

**Block-type 100mW High Power Laser Diode**

**Description**

The SLD301B is a high power laser diode mounted on a 3 × 3 × 5mm Copper block.

It is ideal for applications which require a minimal distance between the laser facet and external optical parts.

**Features**

- Compact size      3 × 3 × 5mm block
- High power output   Po = 100mW
- Hole for thermistor

**Applications**

- Solid state laser excitation
- Medical use

**Structure**

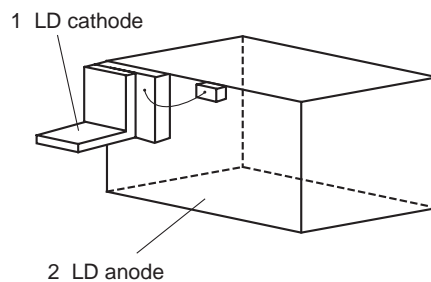
GaAlAs double hetero-type laser diode

**Absolute Maximum Ratings (Tc = 25°C)**

• Optical power output	Po	100	mW
• Recommended optical power output	Po	90	mW
• Reverse voltage	VR LD	2	V
• Operating temperature	Topr	-10 to +50	°C
• Storage temperature	Tstg	-40 to +85	°C

**Pin Configuration**

No.	Function
1	LD cathode
2	LD anode



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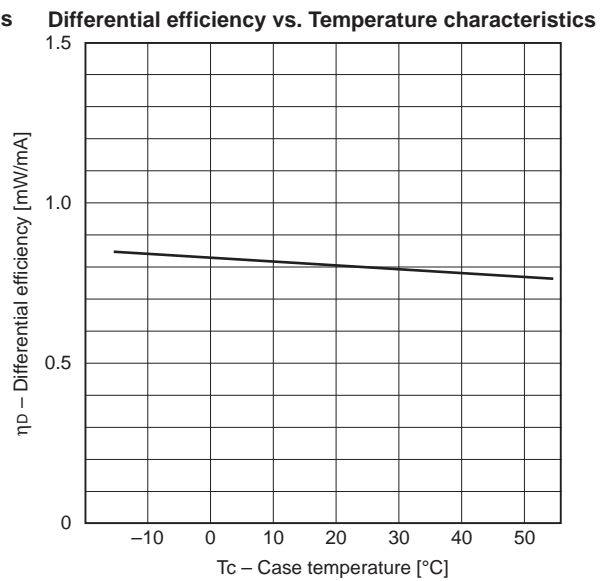
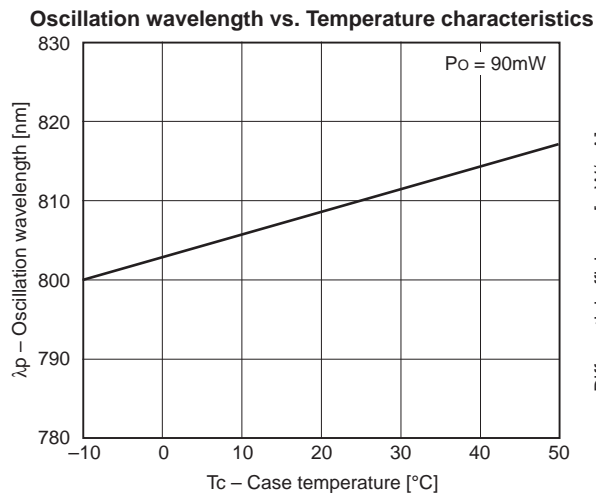
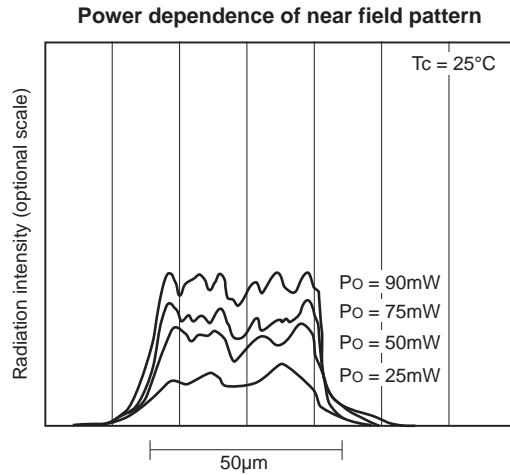
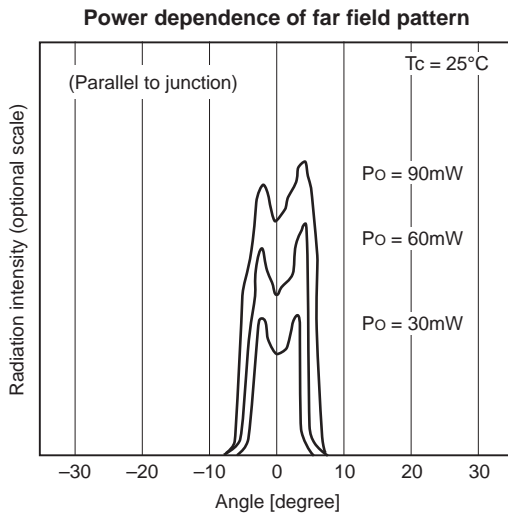
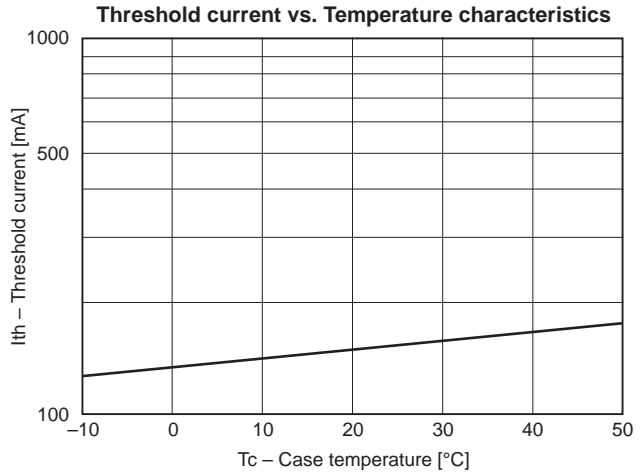
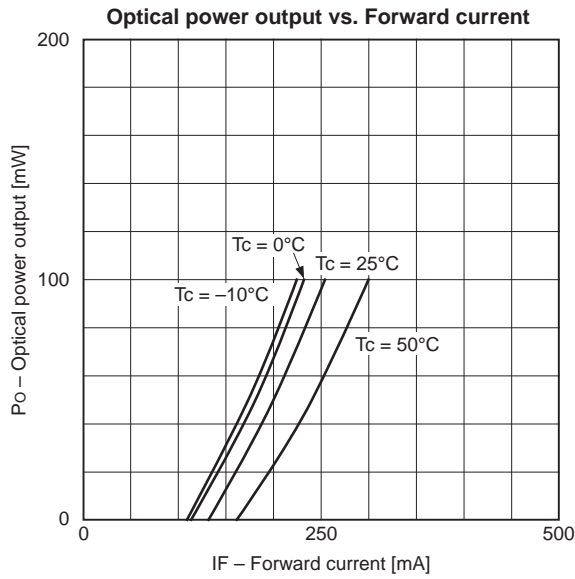
## Electrical and Optical Characteristics

