

MITSUBISHI LASER DIODES
ML5xx51 LD SERIES
FOR DISPLAY SYSTEM

TYPE
NAME

ML520G51

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

DESCRIPTION

Mitsubishi ML520G51 is a high-power, high-efficient semiconductor laser diode which provides emission wavelength of 638 nm and standard light output of 150mW.

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

FEATURES

- High Output Power: 150mW (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	150	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.

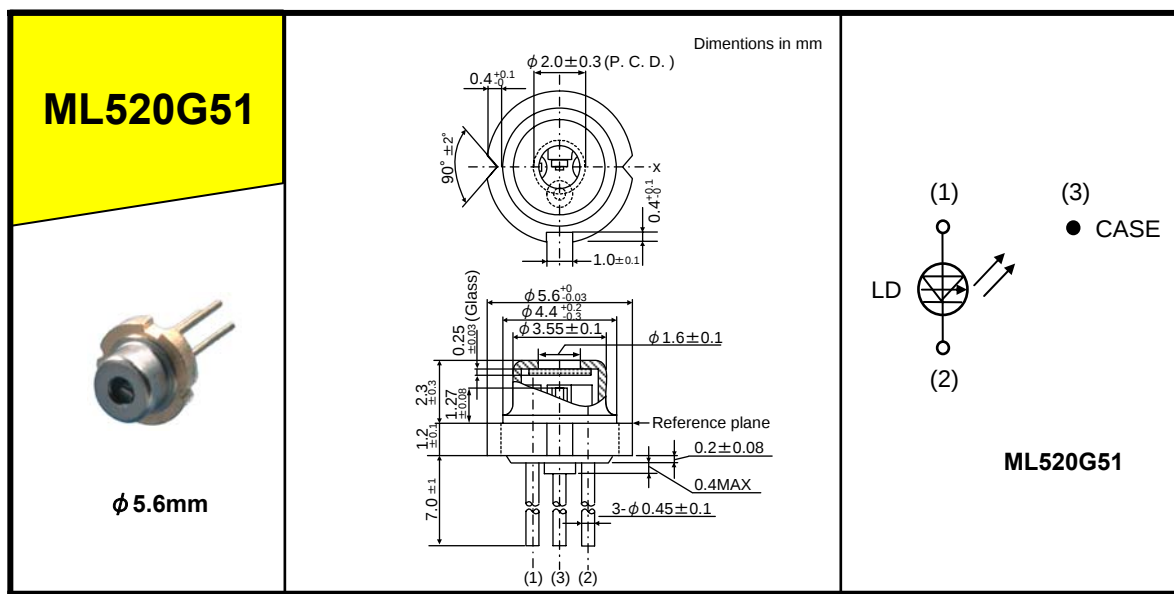
ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	80	130	180	mA
Iop	Operating current	CW, Po=150mW	200	260	330	mA
Vop	Operating voltage	CW, Po=150mW	1.8	2.1	2.5	V
η	Slope efficiency	CW, Po=150mW	0.8	1.0	1.3	mW/mA
λ_p	Peak wavelength	CW, Po=150mW	632	638	644	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW, Po=150mW	1	7	13	°
$\theta_{\perp}$	Beam divergence angle (perpendicular)	CW, Po=150mW	25	35	45	°



