

# Red Laser LDs

## 640nm

### ML520G51-01



#### DESCRIPTION

ML520G51 is a high-power, high-efficient semiconductor laser which provides a stable oscillation with emission wavelength of 640nm and standard CW light output of 150mW.

#### FEATURES\*

- 5.6Ø CAN package
- High Output Power: 150mW (CW)
- Lasing Wavelength: 640nm (typ.)
- Multiple transverse modes

\*tentative

#### APPLICATIONS

Laser Show, Laser Display

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
Po	light output power	CW Pulse	150 250 (tentative)	mW
VRL	reverse voltage	-	2	V
Tc	case temperature	-	-5 ... +45 (tentative)	°C
Tstg	storage temperature	-	-40 ... +100	°C

#### ELECTRICAL/OPTICAL CHARACTERISTICS\* (T<sub>c</sub> = 25°C)

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
I <sub>th</sub>	threshold current	CW	100	140	180	mA
I <sub>op</sub>	operating current	CW, P <sub>o</sub> = 150mW	-	280	360	mA
V <sub>op</sub>	operating voltage	CW, P <sub>o</sub> = 150mW	-	2.3	2.8	V
η	slope efficiency	CW, @I <sub>th</sub> -I <sub>op</sub>	0.8	0.95	-	W/A
λ <sub>p</sub>	peak wavelength	CW, P <sub>o</sub> = 150mW	635	640	645	nm
θ <sub>//</sub>	beam divergence angle (full width at a half maximum)	CW, P <sub>o</sub> = 150mW	3	7	11	°
θ <sub>⊥</sub>	beam divergence angle (full width half maximum)	CW, P <sub>o</sub> = 150mW	30	40	50	°

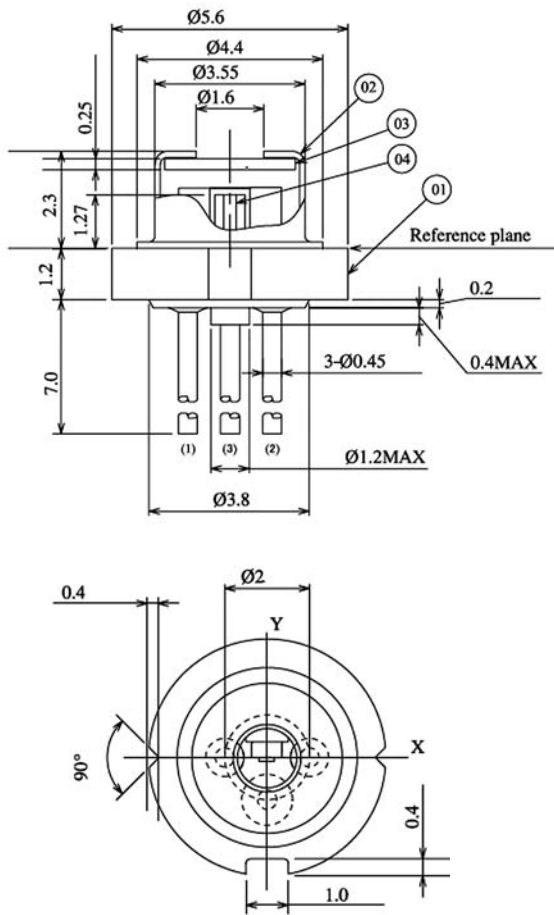
\*expected performance after mounted, not guaranteed

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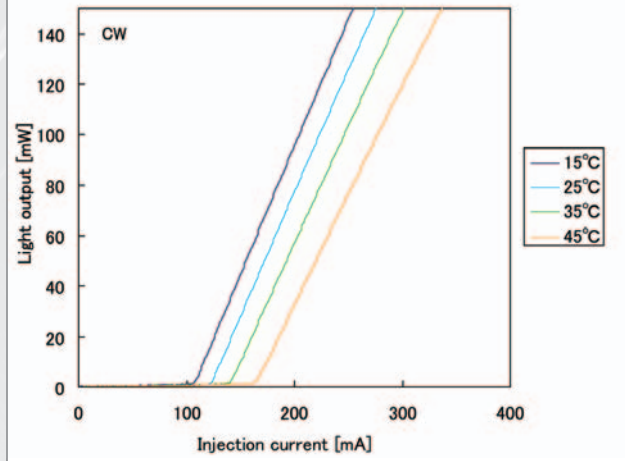
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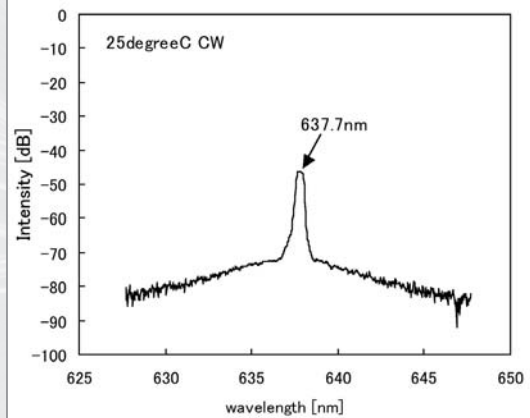
#### Outline Drawings



#### L-I Characteristics



#### Lasing Spectrum



#### Far Field Patterns

