

HL63603TG - 638nm/120mW -

AlGaInP Red High Power Laser Diode

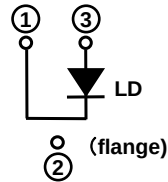
Rev.5
3. Sep. 2010

Applications

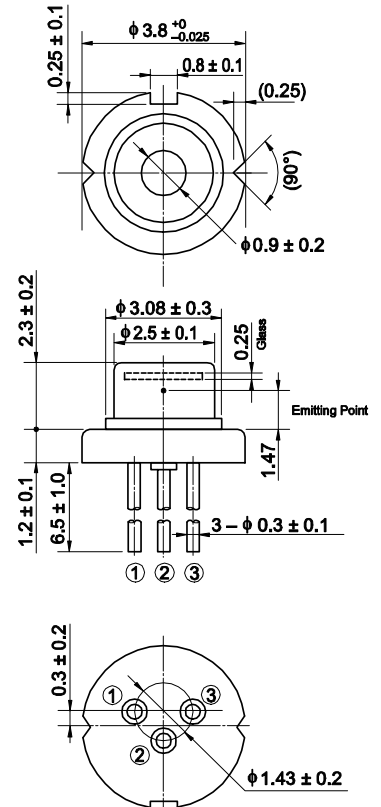
- Pico projector
- Laser module

Internal circuit

HL63603TG



Outline



Features

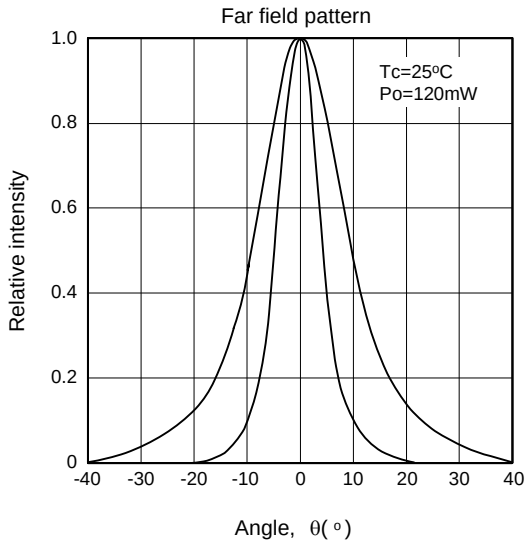
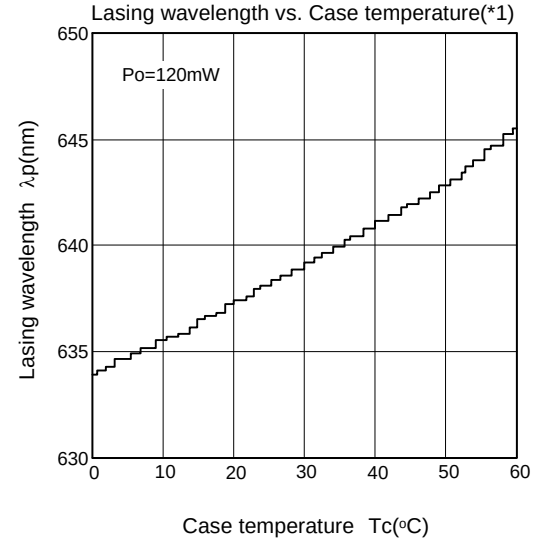
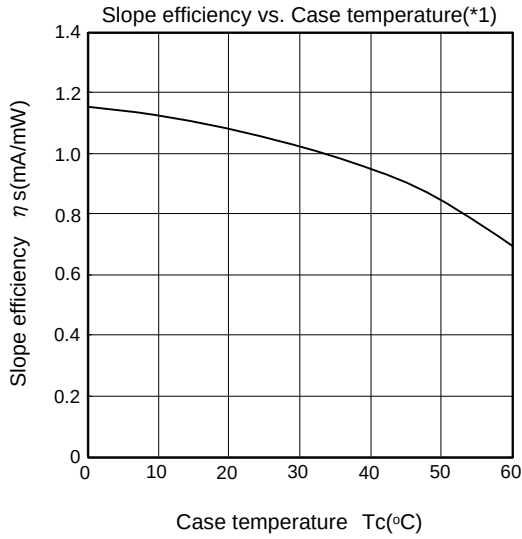
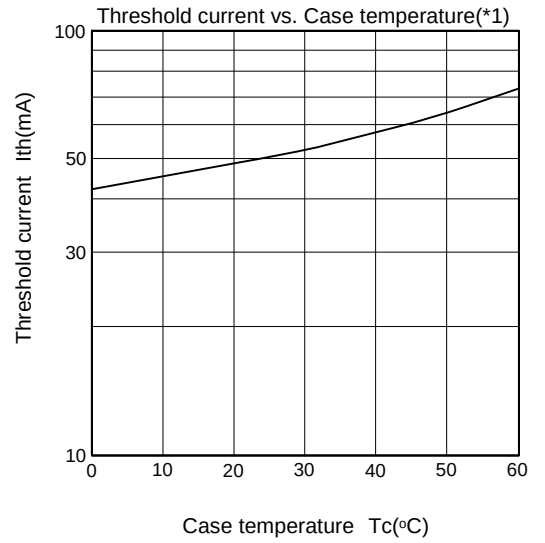
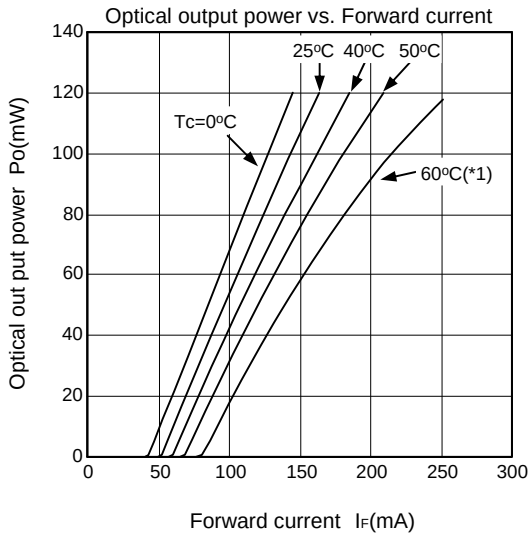
- Optical output power: 120mW(CW)
- Visible light output: $\lambda_p=638\text{nm}$ Typ.
- Low operating current: $I_{op}=165\text{mA}$ Typ.
- Low operating voltage: $V_{op}=2.7\text{V}$ Typ.
- Small package: 3.8mm diameters
- TE mode oscillation

Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

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($T_c=25^\circ\text{C}$)

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
Lasing Wavelength	λ_p	632	638	642	nm	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



(*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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