PRELIMINARY
Notice : This is not a final specification
Some parametric limits are subject to change.

MITSUBISHI LASER DIODES

ML6XX27 SERIES

FOR OPTICAL INFORMATION SYSTEMS

TYPE NAME

ML60127R, ML601J27

DESCRIPTION

ML6XX27 is a high power AlGaAs semiconductor laser which provides a stable, single transverse mode oscillation with emission wavelength of 785nm and standard light output power of 50mW. ML6XX27 is produced by a MOCVD crystal growth method which is excellent in mass production and characteristics uniformity . This is a high -performance , highly reliable, and low-operation-current semiconductor laser.

FEATURES

- Output 50mW (CW), 65mW (pulse)
- Small astigmatic distance
- Low operation current
- Anti-reflection facet for 3-Beam Method

APPLICATION

Optical Disc Drives with 3-Beam Method
CD-R/RW Drive
MD Drive

ABSOLUTE MAXIMUM RATINGS (Note 1)

Based on Mitsubishi's measurement standards

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	**60**	mW
		Pulse(Note 2)	**70**	
VRL	Reverse voltage (laser diode)	-	**2**	V
VRD(Note 3)	Reverse voltage (Photodiode)	-	**30**	V
IFD(Note 3)	Forward current (Photodiode)	-	**10**	mA
Tc	Case temperature	-	**-10~ +60**	˚C
Tstg	Storage temperature	-	**-40~ +100**	˚C

Note1: The 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 issued by Quality Assurance Section, HF & Optical Semiconductor Division, Mitsubishi Electric Co..

Note2: TARGET SPEC /Condition Duty less than 50%,pulse width less than 1μs

Note3: Applicable to ML60127R

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25˚C)

Based on Mitsubishi's measurement standards

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	-	**30**	-	mA
Iop	Operation current	CW,Po=50mW	-	**100**	-	mA
η	Slope efficiency	CW,Po=50mW	-	**0.7**	-	mW/mA
Vop	Operating voltage	CW,Po=50mW	-	**2.0**	**2.5**	V
λp	Peak wavelength	CW,Po=50mW	**775**	**785**	**795**	nm
θ //	Beam divergence angle (parallel)	CW,Po=50mW	**7.5**	**9**	**13.5**	deg.
θ ⊥	Beam divergence angle (perpendicular)	CW,Po=50mW	**16**	**22**	**28**	deg.
Im(Note 4)	Monitoring output current (Photodiode)	CW,Po=50mW,VRD=1V RL=10(Note 5)	-	**0.7**	-	mA
ID(Note 4)	Dark current (Photodiode)	VRD=10V	-	-	**0.5**	μA
Ct(Note 4)	Capacitance (Photodiode)	VRD=5V	-	**7**	-	pF

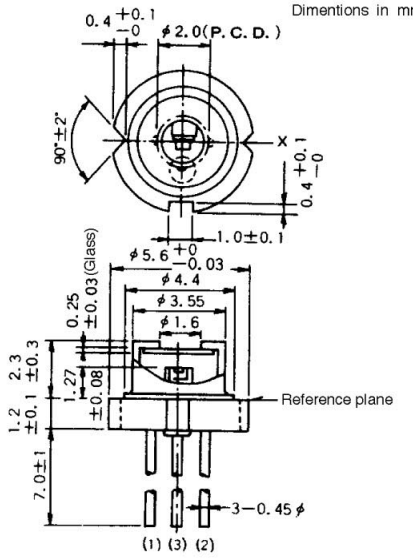
Note 4: Applicable to ML60127R
Note 5:RL=the load resistance of photodiode

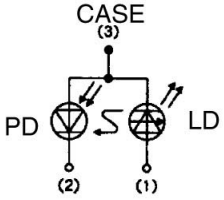
ML6XX27 SERIES

FOR OPTICAL INFORMATION SYSTEMS

OUTLINE DRAWINGS

ML60127R





ML601J27