

TENTATIVE

MITSUBISHI LASER DIODES
ML6xx40 LD SERIES
FOR PUMPING

TYPE
NAME

ML620G40 / ML629R40

This type is under development. Therefore, please note that this data sheet may be changed without any notice.

DESCRIPTION

ML6xx40 is a high-power, high-efficient semiconductor laser diode which provides a stable oscillation with emission wavelength of 805nm and standard CW light output of 0.5 W.

FEATURES

- High output power: 0.5 W (CW) and 1.2W (Pulse)
- Lasing wavelength: 805 nm (typ.)
- ϕ 5.6mm TO-CAN PKG(ML620G40)
- ϕ 3.8mm Cap-less PKG(ML629R40)

APPLICATION

Nd:YAG laser pumping

ABSOLUTE MAXIMUM RATINGS (Note 1)

Symbol	Parameter	Conditions	Ratings	Unit
Po	Light output power	CW	0.5	W
		Pulse (duty<33%)	1.2	W
VRL	Reverse voltage	-	2	V
Tc	Case Temperature	-	-5 ~ +60	°C
Tstg	Storage temperature	-	-40 ~ +100	°C

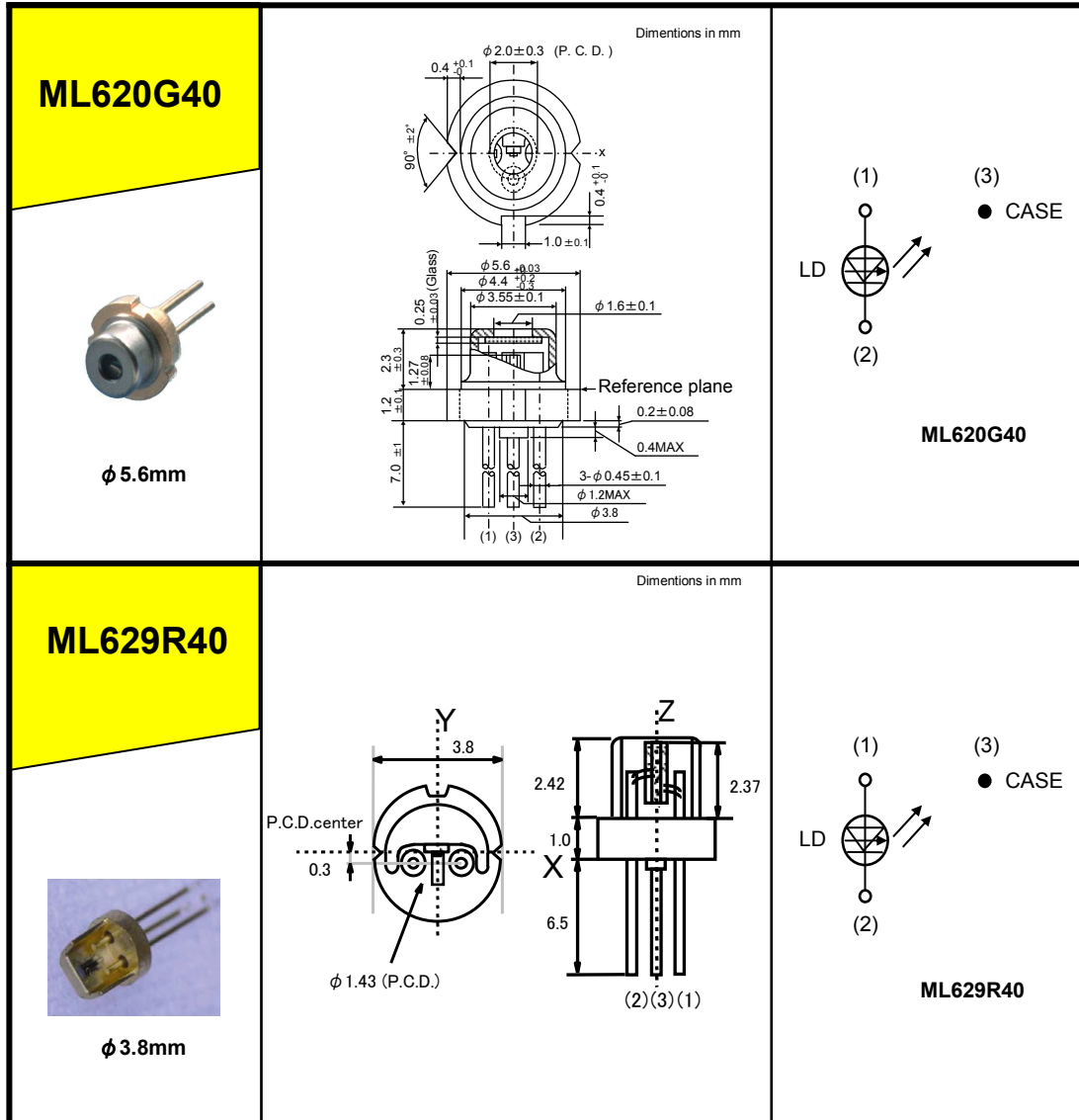
Note1: The maximum rating means the limitation over which the laser should not be operated even instant time. This does not mean the guarantee of its lifetime. As for the reliability, please refer to the reliability report issued by Quality Assurance Section, HF & Optical Semiconductor Division, Mitsubishi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

ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Threshold current	CW	150	200	350	mA
Iop	Operating current	CW, Po=0.5W	650	710	900	mA
Vop	Operating voltage	CW, Po=0.5W	1.6	1.8	2.2	V
η	Slope efficiency	CW, Po=0.5W	0.8	1.1	-	mW/mA
λ_p	Central wavelength	CW, Po=0.5W	795	805	815	nm
θ_{\parallel}	Beam divergence angle (parallel)	CW, Po=0.5W	1	6	15	°
θ_{\perp}	Beam divergence angle (perpendicular)	CW, Po=0.5W	24	34	40	°

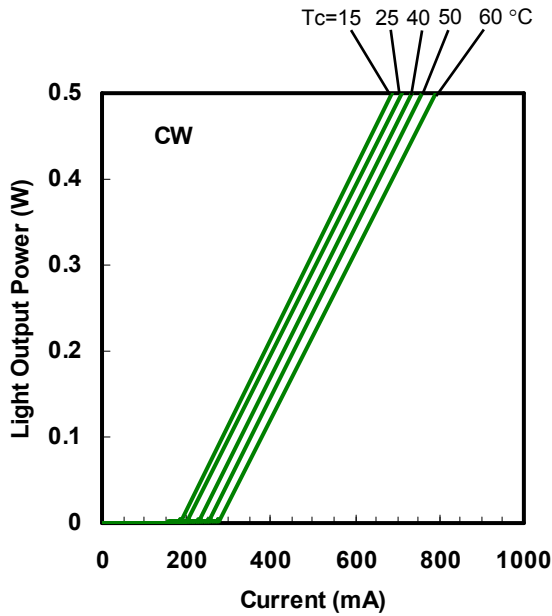
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OUTLINE DRAWINGS

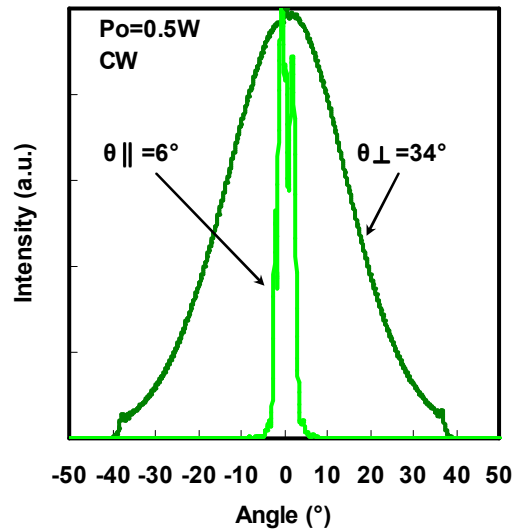


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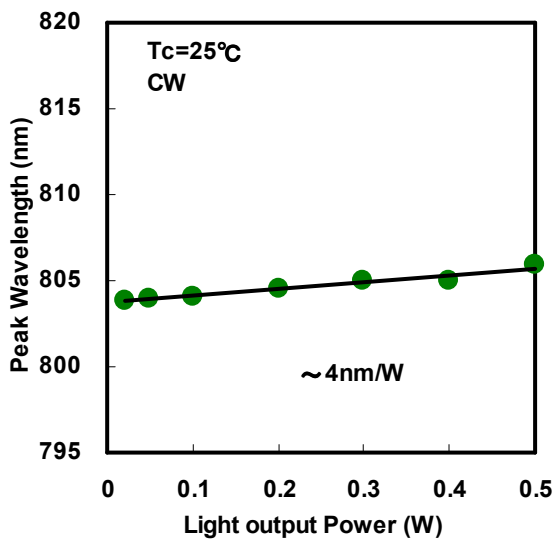
Typical Characteristics of ML6xx40



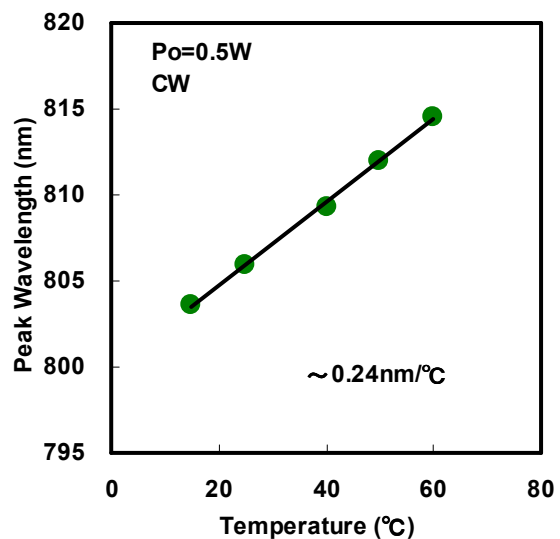
Light Output Power vs. Current (CW)



Far-Field-Patterns



Peak Wavelength vs. Light Output Power



Peak Wavelength vs. Temperature

Requests Regarding Safety Designs

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