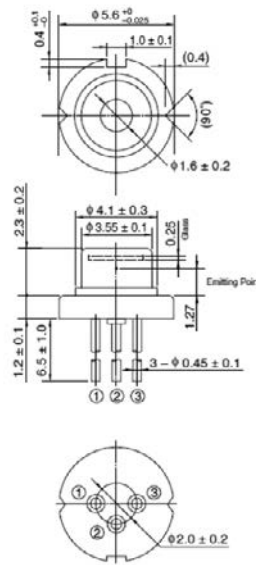


## Data Sheet

# HL6738MG

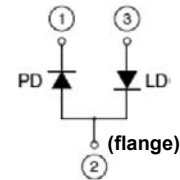
690nm / 35mW    AlGaInP Laser Diode

### Outline



(Unit:mm)

### Internal Circuit



### Features

- Operation temperature:  $-10 \sim +70^\circ\text{C}$
- Optical output power: 30mW(CW)
- Visible lasing: 690nm Typ.(Po=30mW)
- Low operating voltage: 2.8V Max.
- Package:  $\phi 5.6\text{mm}$
- Single transverse mode
- TE mode oscillation

### Application

- Measurement
- Laser Module
- Sensing

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

Item	Symbol	Ratings	Unit
Optical output power	P <sub>o</sub>	35	mW
Pulse optical output power	P <sub>O(pulse)</sub>	50*	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 ~ +70	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C

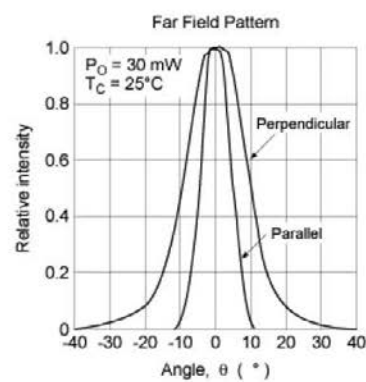
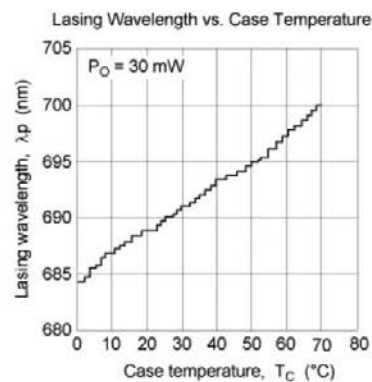
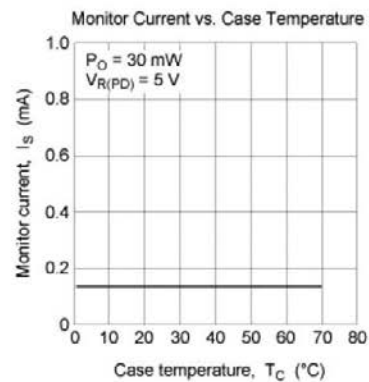
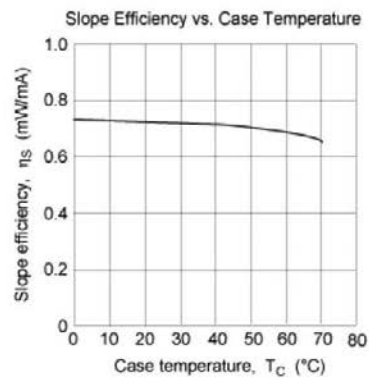
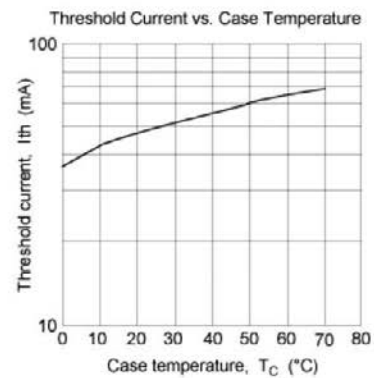
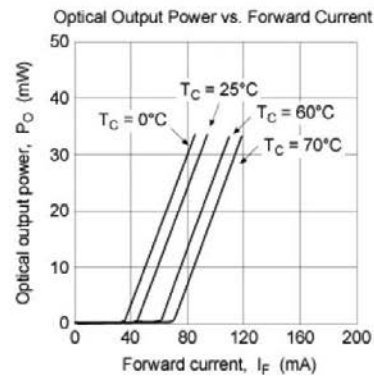
\* Pulse condition: Pulse width ≤ 4μs, duty ≤ 50%

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	30	45	70	mA	-
Operating voltage	V <sub>op</sub>	2.1	2.5	2.8	V	P <sub>o</sub> =30mW
Slope efficiency	η <sub>s</sub>	0.5	0.7	0.9	mW/mA	18(mW)/(I <sub>(24mW)</sub> -I <sub>(6mW)</sub> )
Beam divergence Parallel to the junction	θ <sub>//</sub>	7	8.5	10.5	°	P <sub>o</sub> =30mW, FWHM
Beam divergence Perpendicular to the junction	θ <sub>⊥</sub>	17	19	23	°	P <sub>o</sub> =30mW, FWHM
Lasing Wavelength	λ <sub>p</sub>	680	690	695	nm	P <sub>o</sub> =30mW
Monitor Current	I <sub>s</sub>	0.02	0.10	0.45	mA	P <sub>o</sub> =30mW, V <sub>R(PD)</sub> =5V

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### Typical Characteristic Curves



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