TYPE NAME

ML40126N
ML44126N,ML44126R

FEATURES

ML4xx26 series is AlGaAs laser diodes which provide a stable, single transverse mode ocillation with emission wavelength of 785nm and standard continuous light output of 5mW.

ML4xx26 are hermetically sealed devices having the photodiode for optical output monitoring.

ML4xx26 is produced by the MOCVD crystal growth method which is excellent in mass production and characteristics uniformity.

FEATURES

- Output 5mW(CW)
- Built-in monitor photodiode
- Low droop

APPLICATION

- Laser Beam Printing, Digital Copy

ABSOLUTE MAXIMUM RATINGS (Note 1)

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	**8**	**mW**
VRL	Reverse voltage (laser diode)	-	**2**	**V**
VRD	Reverse voltage (Photodiode)	-	**30**	**V**
IFD	Forward current (Photodiode)	-	**10**	**mA**
Tc	Case temperature	-	**-40~ +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 from Mitsubishi Semiconductor Quality Assurance Department.

ELECTRICAL / OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Test conditions	Mln	Typ.	Max	Unit
Ith	Threshold current	CW	**-**	**25**	**40**	**mA**
Iop	Operation current	CW,Po=5mW	**-**	**40**	**70**	**mA**
η	Slope efficiency	CW,Po=5mW	**0.25**	**0.35**	**0.45**	**mW/mA**
Vop	Operating voltage	CW,Po=5mW	**-**	**2**	**2.5**	**V**
λp	Peak wavelength	CW,Po=5mW	**770**	**785**	**800**	**nm**
θ//	Beam divergence angle (parallel)	CW,Po=5mW	**8**	**11**	**15**	°
θ⊥	Beam divergence angle (perpendicular)	CW,Po=5mW	**22**	**29**	**36**	°
Im	Monitoring output current (Photodiode)	CW,Po=5mW, V_{RD}=1V R_L=10Ω(Note3)	**-**	**0.45**	**-**	**mA**
Im(Note2)			**-**	**0.90**	**-**	
ID	Dark current (Photodiode)	V_{RD}=10V	**-**	**-**	**0.5**	**μA**
Ct	Capacitance (Photodiode)	V_{RD}=5V, f=1MHz	**-**	**7**	**-**	**pF**
D	Droop	CW,Po=3mW	**-**	**6**	**-**	**%**

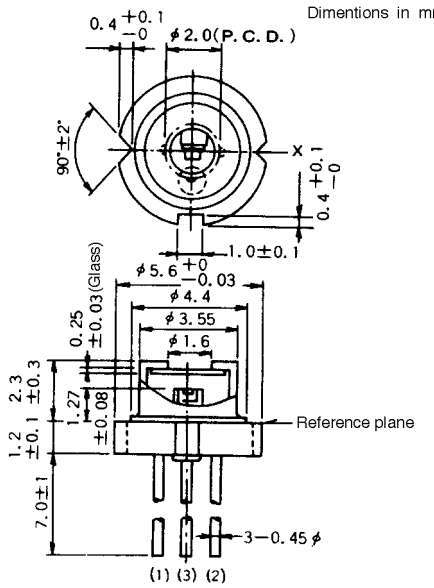
Note 2: Applicable to ML44126R and ML44126N
Note 3: RL=the load resistance of photodiode

