

MITSUBISHI LASER DIODES
ML7XX10 SERIES

InGaAsP — MQW HIGH POWER LASER DIODES

**TYPE
NAME**

ML776H10

DESCRIPTION

ML7XX10 series are InGaAsP high power laser diodes which provide a stable, single transverse mode oscillation with emission wavelength of 1310nm and pulse light output of 300mW.

FEATURES

- High power (Pulse 300mW)
- 1310nm typical emission wavelength
- Stable single transverse mode oscillation
- Low threshold current, low operating current
- High 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	—	20	50	mA
I _{OP}	Operating current	CW, P _O = 10mW	—	30	120	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)	200	300	—	mW
λ _c	Center wavelength	Pulse, I _F = 700mA (Note 2)	1285	1310	1335	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 less than 10 μs

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TYPICAL CHARACTERISTICS

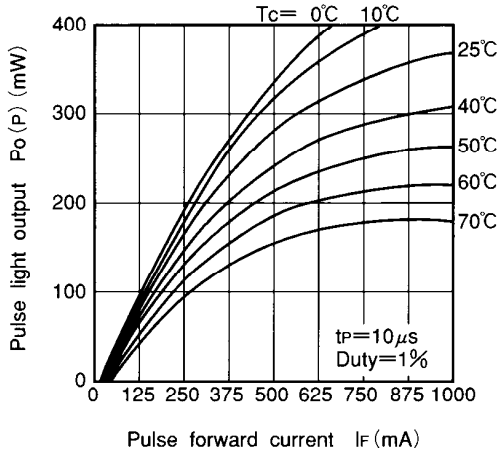


Fig.1 Pulse Light output vs. forward current

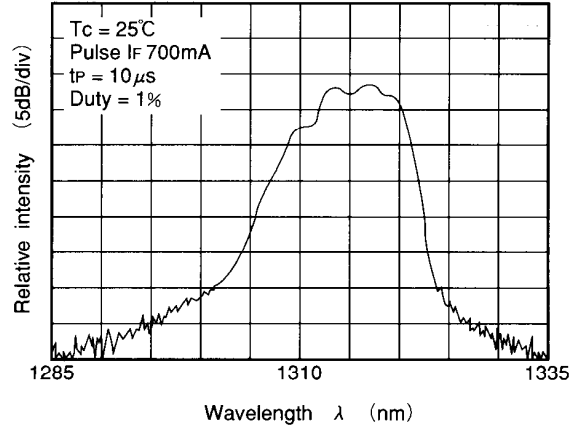


Fig.2 Spectrum

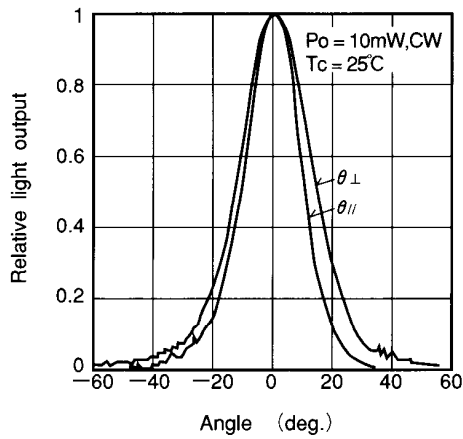


Fig.3 Far field patterns