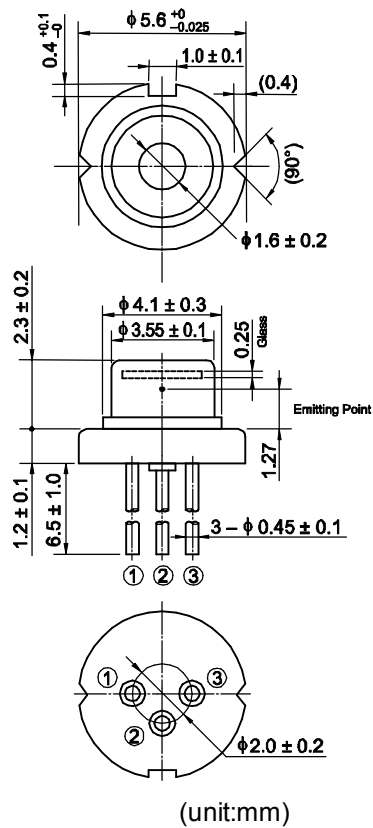


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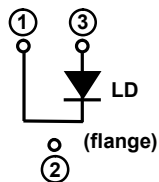
AlGaInP Laser Diode

638nm/700mW

Outline



Internal Circuit



Features:

- Shorter wavelength: 638nm Typ.
- High optical output power: 700mW
- Small package: $\phi 5.6$ mm
- Multi transverse mode
- TM mode oscillation

Applications:

- Laser projector
- Show Laser
- Light source of optical equipment

Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)^{Note1)}

Item	Symbol	Ratings	Unit
Optical output power(1) (-10 to +30 °C) ^{Note2)}	Po (1)	700	mW
Optical output power(2) (+30 to +40 °C) ^{Note2)}	Po (2)	550	mW
Pulse optical output power ^{Note2), 3), 4)}	Po(Pulse)	1000	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature ^{Note2)}	Topr	-10 ~ +40	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Note1) These values should not be exceeded under any conditions.

Note2) Operating temperature "Topr" is defined by Case temperature "Tc". LD chip temperature is getting higher during operation due to its high current density and small package. Thus, without proper heat dissipation less optical output power than specified one could be observed or it results to LD degradation. It is advised that sufficient heat dissipation should be taken not to exceed the maximum operating temperature during actual operation.

