

MITSUBISHI LASER DIODES
ML5xx71 LD SERIES
 FOR DISPLAY SYSTEM

**TYPE
NAME**

ML520G71

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

DESCRIPTION

Mitsubishi ML520G71 is a high-power, high-efficient semiconductor laser diode which provides emission wavelength of 638 nm and standard light output of 300mW.

This LD has broad-stripe structure which enables high output power.

FEATURES

- High Output Power: 300mW (CW)
- High Efficiency: 1.0mW/mA (typ.)
- Visible Light: 638nm (typ.)
- ϕ 5.6mm TO-CAN PKG

APPLICATION

- Display system, Bio-medical

ABSOLUTE MAXIMUM RATINGS (Note 1)

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	300(Tc ≤ 45 °C), 220(45 °C < Tc ≤ 55 °C)	mW
VRL	Reverse voltage	-	2	V
Tc	Case temperature	-	-5 ~ +55	°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. As for the reliability, please refer to the reliability report issued by Quality Assurance Section, HF & Optical Semiconductor Division, Mitsubishi Electric Corporation.

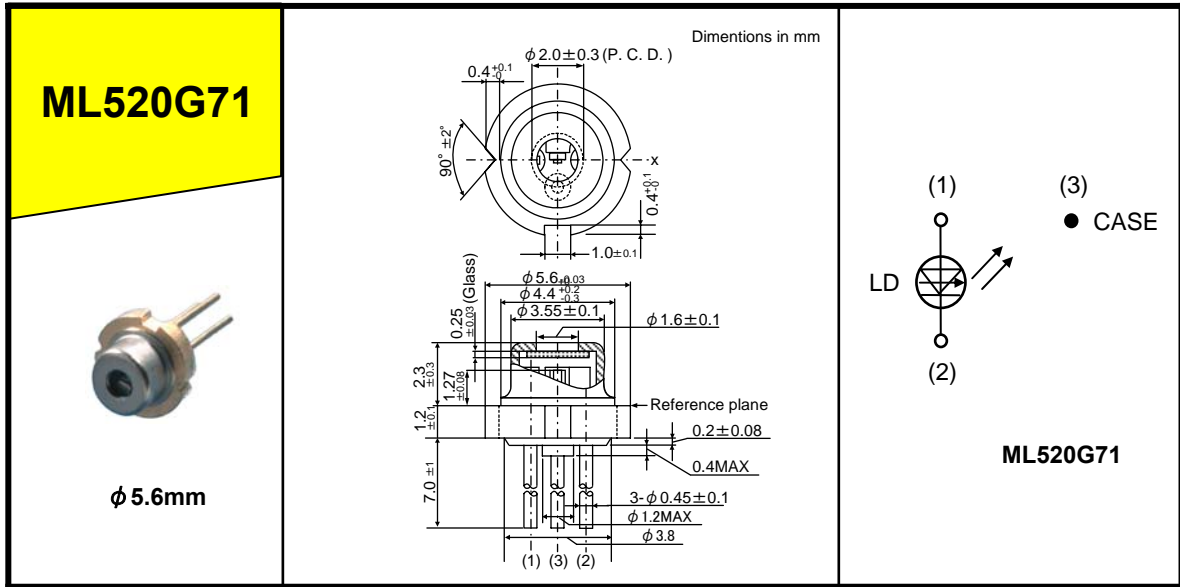
ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	80	130	180	mA
Iop	Operating current	CW, Po=220mW	230	330	400	mA
Vop	Operating voltage	CW, Po=220mW	1.9	2.3	2.6	V
η	Slope efficiency	CW, Po=220mW	0.8	1.0	1.3	mW/mA
λ_p	Peak wavelength	CW, Po=220mW	632	638	644	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW, Po=220mW	1	7	13	°
θ_{\perp}	Beam divergence angle (perpendicular)	CW, Po=220mW	25	35	45	°



