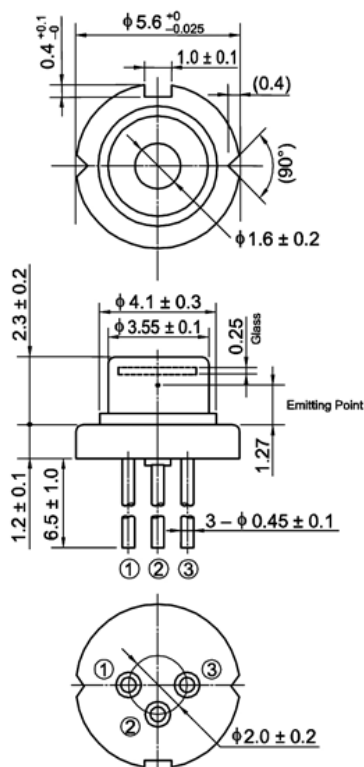


## HL6395MG/96MG

639nm / 12mW AlGaInP Laser Diode

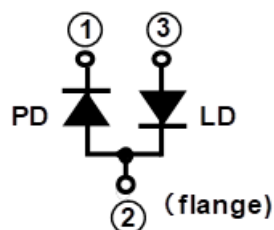
### Outline



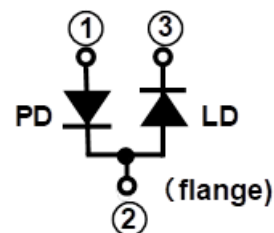
(unit:mm)

### Internal Circuit

#### - HL6395MG



#### - HL6396MG



### Features

- Visible light output: 639 nm Typ.
- Optical output power: 10 mW (CW)
- Single transverse mode
- Low operating current: 55 mA Typ.
- Low operating voltage: 2.5 V Max.
- Operating temperature: +60°C
- TE mode oscillation

