

MITSUBISHI LASER DIODES ML9XX10 SERIES

InGaAsP—MQW HIGH POWER LASER DIODES

TYPE
NAME

ML976H10

DESCRIPTION

ML9XX10 series are InGaAsP high power laser diodes which provides a stable, single transverse mode oscillation with emission wavelength of 1550nm and pulse light output of 200mW.

FEATURES

- High power (Pulse 200mW)
 - 1550nm typical emission wavelength
 - Stable single transverse mode oscillation
 - Low threshold current, low operating current
 - Higt reliability, long operation life
 - MQW* active layer
- * : Multiple Quantum Well

APPLICATION

OTDR systems

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
I _F	Forward current	Pulse (Note 1)	1000	mA
V _{RL}	Reverse Voltage	—	2	V
T _C	Case temperature	—	−40~+50	°C
T _{stg}	Storage temperature	—	−40~+100	°C

Note 1: Duty cycle less than 1%, pulse width less than 10 μs

ELECTRICAL/OPTICAL CHARACTERISTICS (T_C = 25°C)

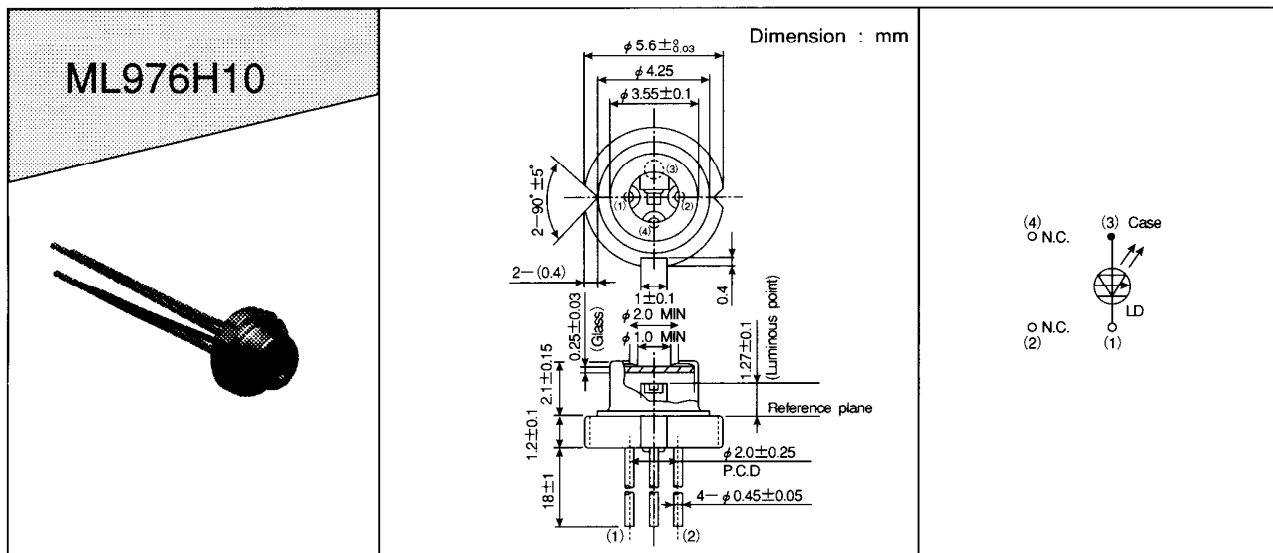
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I _{th}	Threshold current	CW	—	30	50	mA
I _{OP}	Operating current	CW, P _O = 10mW	—	50	180	mA
V _{OP} (P)	Operating voltage	Pulse, I _F = 700mA (Note 2)	—	3	4.5	V
P _O (P)	Pulse light output	Pulse, I _F = 700mA (Note 2)	100	200	—	mW
λ _C	Center wavelength	Pulse, I _F = 700mA (Note 2)	1520	1550	1580	nm
Δλ	Spectral width (RMS)	Pulse, I _F = 700mA (Note 2)	—	7	10	nm
θ	Beam divergence angle (parallel)	CW, P _O = 10mW	—	25	—	deg.
θ _⊥	Beam divergence angle (perpendicular)	CW, P _O = 10mW	—	30	—	deg.

Note 2 : Duty cycle = 1%, pulse width = 10 μs

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OUTLINE DRAWINGS



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TYPICAL CHARACTERISTICS

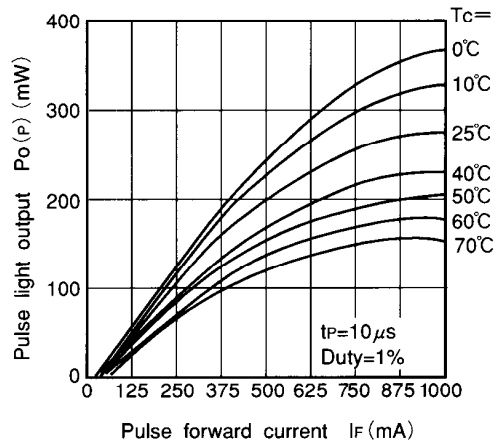


Fig.1 Pulse Light output vs. forward current

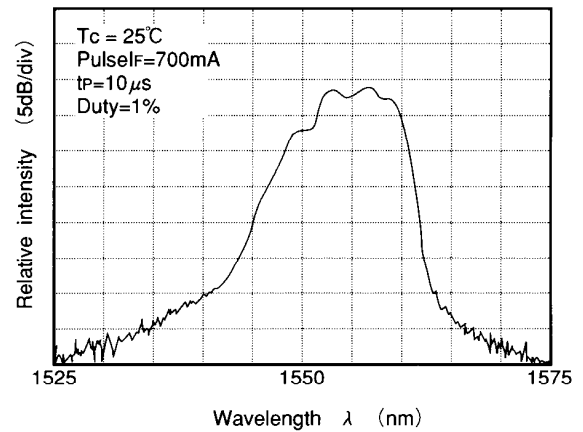


Fig.2 Spectrum

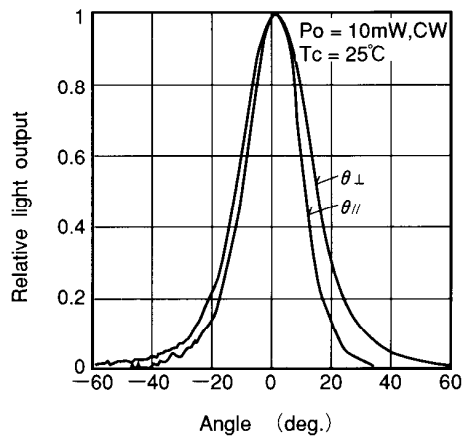


Fig.3 Far field patterns