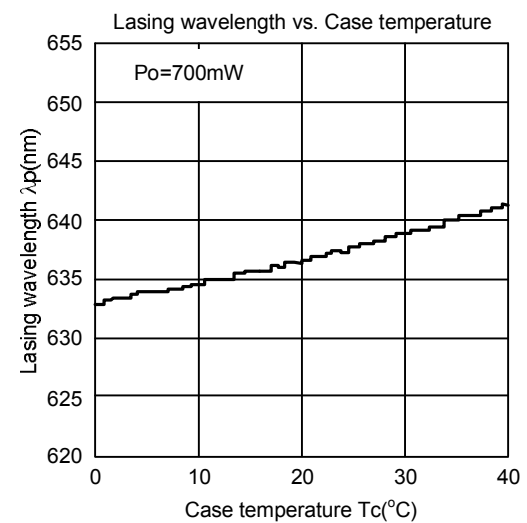
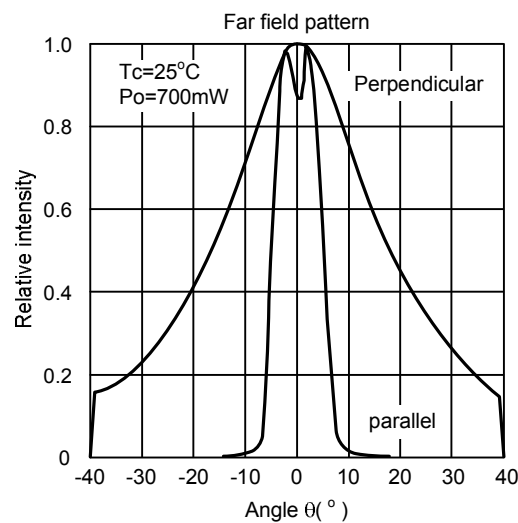
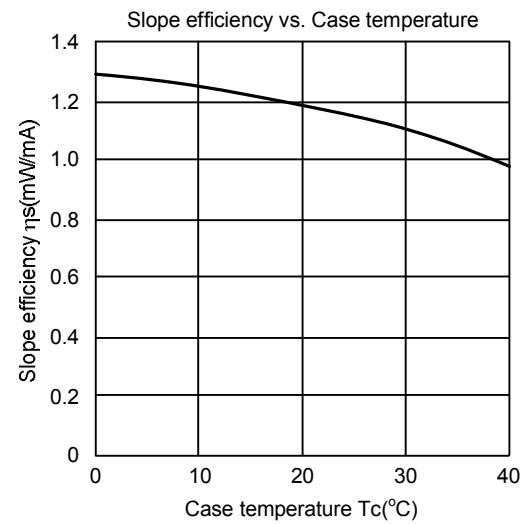
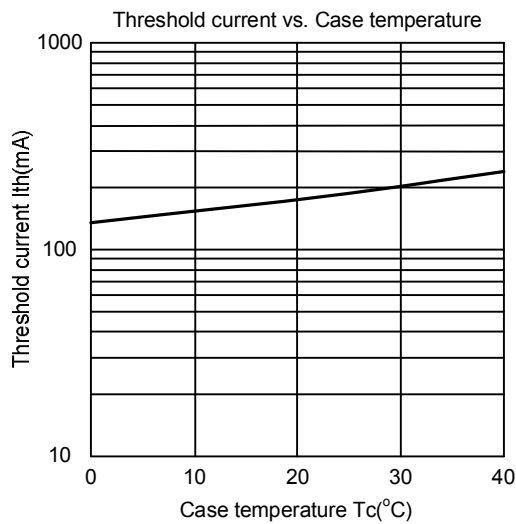
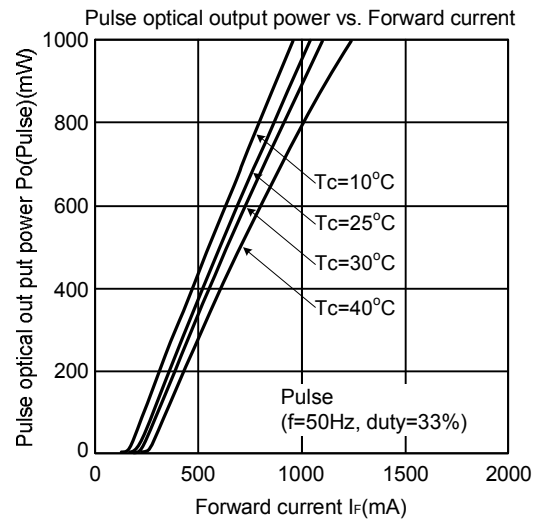
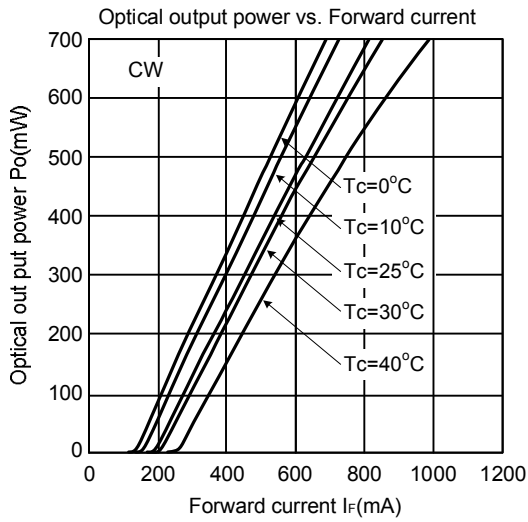
Note3) Pulse condition: Pulse frequency $\geq 50\text{Hz}$, duty $\leq 33\%$

Note4) The long term reliability such as lifetime is not guaranteed.

Optical and Electrical Characteristics ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	200	250	mA	-
Operating current	Iop	-	820	1000	mA	Po=700mW
Operating voltage	Vop	-	2.2	2.6	V	Po=700mW
Beam divergence Parallel to the junction	$\theta_{//}$	1	9	20	°	Po=700mW, FWHM
Beam divergence Perpendicular to the junction	θ_{\perp}	25	35	45	°	Po=700mW, FWHM
Lasing Wavelength	λ_p	632	638	643	nm	Po=700mW

Typical Characteristic Curves



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