

Block-type 200mW High Power Laser Diode

Description

The SLD302B 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 = 200mW
- Hole for thermistor

Applications

- Solid state laser excitation
- Medical use

Structure

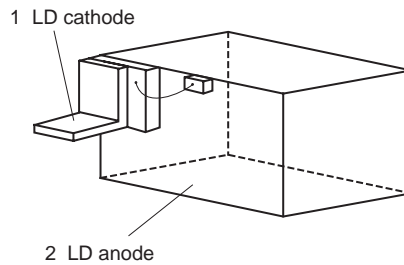
GaAlAs double hetero-type laser diode

Absolute Maximum Ratings (Tc = 25°C)

- | | | | |
|------------------------------------|-------|------------|----|
| • Optical power output | Po | 200 | mW |
| • Recommended optical power output | Po | 180 | 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



Sony reserves the right to change products and specifications without prior notice. This information does not convey any license by any implication or otherwise under any patents or other right. Application circuits shown, if any, are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits.

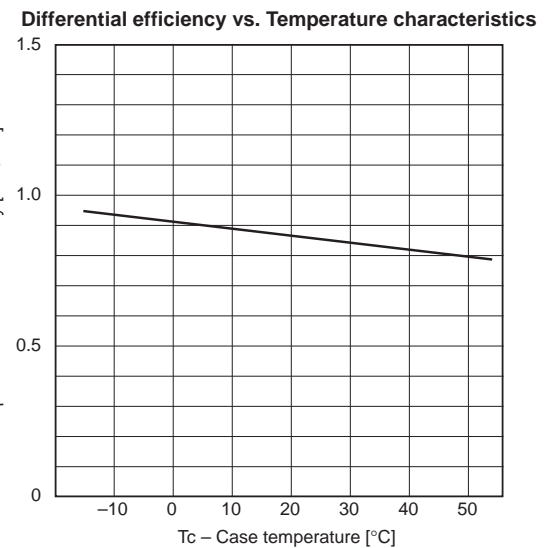
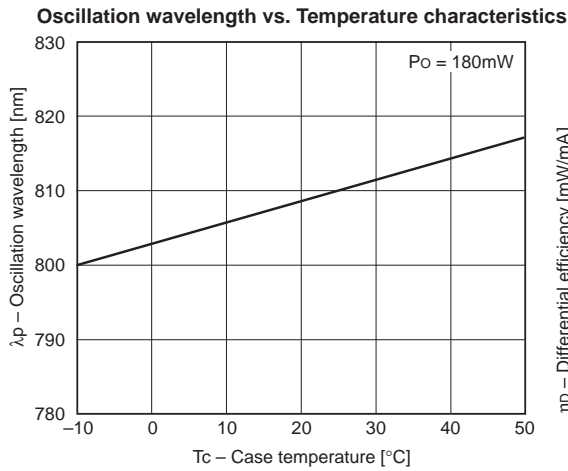
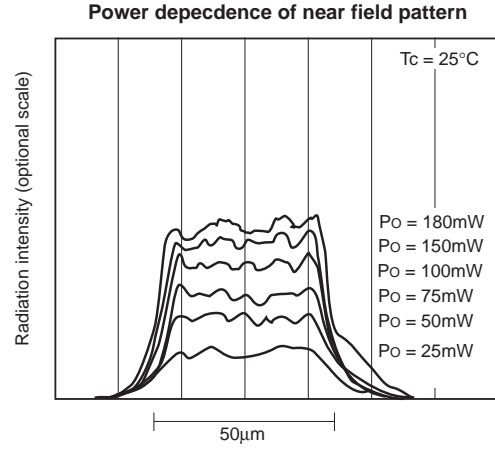
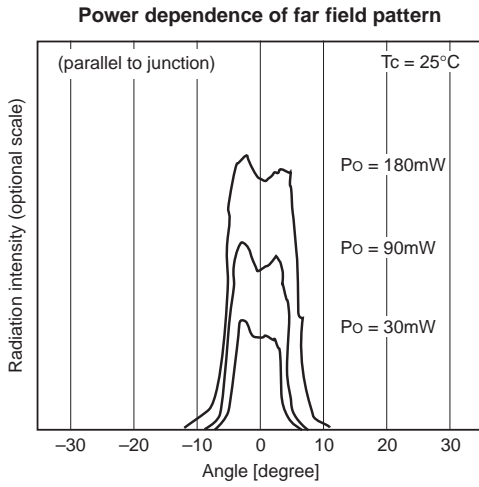
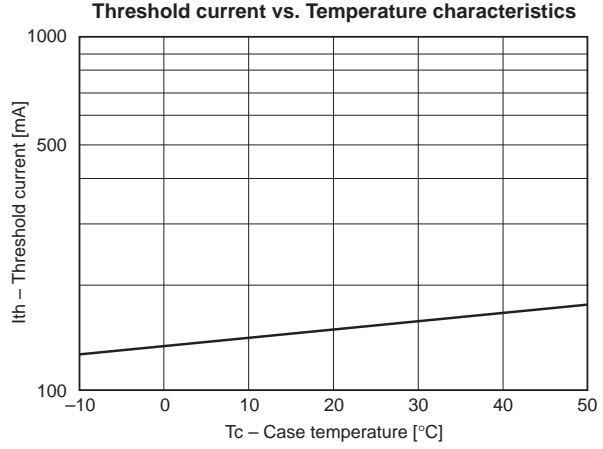
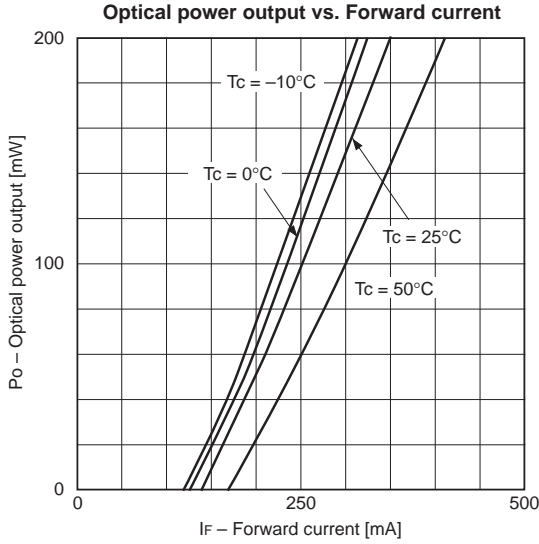
Electrical and Optical Characteristics

