

PRELIMINARY

MITSUBISHI LASER DIODES

ML8XX5 SERIES

980nm High Power Laser Diode

TYPE
NAME

ML8xx5 (980nm High Power LD)

DESCRIPTION

ML8xx5 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 @500mW, and good wavelength stability with use of Fiber-Bragg-Grating.

FEATURES

- High Power (CW 500mW)
- 980nm typical emission wavelength
- High reliability, long operation life
- Ridge waveguide with window structure
- Reflectivity less than 1% (front facet)
- MQW*- Fabry - Perot Laser

* Multiple Quantum Well

APPLICATION

- Er-doped fiber amplifier

ABSOLUTE MAXIMUM RATINGS ^(Note)

Symbol	Parameter	Conditions	Ratings	Unit
P _o	Light output power	CW	600	mW
V _R	Reverse voltage	-	2	V
T _c	Case temperature	-	+ 20 ~ +30	degC
T _{stg}	Storage temperature	-	- 40 ~+100	degC

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_c=25deg.C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
I _{th}	Threshold current	CW	-	110	150	mA
I _{op}	Operation current	CW,P _o =500mW	-	680	730	mA
V _{op}	Operating voltage	CW,P _o =500mW	-	2.1	2.5	V
λ _c	Center wavelength	CW,P _o =500mW	970	980	990	nm
Δλ	Spectral width (RMS, -20dB)	CW,P _o =500mW, RMS	-	3	-	nm
θ _{//}	Beam divergence angle (parallel)	CW,P _o =500mW	4	7	10	deg.
θ _⊥	Beam divergence angle (perpendicular)	CW,P _o =500mW	13	18	23	deg.
I _m	Monitor current	CW,P _o =500mW	-	-	1.0	mA

