

**PRELIMINARY**

MITSUBISHI LASER DIODES

# ML8XX2 SERIES

980nm High Power Laser Diode

**TYPE  
NAME**

## ML8xx2 (980nm High Power LD)

### DESCRIPTION

ML8xx2 series are InGaAs/ GaAs high power laser diodes which provide a stable, single transverse mode oscillation with emission wavelength of 980nm and standard continuous light output of @350mW .

### FEATURES

- High Power (CW 350mW)
- 980nm typical emission wavelength
- High reliability, long operation life
- Ridge waveguide with window structure
- MQW\*- Fabry - Perot Laser

\* Multiple Quantum Well

### APPLICATION

- Er-doped fiber amplifier

### ABSOLUTE MAXIMUM RATINGS <sup>(Note)</sup>

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	400	mW
V <sub>R</sub>	Reverse voltage	-	2	V
T <sub>c</sub>	Case temperature	-	+ 20 ~ +30	deg.C
T <sub>stg</sub>	Storage temperature	-	- 40 ~+100	deg.C

Note: The absolute maximum rating means the limitation over which the laser should not be operated even instant time, and this does not mean the guarantee of its lifetime. As for the reliability , please refer to the reliability report from Mitsubishi Semiconductor Quality Assurance Department.

### ELECTRICAL/OPTICAL CHARACTERISTICS ( T<sub>c</sub>=25deg.C )

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
I <sub>th</sub>	Threshold current	CW	-	80	100	mA
I <sub>op</sub>	Operation current	CW,Po=350mW	-	450	500	mA
V <sub>op</sub>	Operating voltage	CW,Po=350mW	-	2.0	2.5	V
λ <sub>c</sub>	Center wavelength	CW,Po=350mW	970	980	990	nm
Δλ	Spectral width (RMS , -20dB)	CW,Po=350mW, RMS	-	3	-	nm
θ <sub>//</sub>	Beam divergence angle (parallel)	CW,Po=350mW	4	7	10	deg.
θ <sub>⊥</sub>	Beam divergence angle (perpendicular)	CW,Po=350mW	14	19	24	deg.
I <sub>m</sub>	Monitor current	CW,Po=350mW	-	-	1.0	mA