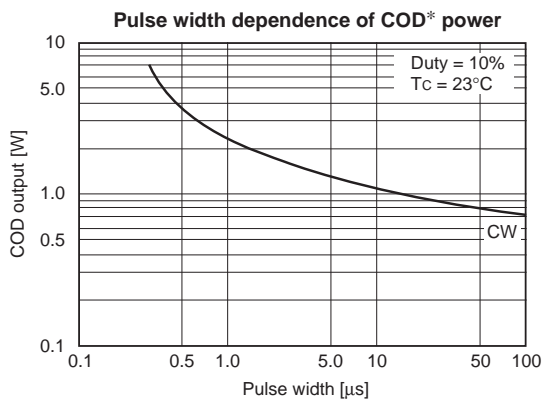
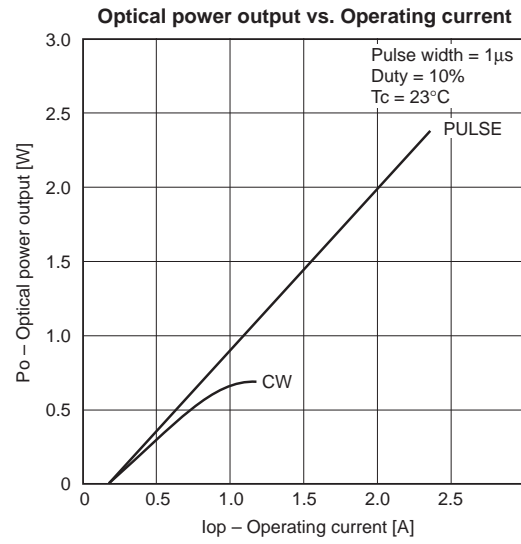
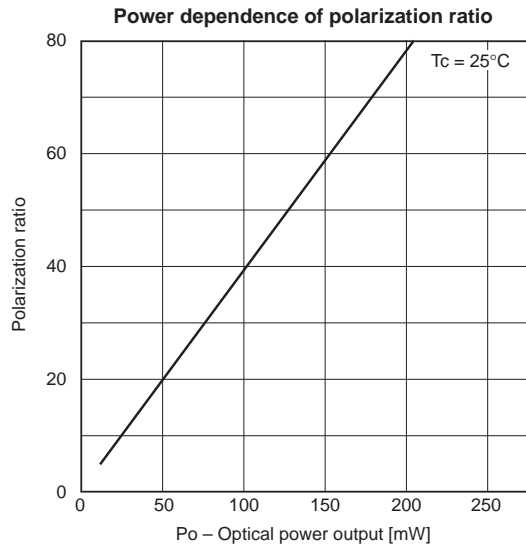
(T_c = 25°C)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Threshold current		I _{th}			150	200	mA
Operating current		I _{op}	P _o = 180mW		400	500	mA
Operating voltage		V _{op}	P _o = 180mW		1.9	3.0	V
Wavelength		λ _p	P _o = 180mW	770		840	nm
Radiation angle (F. W. H. M.*)	Perpendicular to junction	θ _⊥	P _o = 180mW		28	40	degree
	Parallel to junction	θ _{//}			12	17	
Positional accuracy	Position	ΔX	P _o = 180mW			±300	μm
		ΔY, ΔZ				±100	
	Angle	Δφ _⊥					±3
Differential efficiency		η _D	P _o = 180mW	0.5	0.8		mW/mA