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ML861E5S

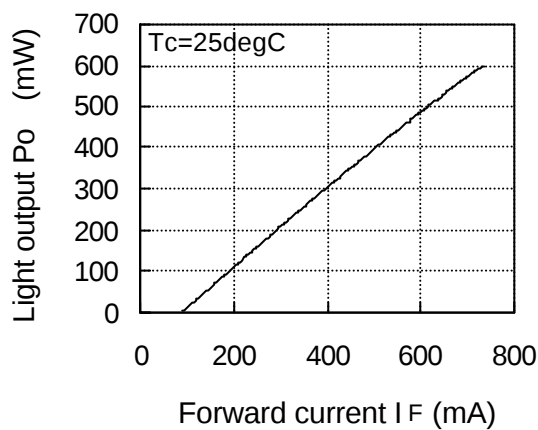


Fig.1 Light output vs. forward current

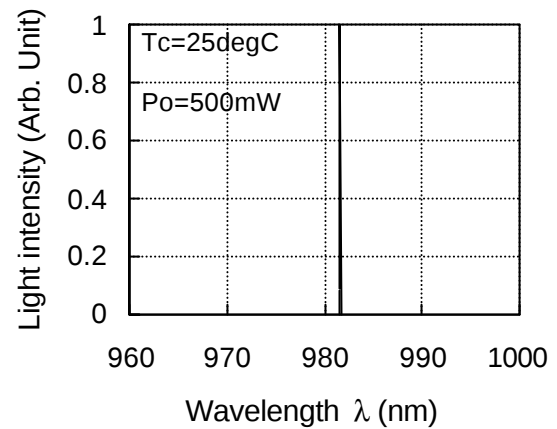


Fig.2 Spectrum

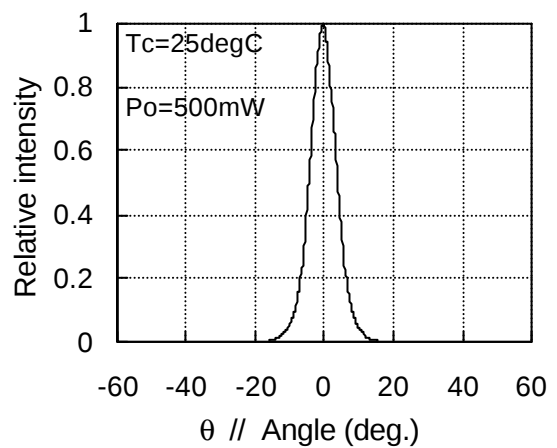
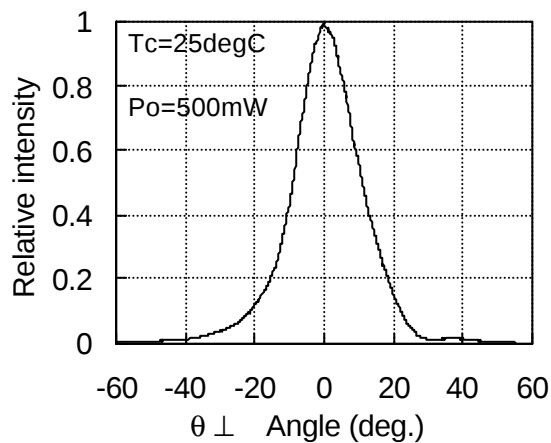


Fig.3 Far field patterns

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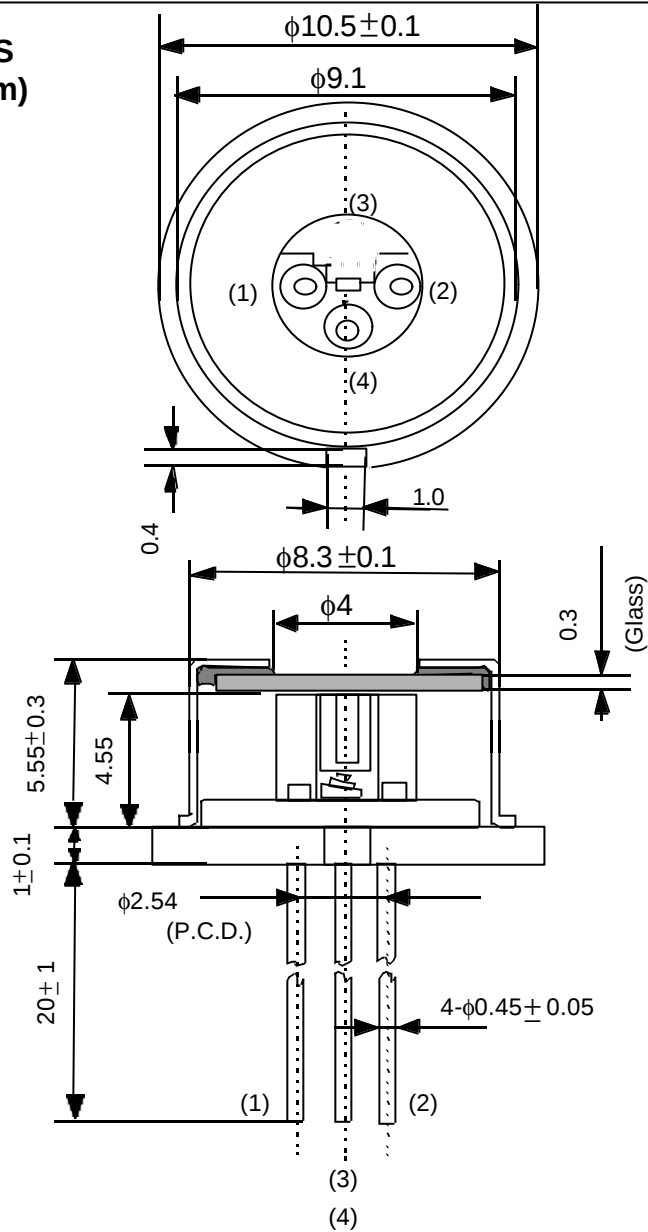
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980nm High Power Laser Diode

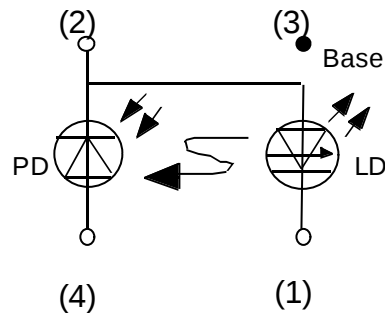
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OUTLINE DRAWINGS (Dimension in mm)



LEAD CONNECTION



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MITSUBISHI LASER DIODES

ML8XX5 SERIES

980nm High Power Laser Diode

TYPE
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ML8SM5

OUTLINE DRAWINGS (Dimension in mm)