**PRELIMINARY**

**ML8XX2 SERIES**  
980nm High Power Laser Diode

TYPE  
NAME

**ML861D2S**

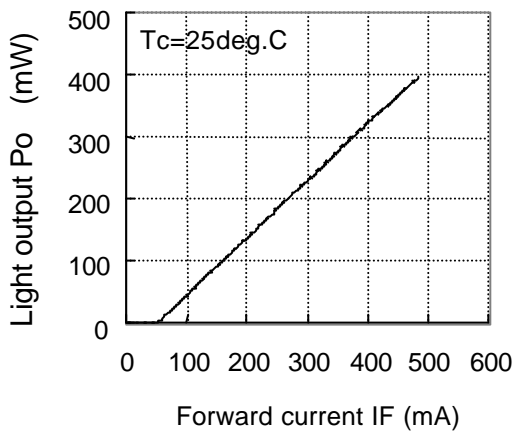


Fig.1 Light output vs. forward current

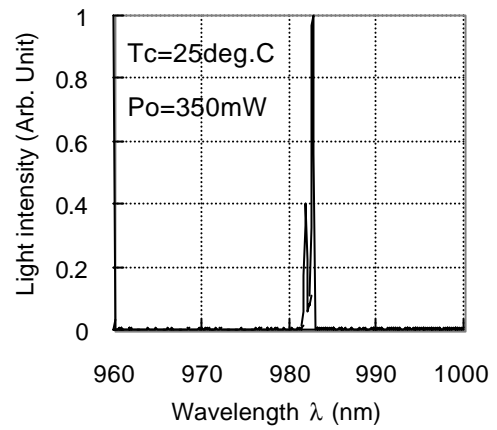


Fig.2 Spectrum

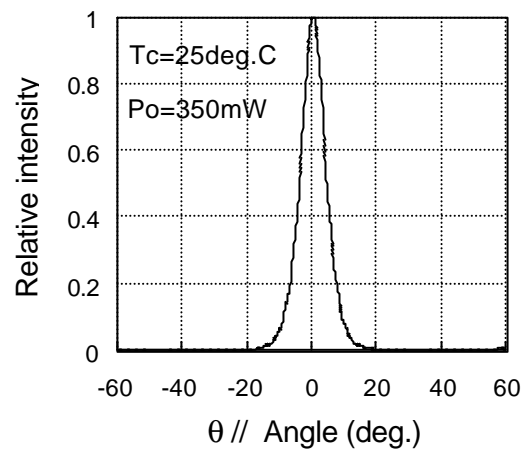
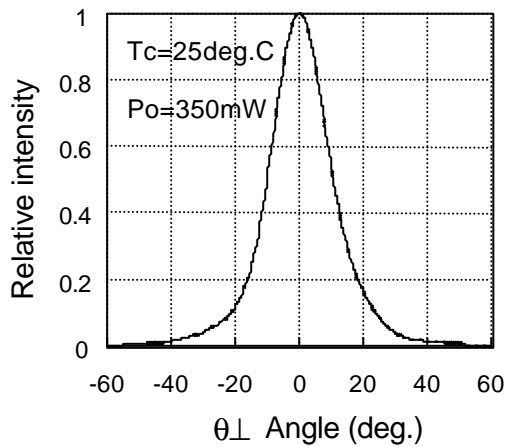


Fig.3 Far field patterns

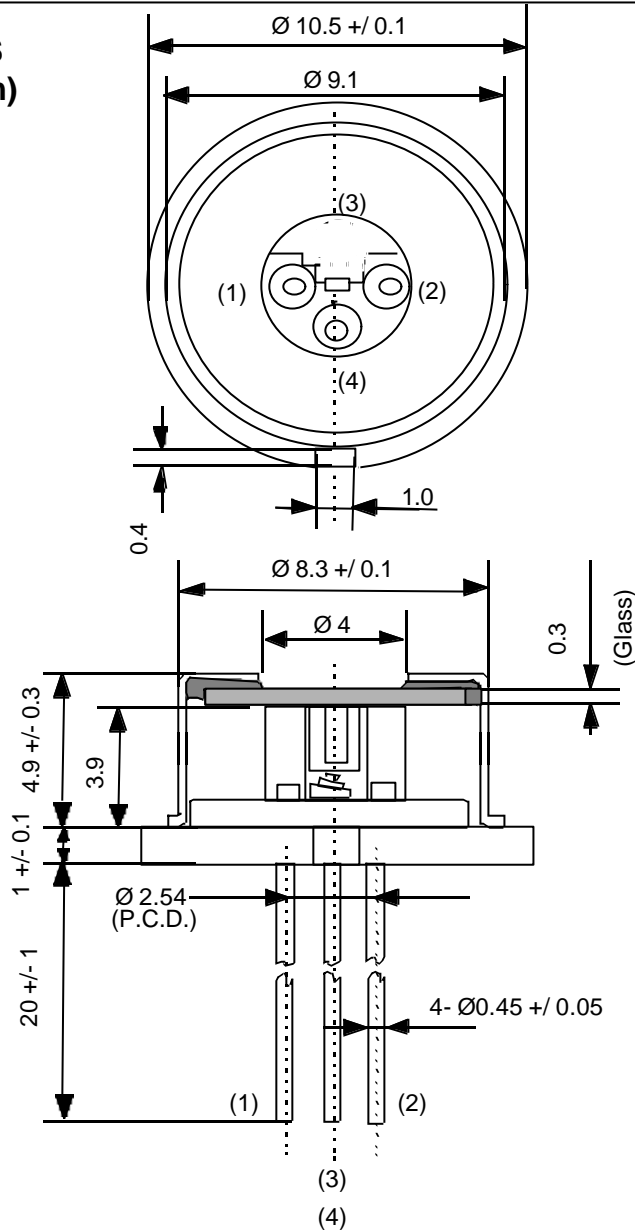
**PRELIMINARY**

**ML8XX2 SERIES**  
980nm High Power Laser Diode

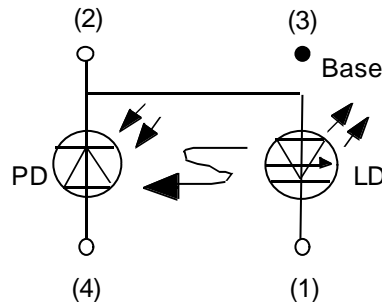
TYPE  
NAME

**ML861D2S**

OUTLINE DRAWINGS  
(Dimension in mm)