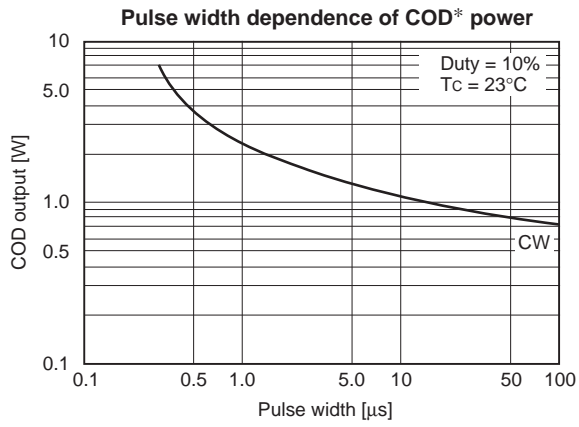
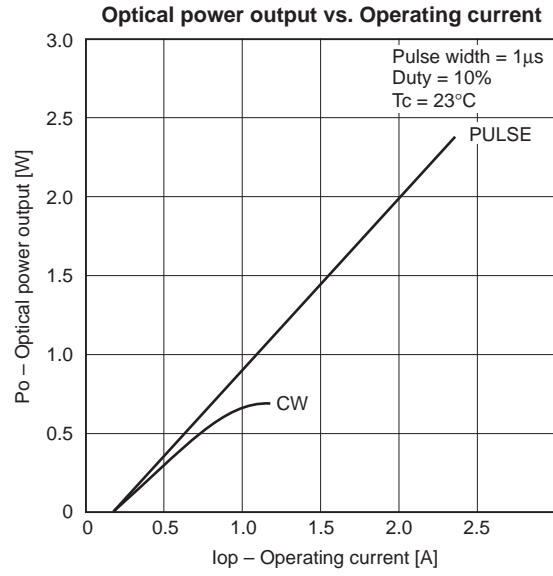
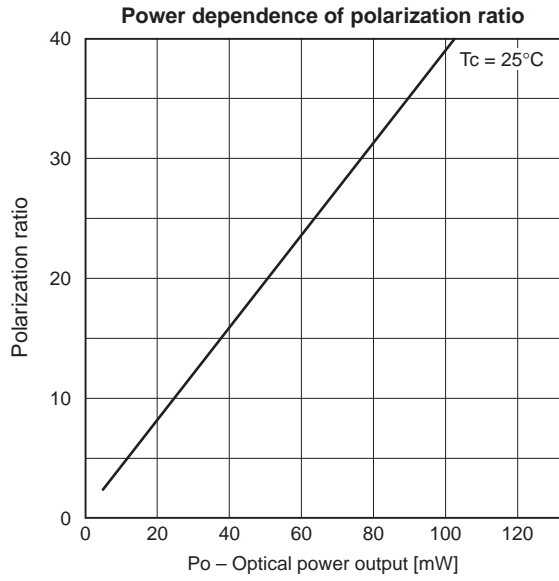
(T<sub>c</sub> = 25°C)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Threshold current		I <sub>th</sub>			150	200	mA
Operating current		I <sub>op</sub>	P <sub>o</sub> = 90mW		300	400	mA
Operating voltage		V <sub>op</sub>	P <sub>o</sub> = 90mW		1.9	3.0	V
Wavelength		λ <sub>p</sub>	P <sub>o</sub> = 90mW	770		840	nm
Radiation angle (F. W. H. M.*)	Perpendicular to junction	θ <sub>⊥</sub>	P <sub>o</sub> = 90mW		28	40	degree
	Parallel to junction	θ <sub>//</sub>			12	17	
Positional accuracy	Position	ΔX	P <sub>o</sub> = 90mW			±300	μm
		ΔY, ΔZ				±100	
	Angle	Δφ <sub>⊥</sub>					±3
Differential efficiency		η <sub>D</sub>	P <sub>o</sub> = 90mW	0.5	0.7		mW/mA

