MITSUBISHI LASER DIODES

ML3xx2 LD SERIES

FOR INDUSTRIAL SYSTEMS

TYPE NAME

ML320G2-11 / ML329G2-11

Please note that this data sheet may be changed without any notice.

DESCRIPTION

ML3XX2 is a high-power, high-efficient blue-violet semiconductor laser which provides a stable, single transverse mode oscillation with emission wavelength of 405nm and standard light output of 120mW(CW).

FEATURES

- High Output Power: 120mW (CW)
- High Efficiency: 1.7mW/mA (typ.)
- Visible Light: 405nm (typ.)
- Package: ϕ5.6mm TO-CAN PKG (ML320G2)
  ϕ3.8mm TO-CAN PKG (ML329G2)

APPLICATION

- Industrial , Bio-medical systems

ABSOLUTE MAXIMUM RATINGS (Note 1)

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	**120**	mW
VRL	Reverse voltage	-	**2**	V
Tc	Case temperature	-	**+5 ~ +80**	°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. This does not mean the guarantee of its lifetime. Additionally, LD lifetime is strongly dependent on the case temperature. As for the reliability, please refer to the reliability report issued by Quality Assurance Section, HF & Optical Semiconductor Division, Mitsubishi Electric Corporation.

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

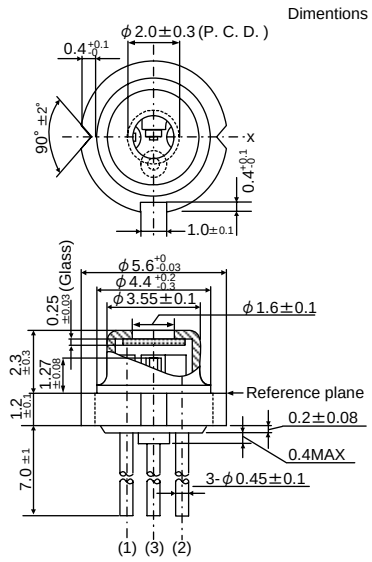
Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	**-**	**45**	**70**	mA
Iop	Operating current	CW, Po=120mW	**-**	**120**	**160**	mA
Vop	Operating voltage	CW, Po=120mW	**-**	**5.0**	**6.0**	V
η	Slope efficiency	CW, Po=120mW	**1.3**	**1.7**	**2.0**	mW/mA
λp	Peak wavelength	CW, Po=120mW	**400**	**405**	**410**	nm
θ//	Beam divergence angle (parallel)	CW, Po=120mW	**6**	**8**	**12**	°
$\theta\perp$	Beam divergence angle (perpendicular)	CW, Po=120mW	**15**	**17**	**21**	°

