

MITSUBISHI LASER DIODES
ML5xx72 LD SERIES
 FOR DISPLAY SYSTEM

**TYPE
NAME**

ML520G72

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

DESCRIPTION

Mitsubishi ML520G72 is a high-power, highly efficient semiconductor laser diode which provides emission wavelength of 638 nm and standard light output of 500mW.

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

FEATURES

- High Output Power: 500mW (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	500	mW
		Pulse Duty \leq 25%, frequency \geq 50Hz	600	mW
VRL	Reverse voltage	-	2	V
Tc	Case temperature	CW	-5 ~ +40	$^{\circ}$ C
		Pulse Duty \leq 25%, frequency \geq 50Hz	-5 ~ +50	$^{\circ}$ C
Tstg	Storage temperature	-	-40 ~ +100	$^{\circ}$ C

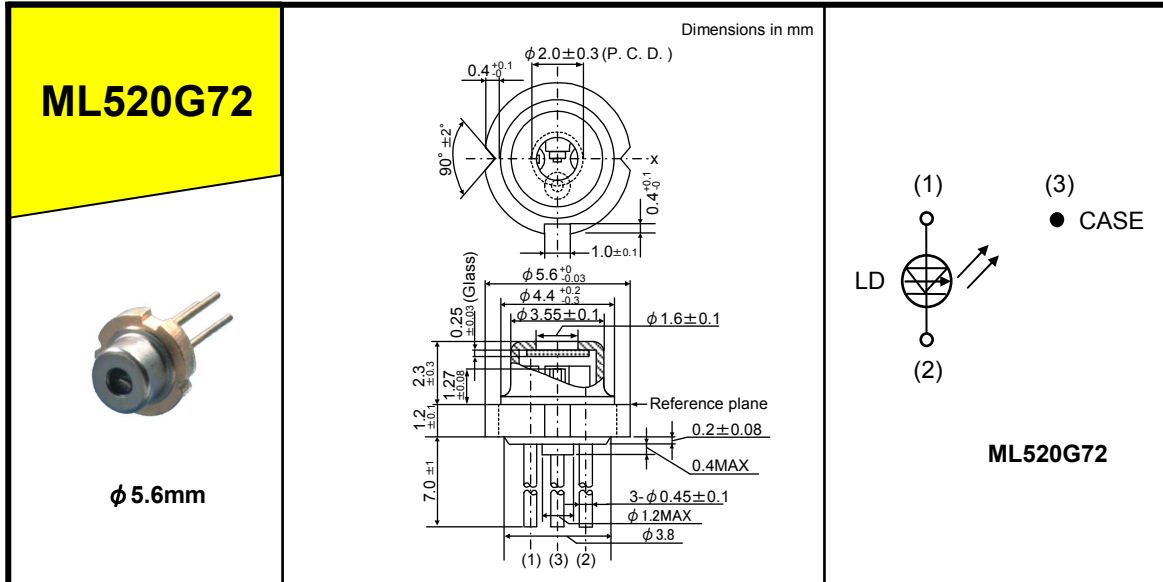
Note1: The maximum rating means the limitation over which the laser should not be operated even instant time. This does not mean the guarantee of its lifetime. As for the reliability, please refer to the reliability report issued by Quality Assurance Section, HF & Optical Semiconductor Division, Mitsubishi Electric Corporation.

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25 $^{\circ}$ C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	90	160	210	mA
Iop	Operating current	CW, Po=500mW	500	680	800	mA
Vop	Operating voltage	CW, Po=500mW	1.9	2.3	2.6	V
η	Slope efficiency	CW, Po=500mW	0.8	1.0	1.4	mW/mA
λ_p	Peak wavelength	CW, Po=500mW	632	638	644	nm
$\theta_{//}$	Beam divergence angle (parallel)	CW, Po=500mW	1	9	15	$^{\circ}$
θ_{\perp}	Beam divergence angle (perpendicular)	CW, Po=500mW	25	35	45	$^{\circ}$