\* F. W. H. M. : Full Width at Half Maximum

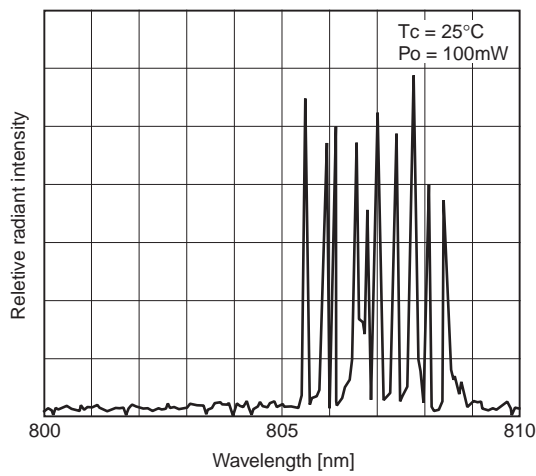
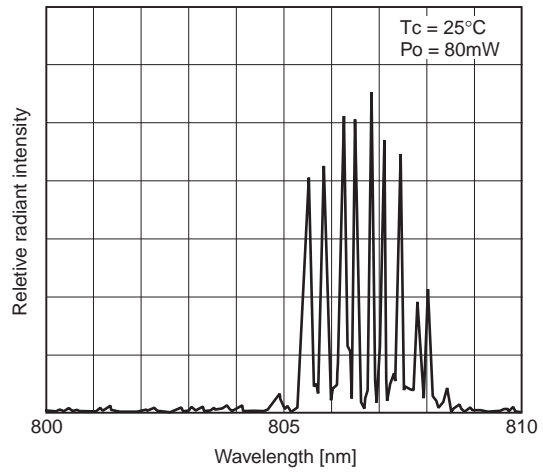
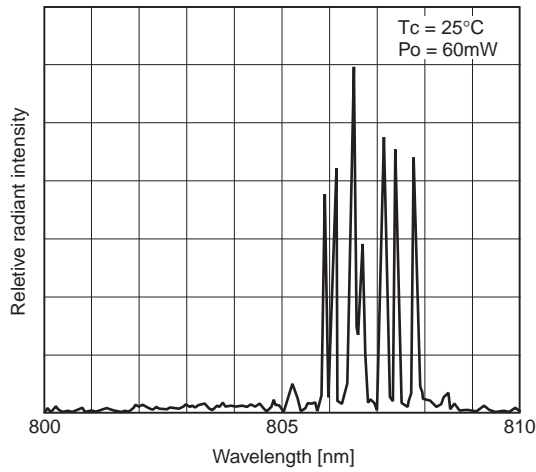
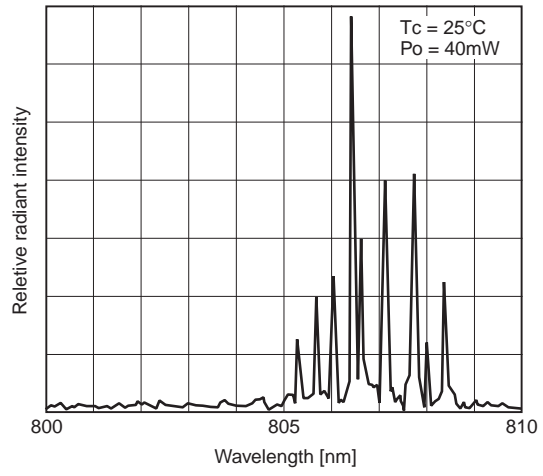
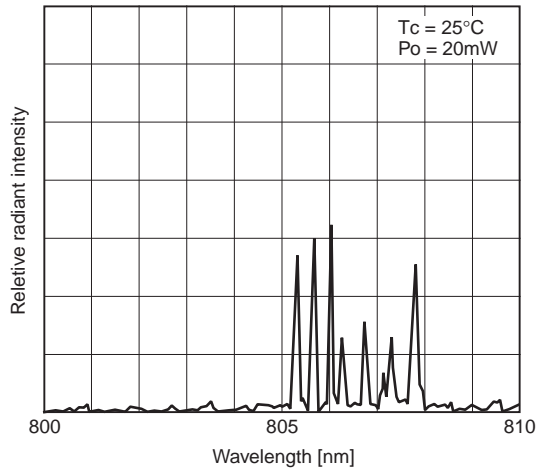
Example of Representative Characteristics