LEAD CONNECTION



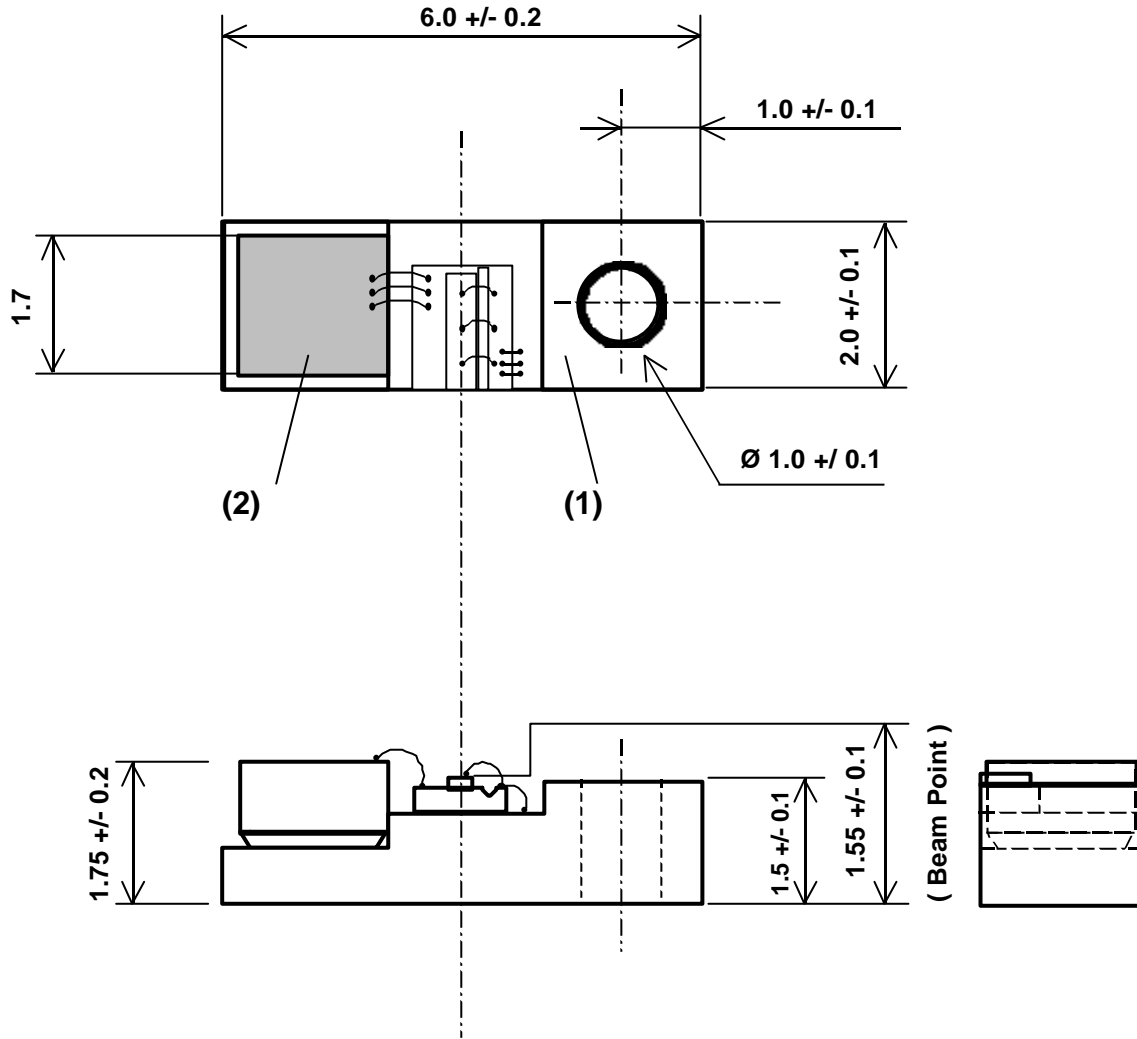
**PRELIMINARY**

**ML8XX2 SERIES**  
980nm High Power Laser Diode

TYPE  
NAME

**ML8922**

**OUTLINE DRAWINGS (Dimension in mm)**



**LEAD CONNECTION**