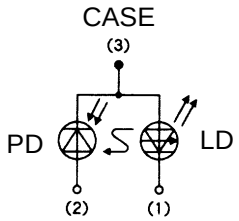
ML4XX26 SERIES

FOR OPTICAL INFORMATION SYSTEMS

OUTLINE DRAWINGS

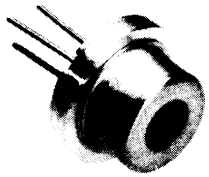
ML40126N

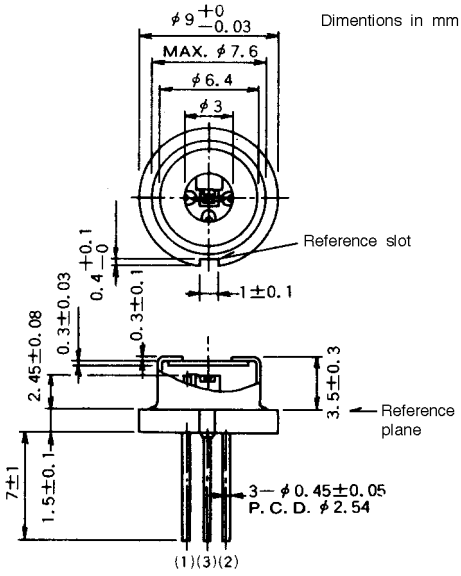


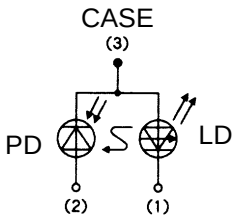


ML40126N

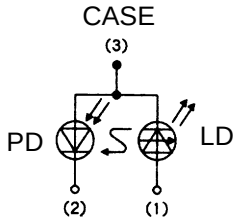
ML44126N
ML44126R





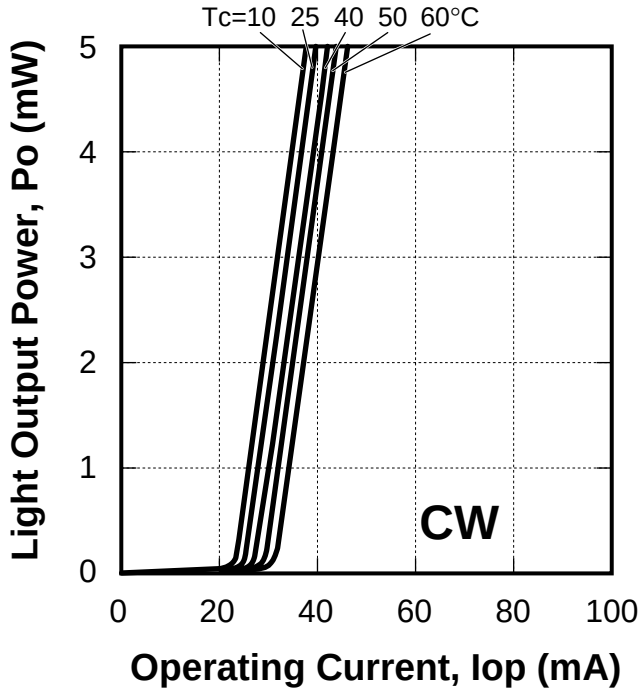


ML44126N

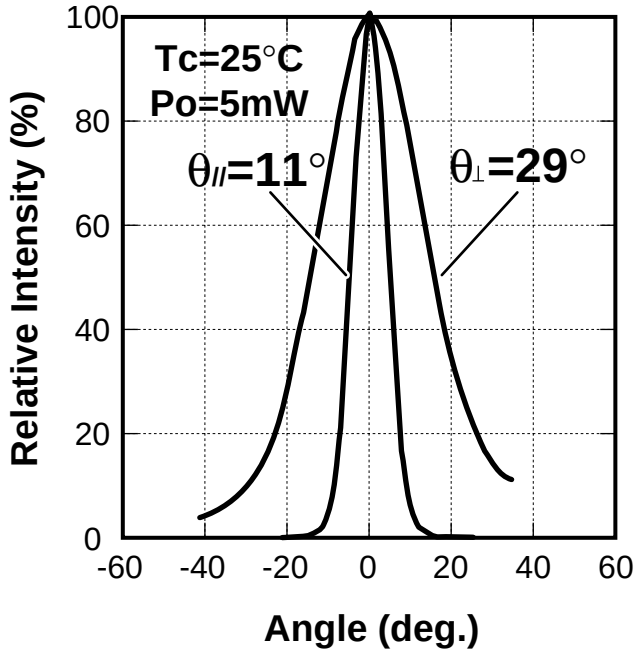


ML44126R

