

Preliminary

MITSUBISHI LASER DIODES ML6XX34 SERIES FOR OPTICAL INFORMATION SYSTEMS

This model is under development. Therefore, please note that this data sheet may be changed without any notice.

DESCRIPTION

ML6XX34 has window-mirror structure for increasing COD power and real-reflective-index wave guide for reducing operation current.

ML6XX34 is a highly reliable high-power and high-efficiency AlGaAs semiconductor laser which provides a stable, single transverse mode oscillation with emission wavelength of 785nm and standard pulse output power of 160mW.

FEATURES

- Pulse available output power : up to 160mW
($t \leq 0.1\mu s$, $D_{ut} \leq 50\%$)
- Small stigmatic distance
- Low operation current

APPLICATION

- 16X CD-R/RW Drive

ABSOLUTE MAXIMUM RATINGS (Note1)

Based on Mitsubishi's measurement standards

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power ($T_c = 25^\circ C$)	CW	90	mW
		Pulse (Note2)	180	
VRL	Reverse voltage	-	2	V
Tc	Case temperature	-	-10 ~ +70	$^\circ C$
Tstg	Storage temperature	-	-40 ~ +100	$^\circ C$

Note1: The maximum rating means the limitation over which the lasers should not be operated even instant time, and this does neither mean the guarantee of its lifetime nor its electrical and optical characteristics. 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: Pulse width less than 0.1 μs , Duty less than 50%

ELECTRICAL/OPTICAL CHARACTERISTICS ($T_c = 25^\circ C$) Based on Mitsubishi's measurement standards

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	-	40	-	mA
Iop	Operation current	CW, $P_o = 80mW$	-	120	-	mA
η	Slope efficiency	CW, $P_o = 80mW$	-	1.0	-	mW/mA
Vop	Operating voltage	CW, $P_o = 80mW$	-	2.0	-	V
λ_p	Peak wavelength	CW, $P_o = 80mW$	775	785	795	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW, $P_o = 80mW$	-	8.5	-	$^\circ$
$\perp$	Beam divergence angle (perpendicular)	CW, $P_o = 80mW$	-	17	-	$^\circ$

NSPF

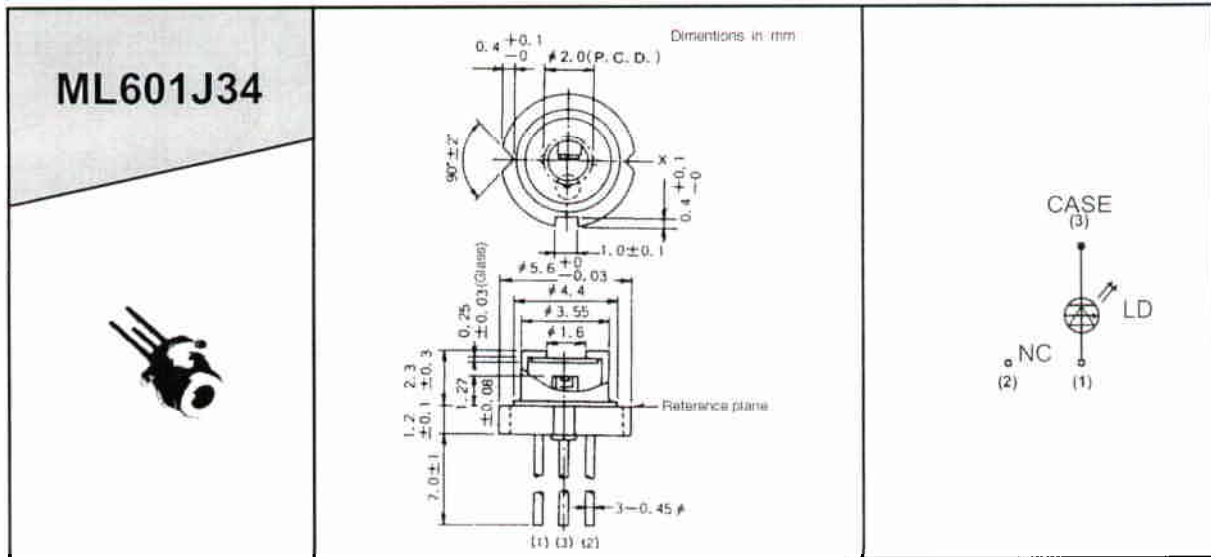


as of 16th October '00

ML6XX34 SERIES

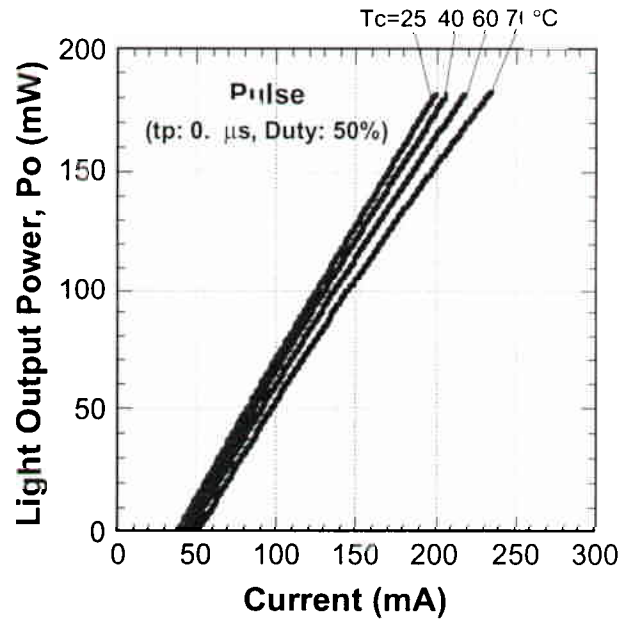
FOR OPTICAL INFORMATION SYSTEMS

OUTLINE DRAWINGS

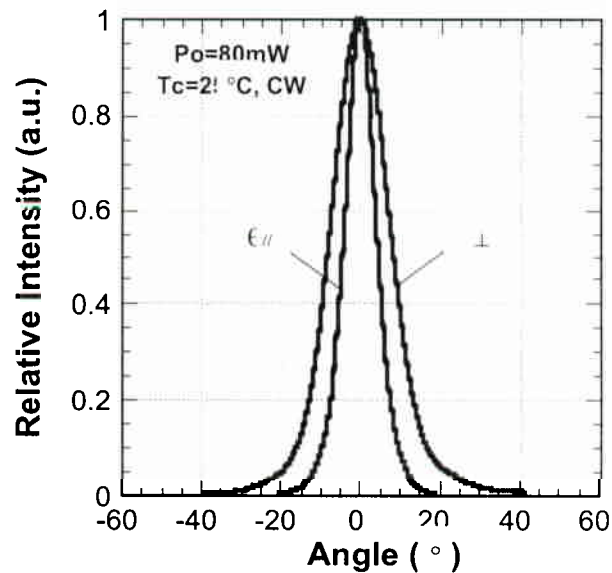


There is no model with a monitor photodiode in the ML6XX34 series.

TENTATIVE CHARACTERISTICS (Reference Data)



LightOutputPowervs.Current(Pulse)



FarFieldPatterns