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

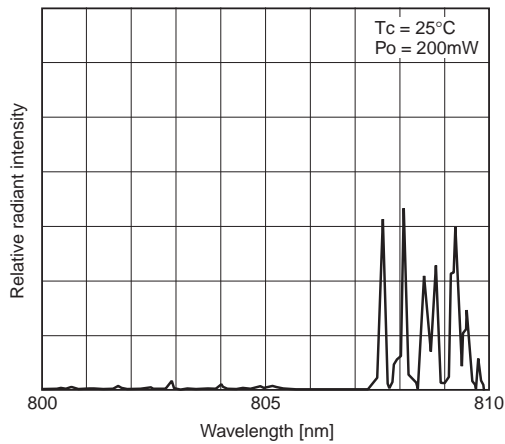
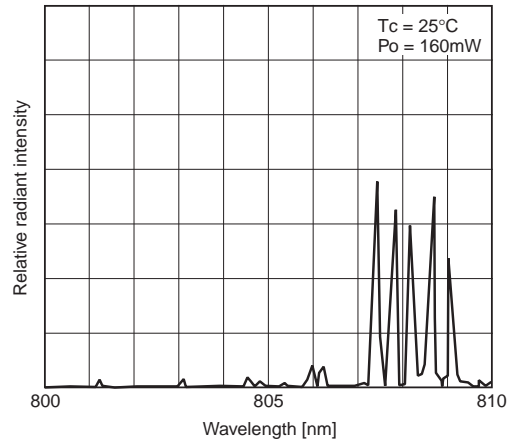
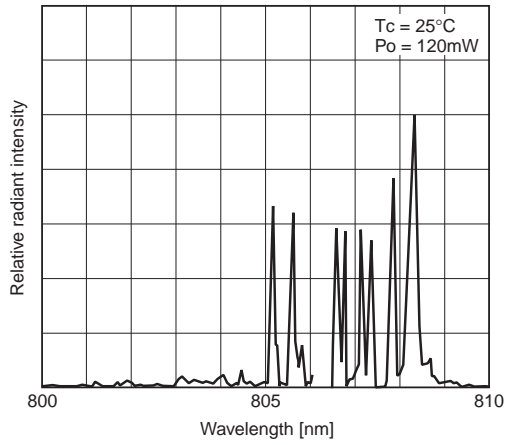
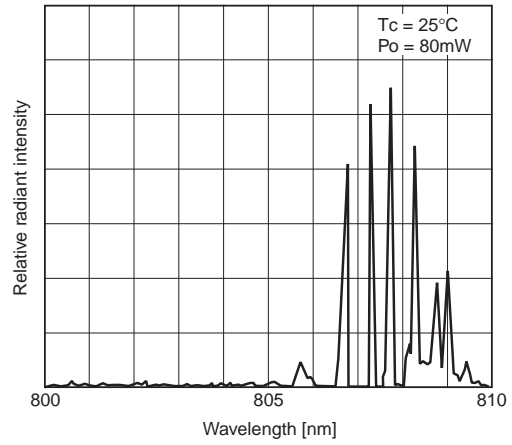
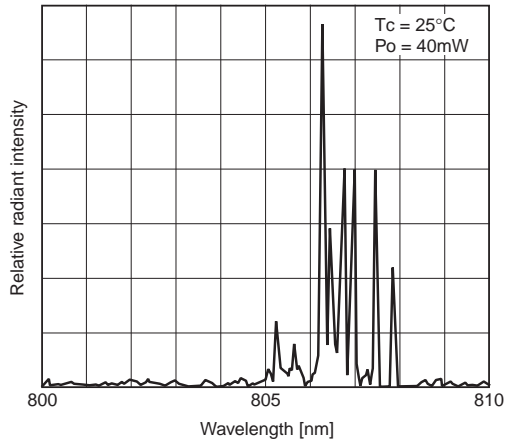
Example of Representative Characteristics



