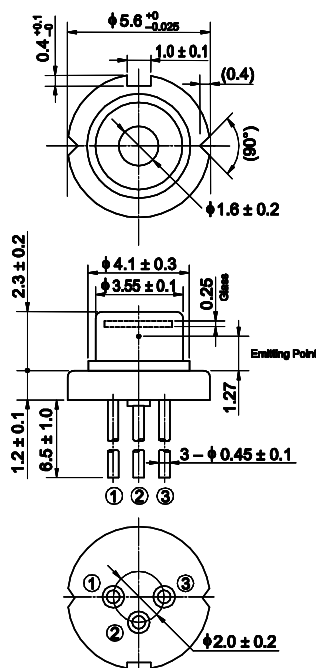


## Data Sheet

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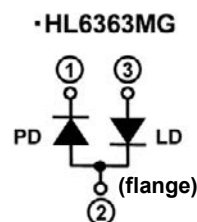
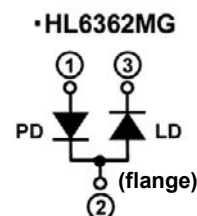
640nm / 45mW AlGaInP Laser Diode

### Outline



(unit:mm)

### Internal Circuit



### Features

- Visible light output: 640nm Typ.
- Optical output power: 40mW (CW)
- Single transverse mode
- Low operating current: 90mA Typ.
- Low operating voltage: 2.6V Max.
- Operating temperature: +50°C
- TE mode oscillation

### Application

- Laser leveler
- Laser scanner
- Light source of optical equipments

### Absolute Maximum Ratings (Tc=25°C)

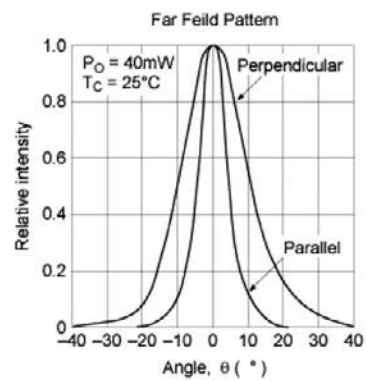
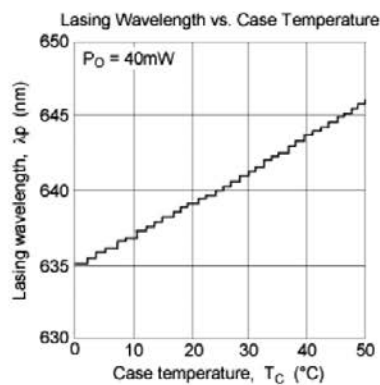
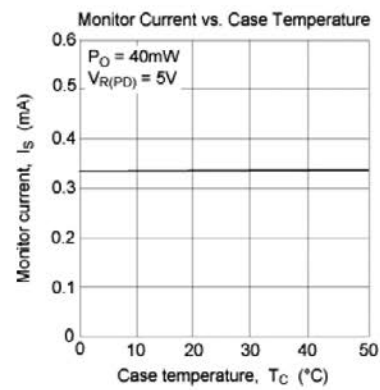
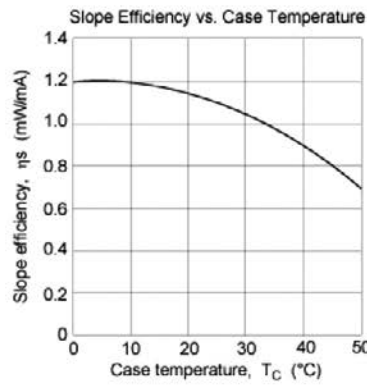
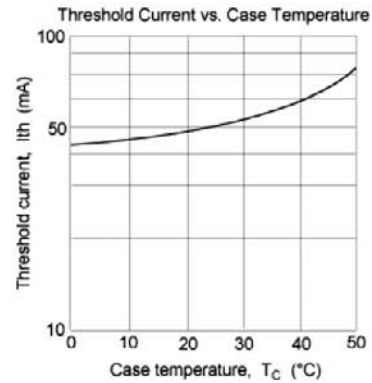
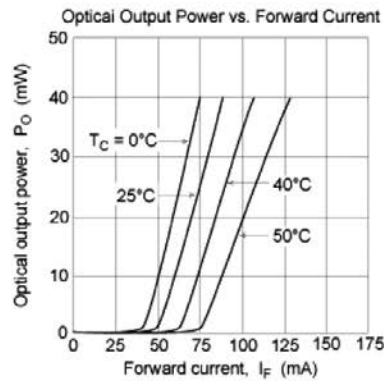
Item	Symbol	Ratings	Unit
Optical output power	P <sub>o</sub>	45	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	T <sub>opr</sub>	-10 ~ +50	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C

### Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	-	45	60	mA	-
Operating current	I <sub>op</sub>	-	90	110	mA	P <sub>o</sub> =40mW
Operating voltage	V <sub>op</sub>	-	2.4	2.6	V	P <sub>o</sub> =40mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	7	10	13	°	P <sub>o</sub> =40mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	16	21	24	°	P <sub>o</sub> =40mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	-	640	643	nm	P <sub>o</sub> =40mW
Monitor Current	I <sub>s</sub>	0.15	0.30	0.60	mA	P <sub>o</sub> =40mW, V <sub>R(PD)</sub> =5V

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### Typical Characteristic Curves



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- 2.This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.

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