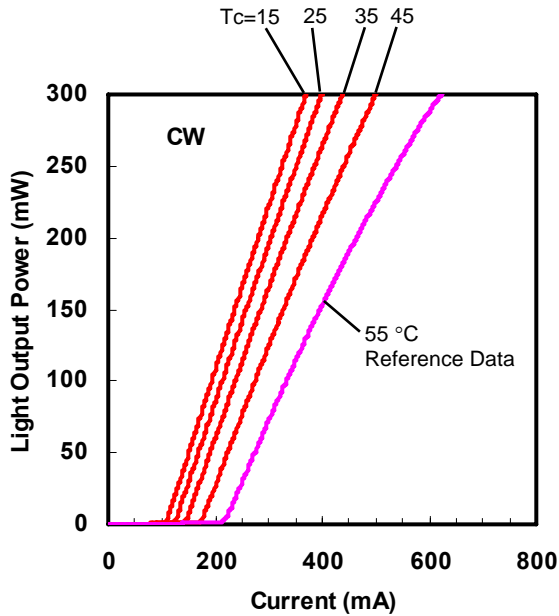
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OUTLINE DRAWINGS

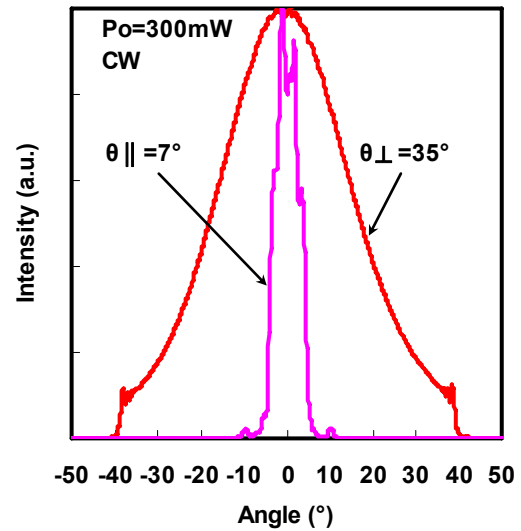


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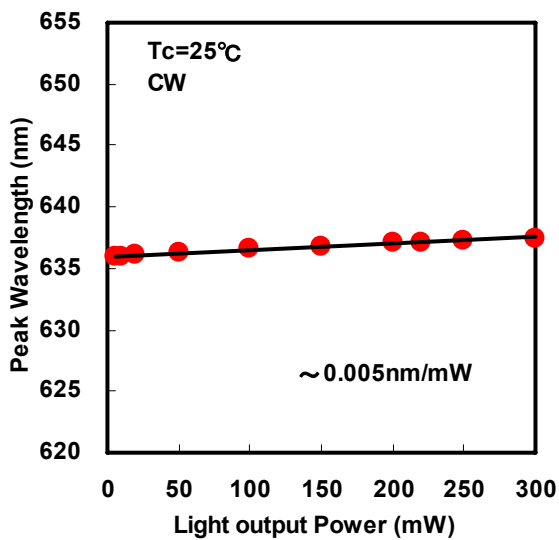
Typical Characteristics of ML520G71



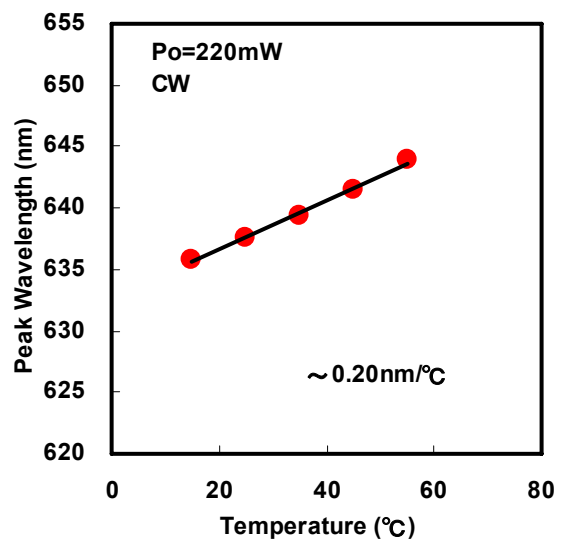
Light Output Power vs. Current (CW)



Far-Field-Patterns



Peak Wavelength vs. Light Output Power



Peak Wavelength vs. Temperature

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