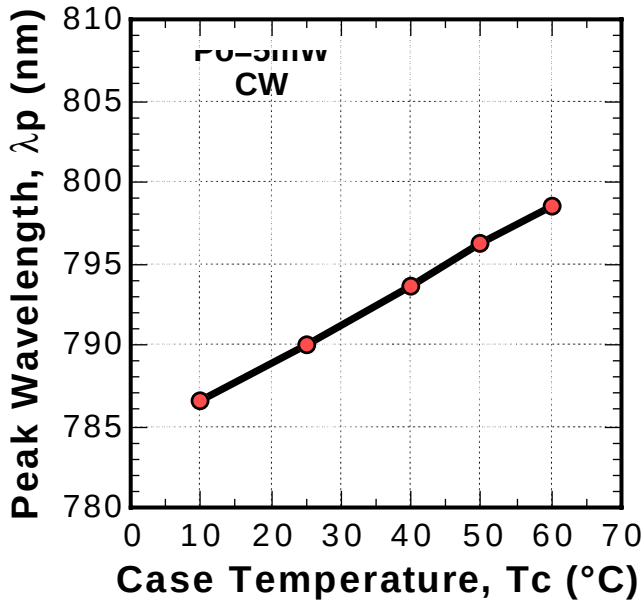
Typical Chracteristics



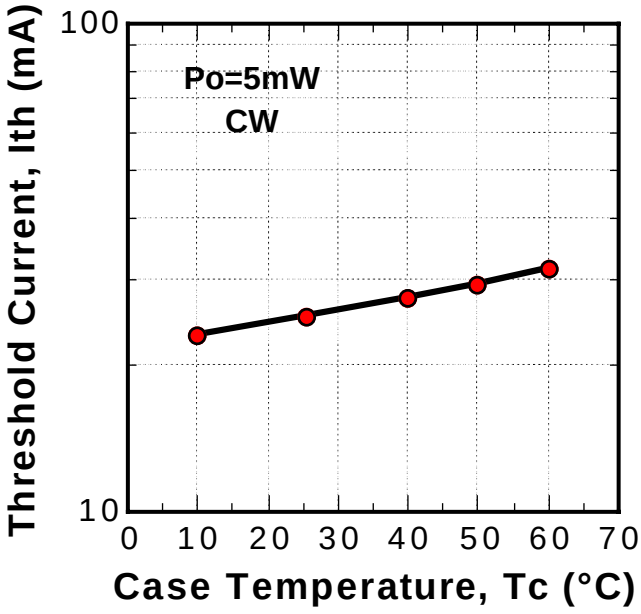
Light Output Power vs. Current (CW)



Far-Filed-Patterns

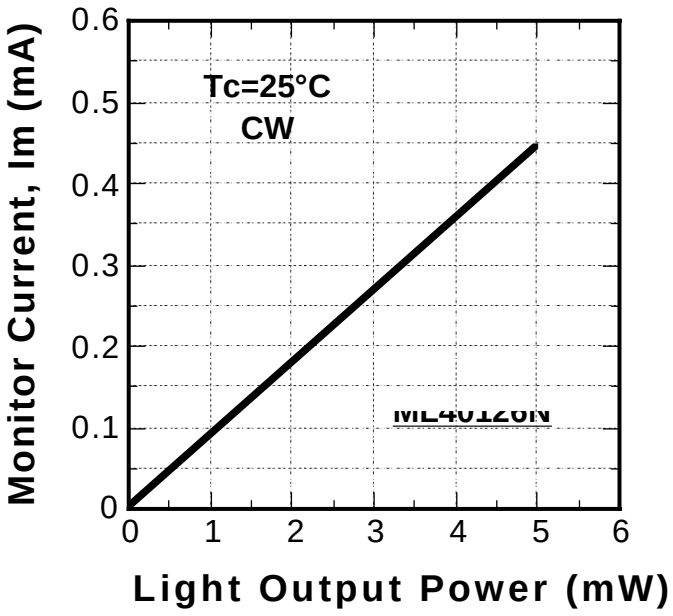


Peak Wavelength vs. Temperature

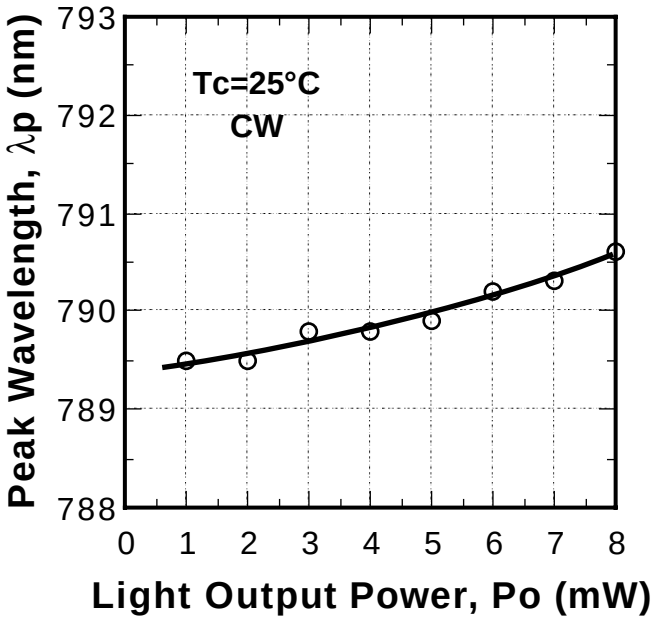


Threshold Current vs. Temperature

Typical Characteristics



Monitor Photodiode Current



Peak Wavelength vs. Light Output Power