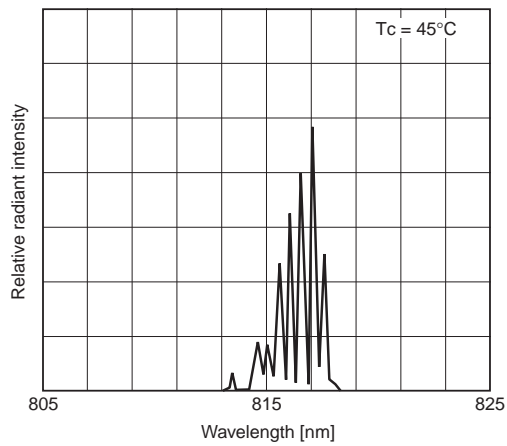
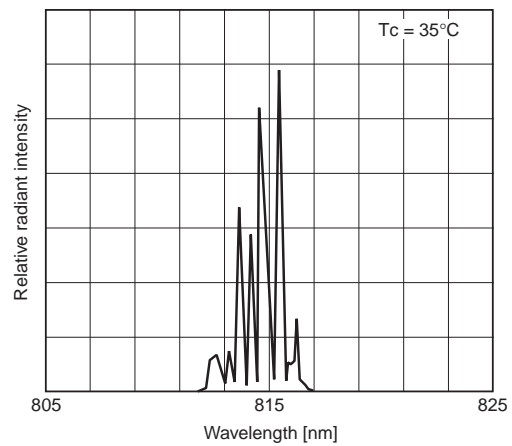
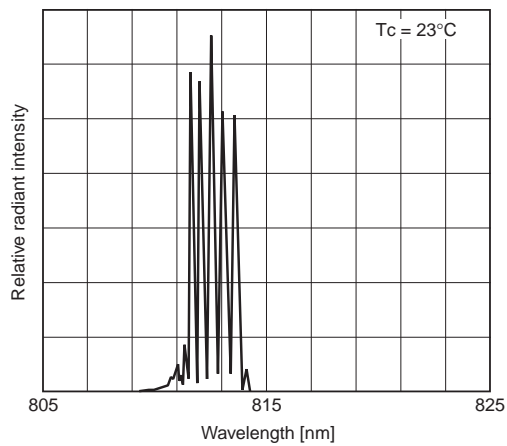
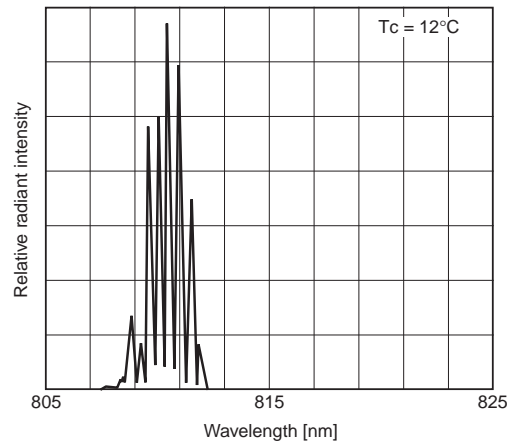
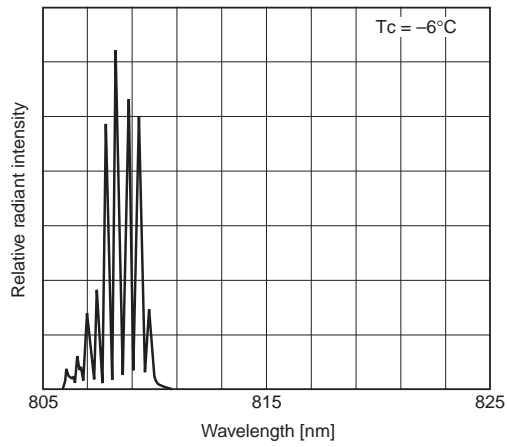


* COD (Catastrophic Optical Damage)

Power Dependence of Wavelength



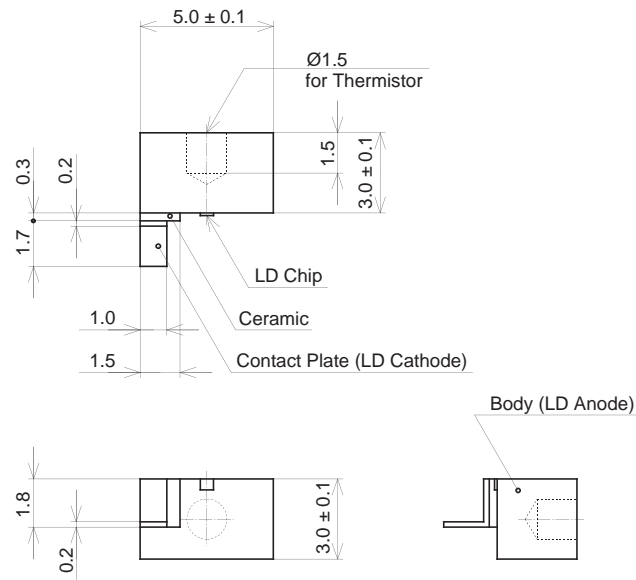
Temperature Dependence of Wavelength ($P_o = 180\text{mW}$)



Package Outline

Unit: mm

M - 261



SONY CODE	M-261
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE STRUCTURE

PACKAGE WEIGHT	1g
----------------	----