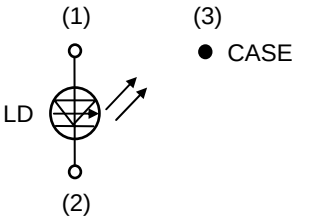
OUTLINE DRAWINGS

ML320G2

ϕ5.6mm

Dimentions in mm



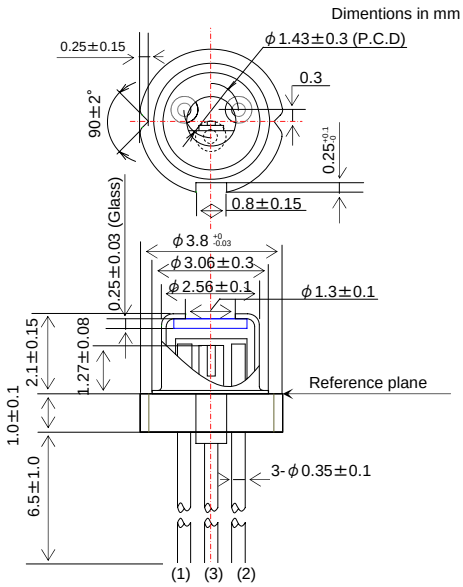


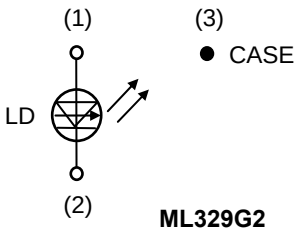
ML320G2

ML329G2

ϕ3.8mm

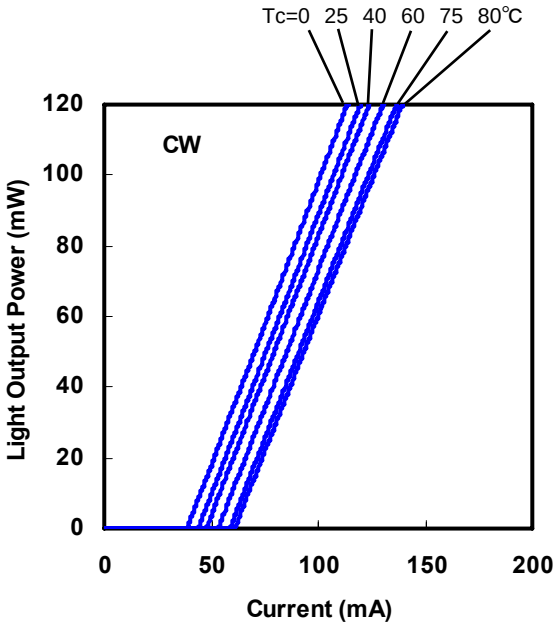
Dimentions in mm



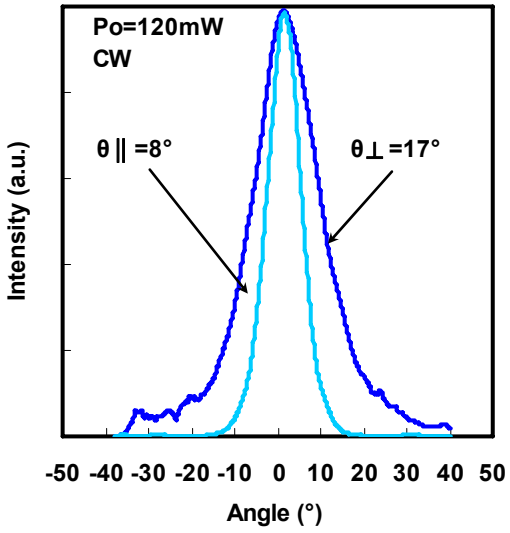


ML329G2

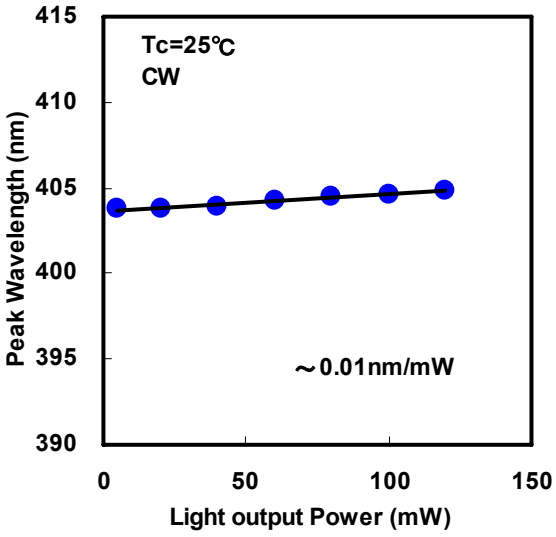
Typical Characteristics of ML320G2



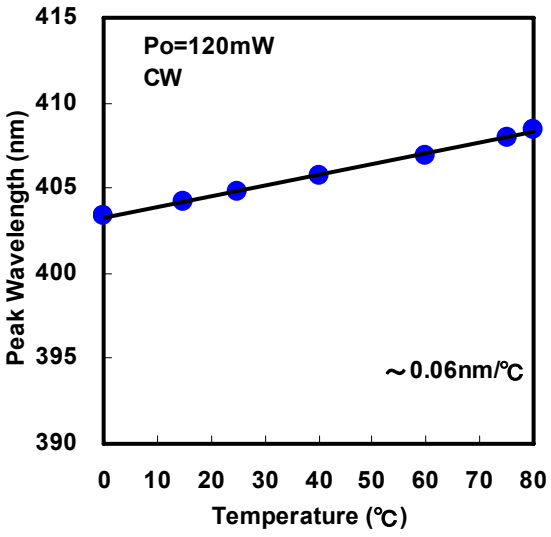
Light Output Power vs. Current (CW)



Far-Field-Patterns



Peak Wavelength vs. Light Output Power



Peak Wavelength vs. Temperature

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