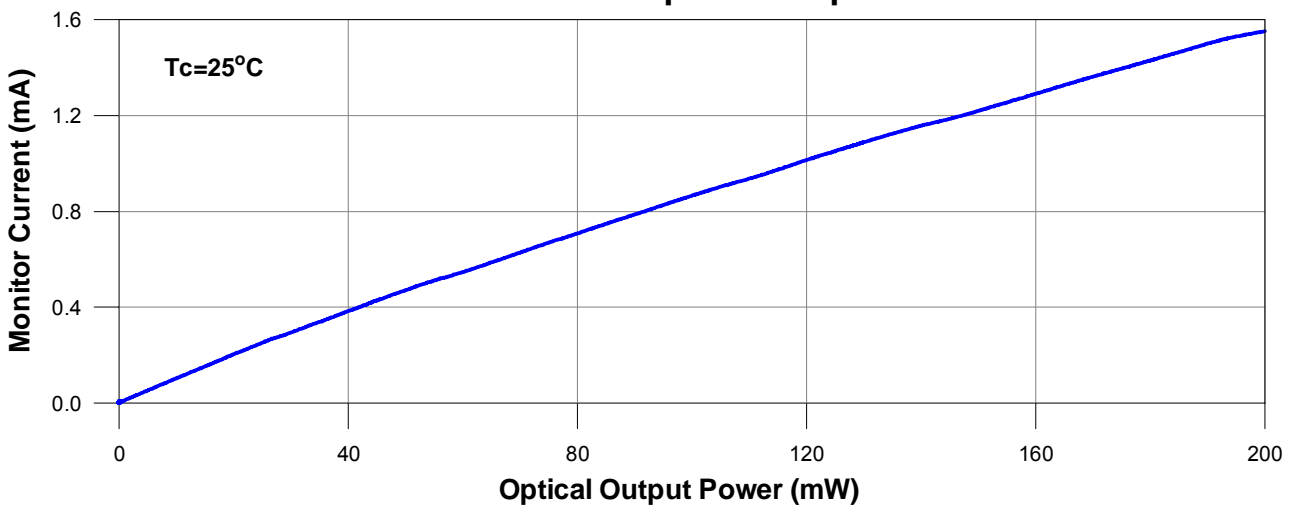
#### Forward Voltage v.s. Forward Current



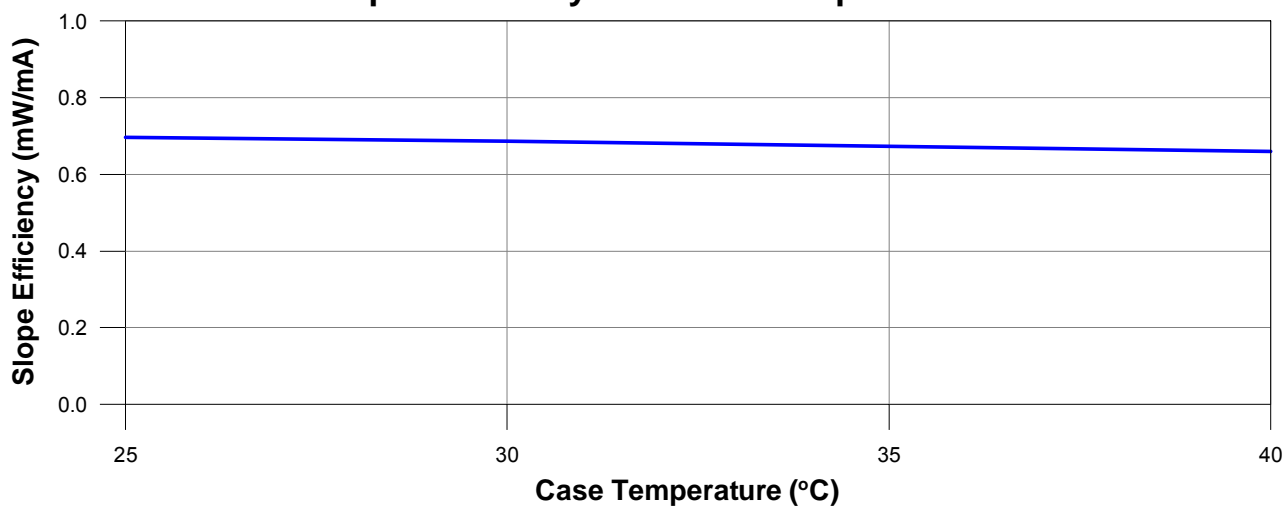
Peak Wavelength v.s. Case Temperature



Monitor Current v.s. Optical Output Power



Slope Efficiency v.s. Case Temperature



Threshold Current v.s. Case Temperature