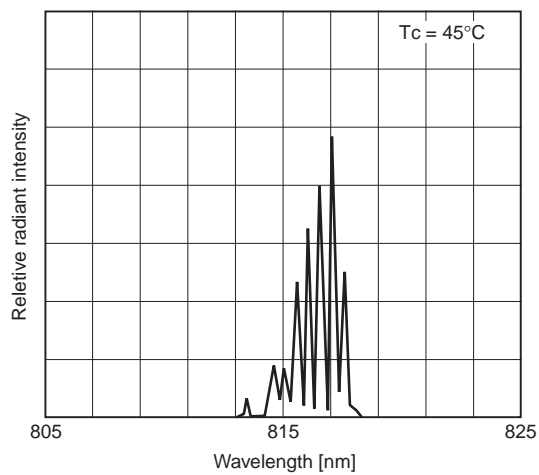
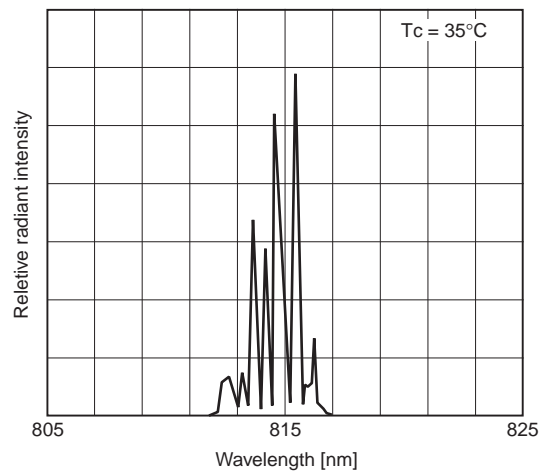
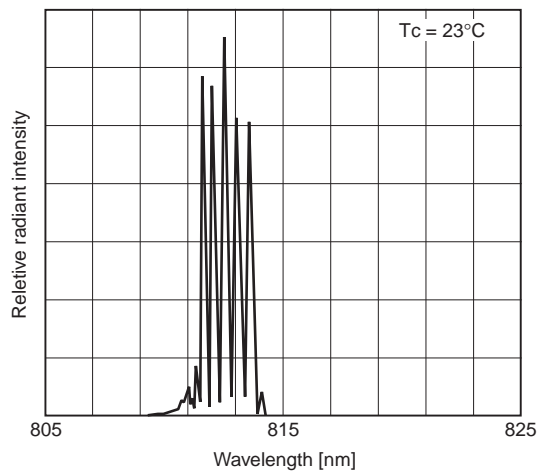
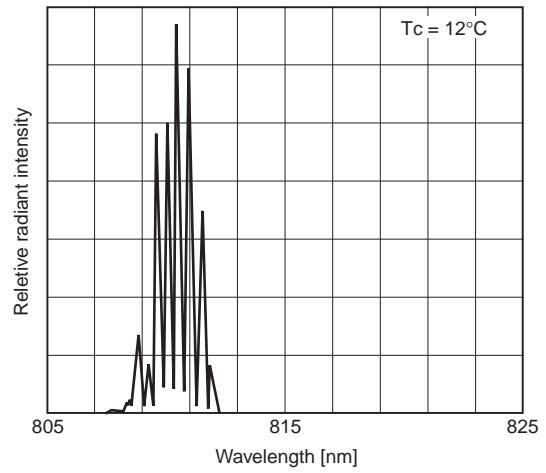
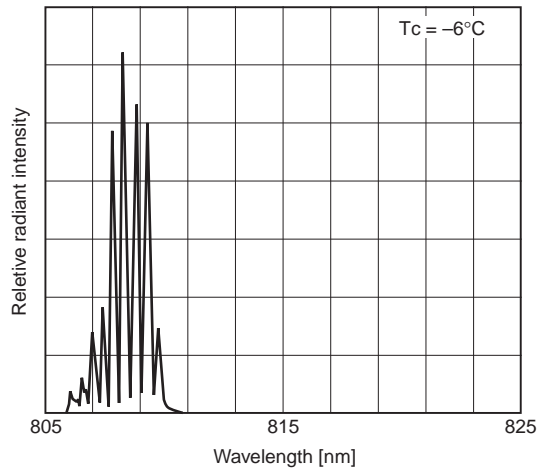


\* COD (Catastrophic Optical Damage)

Power Dependence of Wavelength



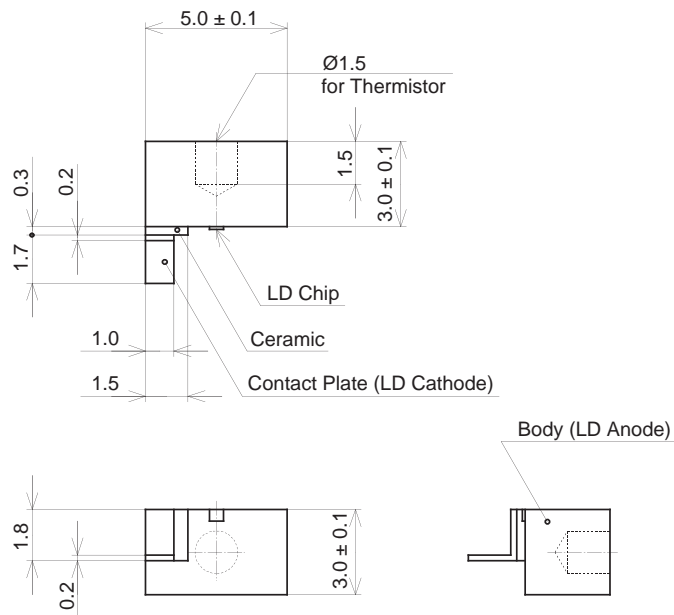
Temperature Dependence of Wavelength ( $P_o = 90\text{mW}$ )



Package Outline

Unit: mm

M - 261



SONY CODE	M-261
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE STRUCTURE

PACKAGE WEIGHT	1g
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