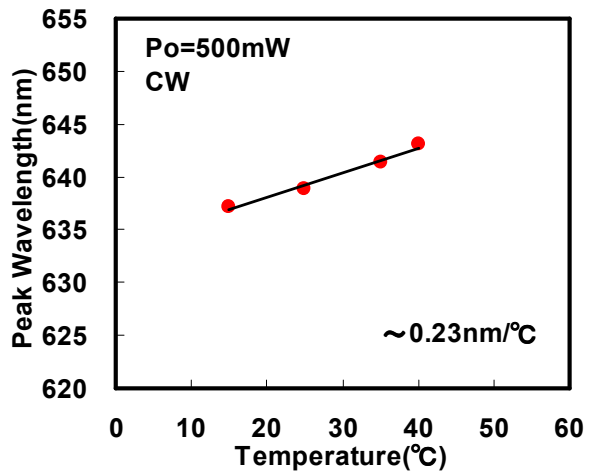
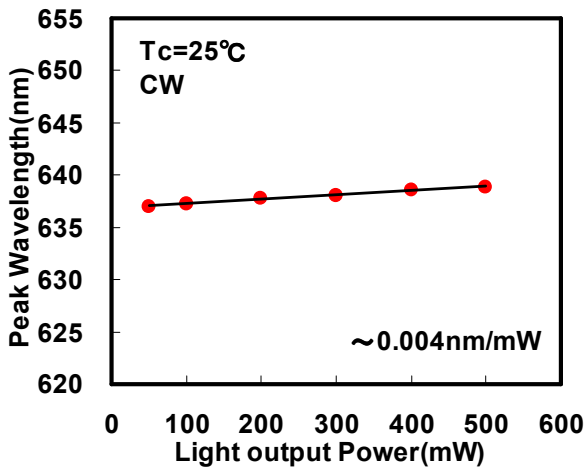
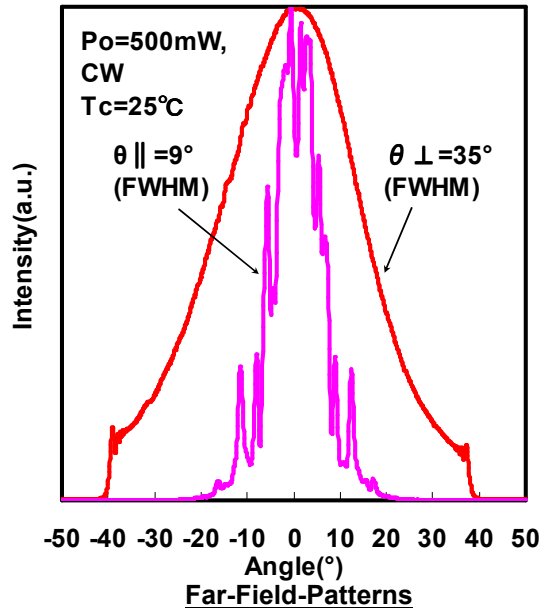
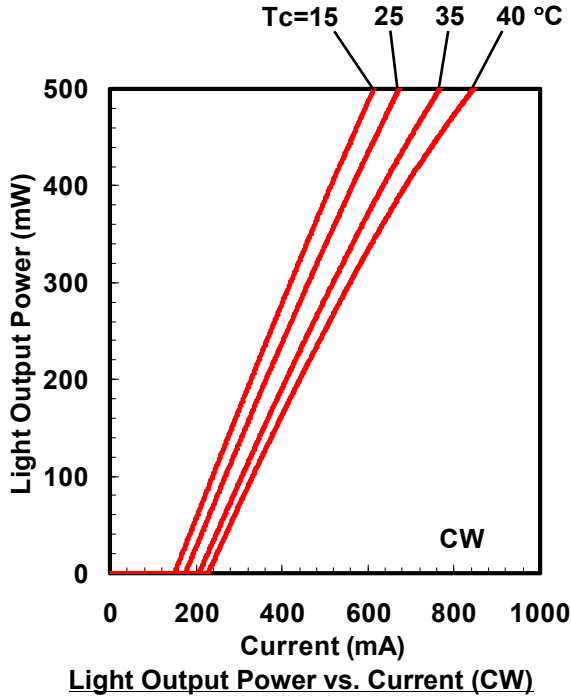
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OUTLINE DRAWINGS



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Typical Characteristics of ML520G72



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