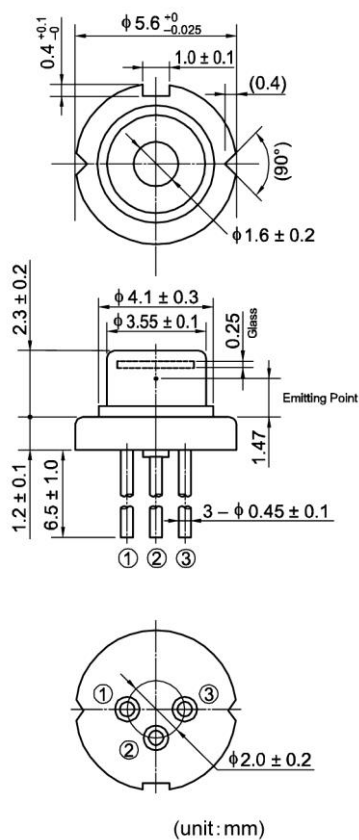


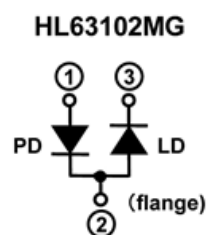
## HL63102MG

638nm / 7mW     AlGaInP Laser Diode

### Outline



### Internal Circuit



### Features

- Optical output power: 5mW(CW)
- Visible light output: 637nm Typ.
- Low operating current: 20mA Typ.
- Low operating voltage: 2.4V Max.
- Operating temperature: 60°C
- TE mode oscillation
- Single transverse mode

### Application

- Laser leveler
- Laser pointer
- Distance meter
- Light source of optical equipment

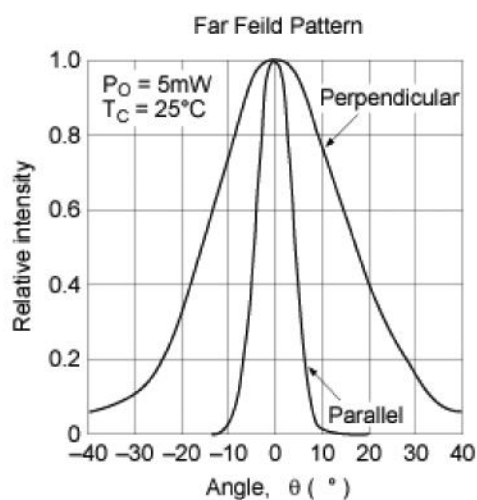
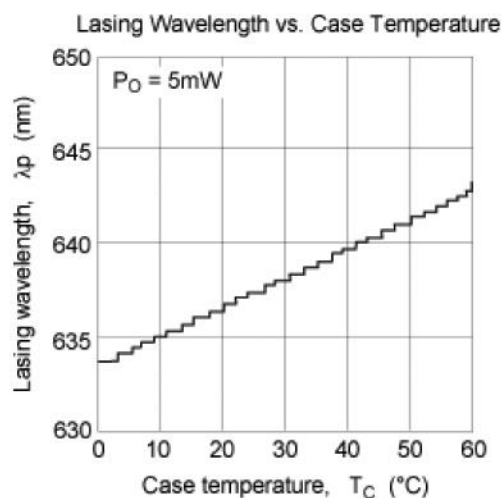
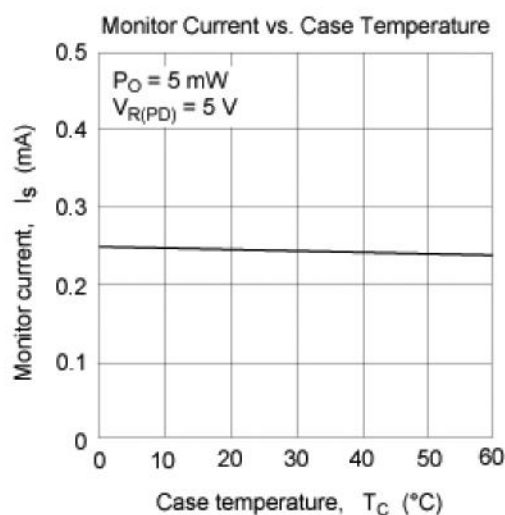
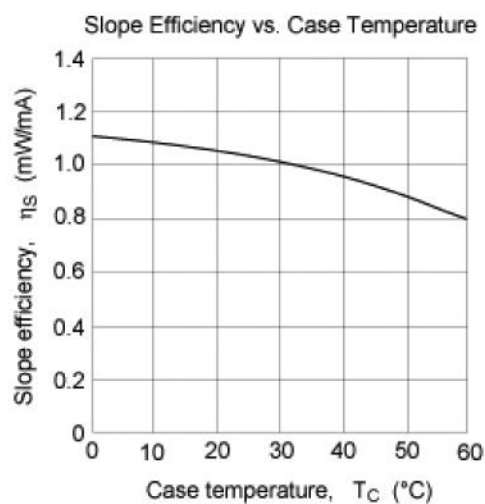
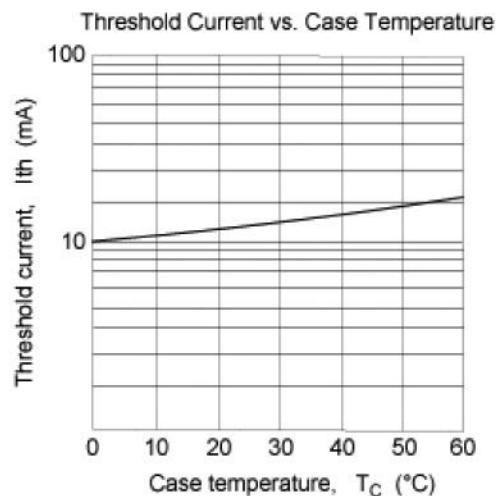
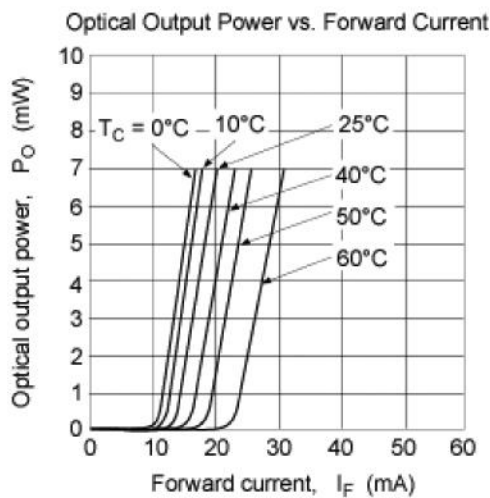
**Absolute Maximum Ratings (Tc=25°C)**

Item	Symbol	Ratings	Unit
Optical output power	Po	7	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	-	15	20	mA	-
Operating current	I <sub>op</sub>	-	20	25	mA	Po=5mW
Operating voltage	V <sub>op</sub>	-	2.2	2.4	V	Po=5mW
Lasing Wavelength	λ <sub>p</sub>	630	637	640	nm	Po=5mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	5	8	11	°	Po=5mW FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	28	34	40	°	Po=5mW FWHM
Monitor current	I <sub>s</sub>	0.1	0.2	0.5	mA	Po=5mW, V <sub>R(PD)</sub> =5V

## Typical Characteristic Curves



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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
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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