

HL63603TG

- 638nm/120mW -

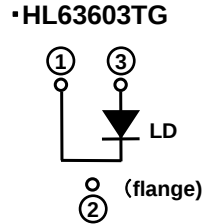
AlGaInP Laser Diode

Rev.6
31. Aug. 2012

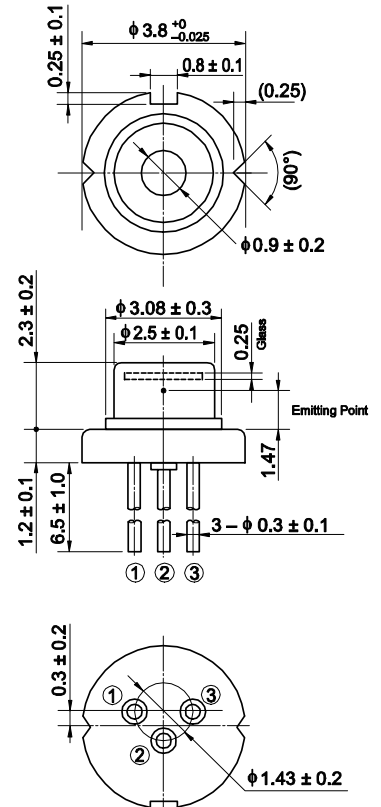
Applications

- Pico projector
- Laser module
- Light source of optical equipments

Internal circuit



Outline



Features

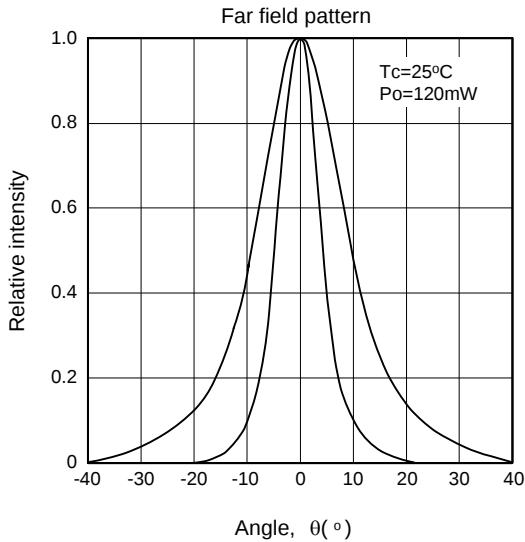
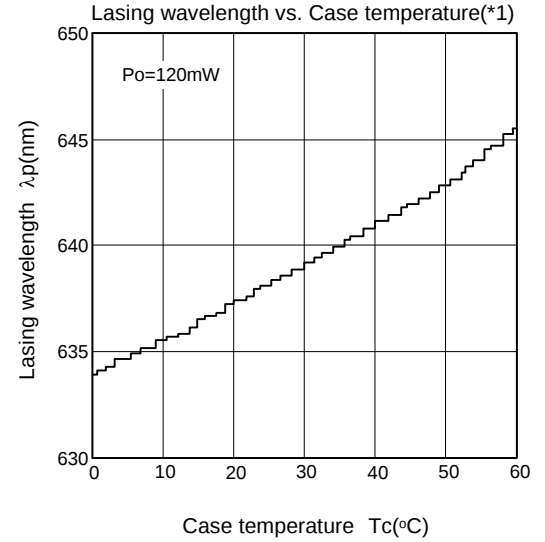
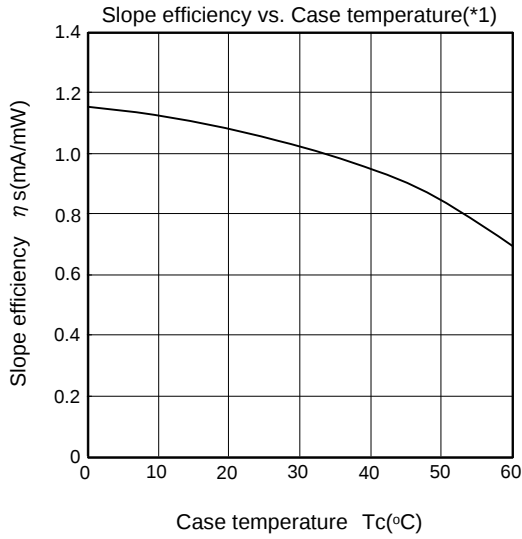
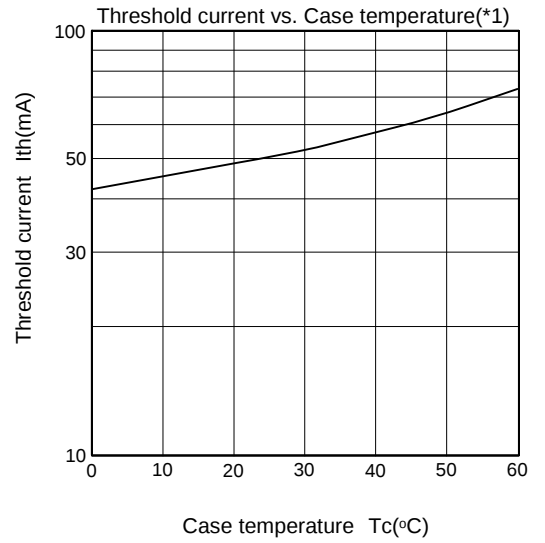
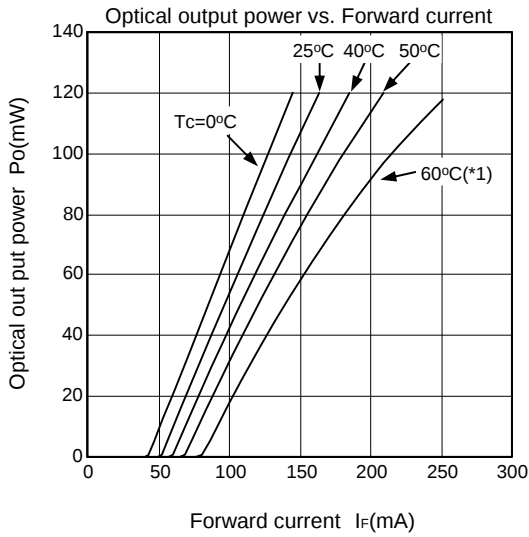
- Visible light output: 638nm Typ.
- Optical output power: 120mW (CW)
- Single transverse mode
- Low operating current: 165mA Typ.
- Low operating voltage: 2.7V Typ.
- Small package: $\phi 3.8$ mm
- TE mode oscillation

Absolute Maximum Ratings(Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power(1) (-10 to +50 °C)	Po(1)	120	mW
Optical output power(2) (+50 to +60 °C)	Po(2)	90	mW
LD Reverse Voltage	V _{R(LD)}	2	V
Operating Temperature	T _{opr}	-10 ~ +60	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C

Optical and Electrical Characteristics(Tc=25°C)

Item	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold current	I _{th}	-	50	65	mA	-
Operating current	I _{op}	-	165	200	mA	Po=120mW
Operating voltage	V _{op}	-	2.7	3.0	V	Po=120mW
Beam divergence Parallel to the junction	$\theta_{//}$	5	8.5	13	°	Po=120mW
Beam divergence Perpendicular to the junction	$\theta_{\perp}$	13	18	23	°	Po=120mW
Lasing Wavelength	λ_p	632	638	642	nm	Po=120mW



(*1) The data of $P_o > 90\text{mW}$ at $T_c > 50^\circ\text{C}$ is a reference.

The maximum rating of the optical output power in each operating temperature is as follows.
 $P_o(1) = 120\text{mW}$ ($T_{opr} = -10 \sim 50^\circ\text{C}$)
 $P_o(2) = 90\text{mW}$ ($T_{opr} = +50 \sim +60^\circ\text{C}$)

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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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