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OUTLINE DRAWINGS

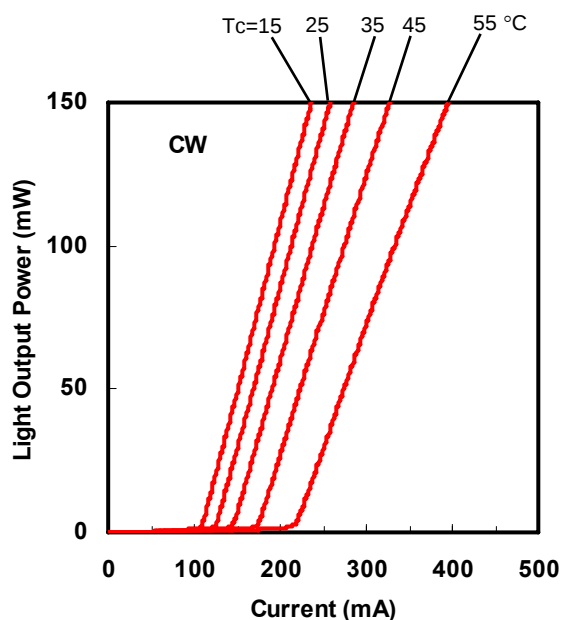


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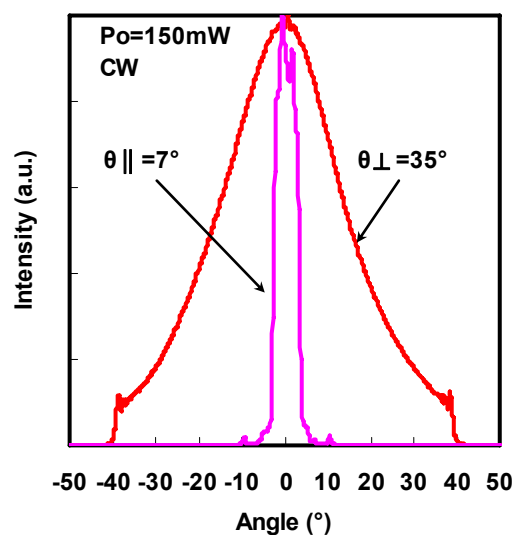
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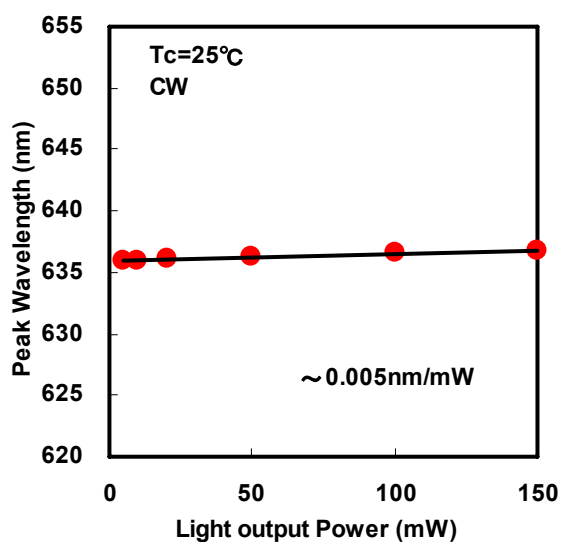
Typical Characteristics of ML520G51



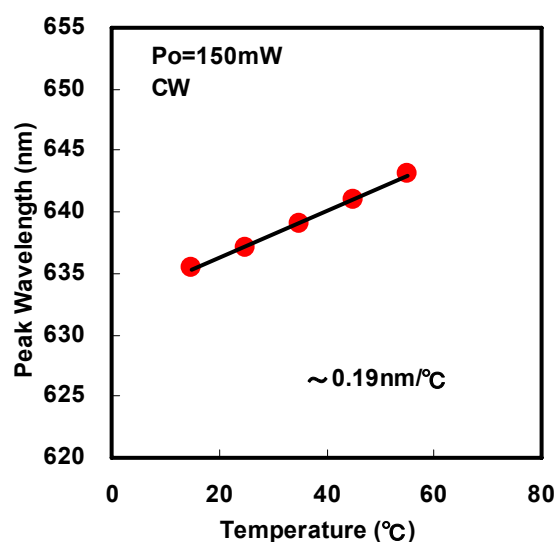
Light Output Power vs. Current (CW)



Far-Field-Patterns



Peak Wavelength vs. Light Output Power



Peak Wavelength vs. Temperature

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