### Application

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

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

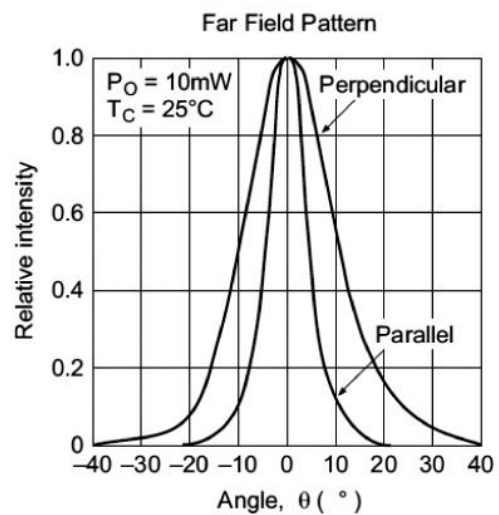
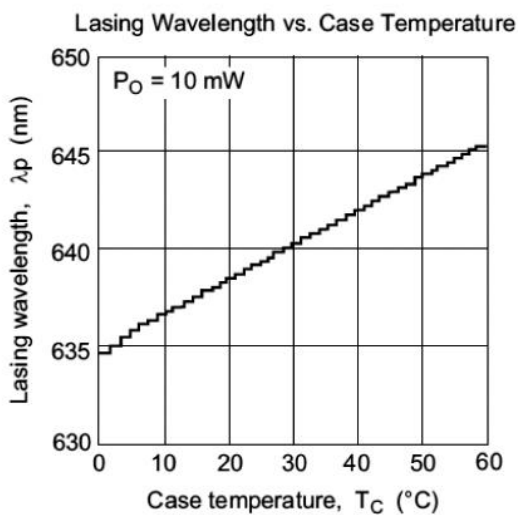
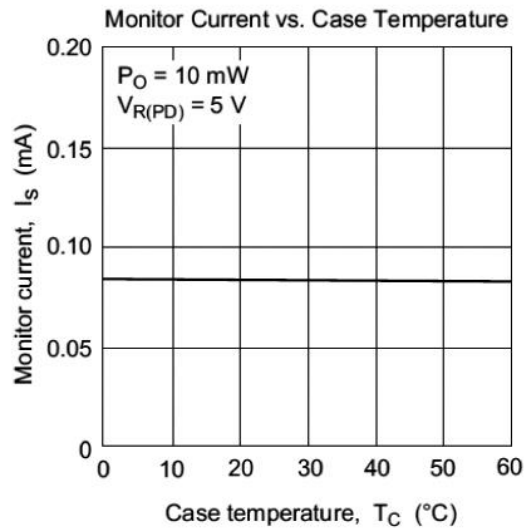
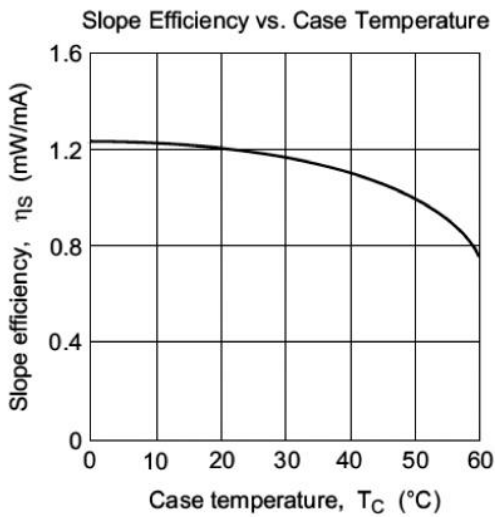
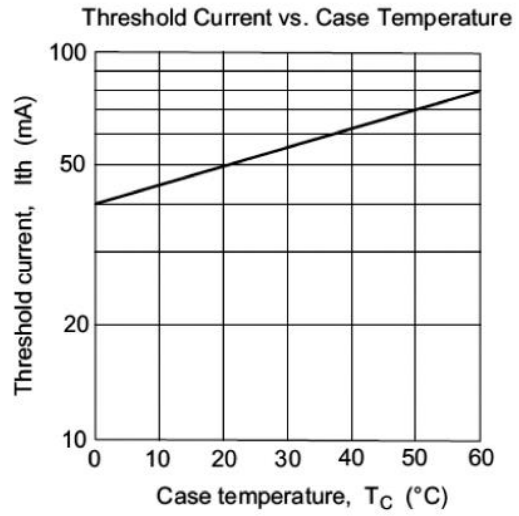
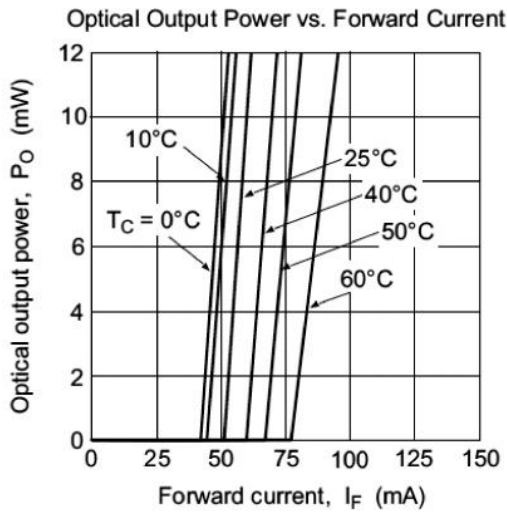
Item	Symbol	Ratings	Unit
Optical output power	Po	12	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	T <sub>opr</sub>	-10 ~ +60	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C

Note: Operating temperature is defined by Case temperature "Tc". High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

**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>	-	55	70	mA	Po=10mW
Operating voltage	V <sub>op</sub>	-	2.3	2.5	V	Po=10mW
Beam divergence Parallel to the junction	θ <sub>//</sub>	6	9	12	°	Po=10mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	16	21	24	°	Po=10mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	-	639	643	nm	Po=10mW
Monitor Current	I <sub>s</sub>	0.04	0.07	0.15	mA	Po=10mW, V <sub>R(PD)</sub> =5V

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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