
HL6722G

AlGaInP Laser Diode

HITACHI

ADE-208-220B (Z)
3rd. Edition
January 1994

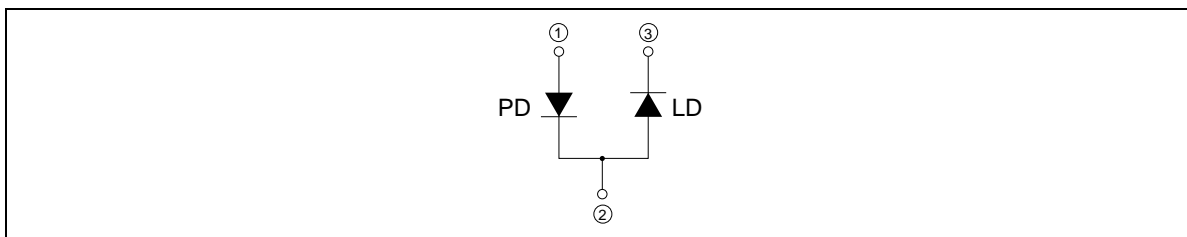
Description

The HL6722G is a 0.67 μm band AlGaInP index-guided laser diode with a multi-quantum well(MQW) structure. It is suitable as a light source for barcode scanner, and various other types of optical equipment. Hermetic sealing of the package assures high reliability.

Features

- Visible light output at wavelengths up to 680 nm
- Continuous operating output: 5 mW CW
- Low voltage operation: 2.7 V Max
- Low current operation: 32 mA Typ
- Single longitudinal mode
- Built-in monitor photodiode

Internal Circuit



HL6722G

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

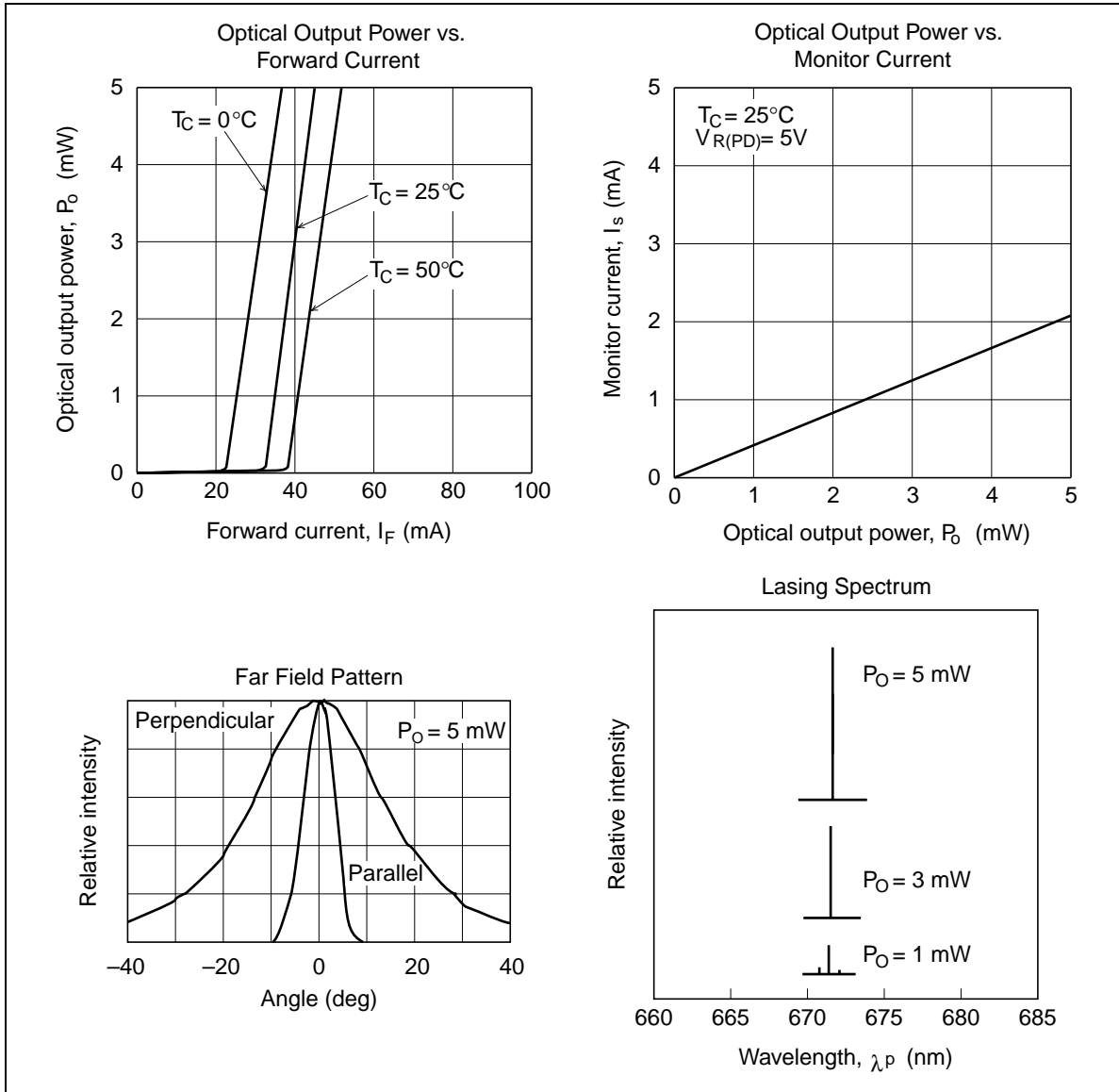
Item	Symbol	Rated Value	Unit
Optical output power	P_o	5	mW
Pulse optical output power	$P_{O(\text{pulse})}$	6*1	mW
LD reverse voltage	$V_{R(\text{LD})}$	2	V
PD reverse voltage	$V_{R(\text{PD})}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Note: 1. Maximum 50% duty cycle, maximum 1 μs pulse width

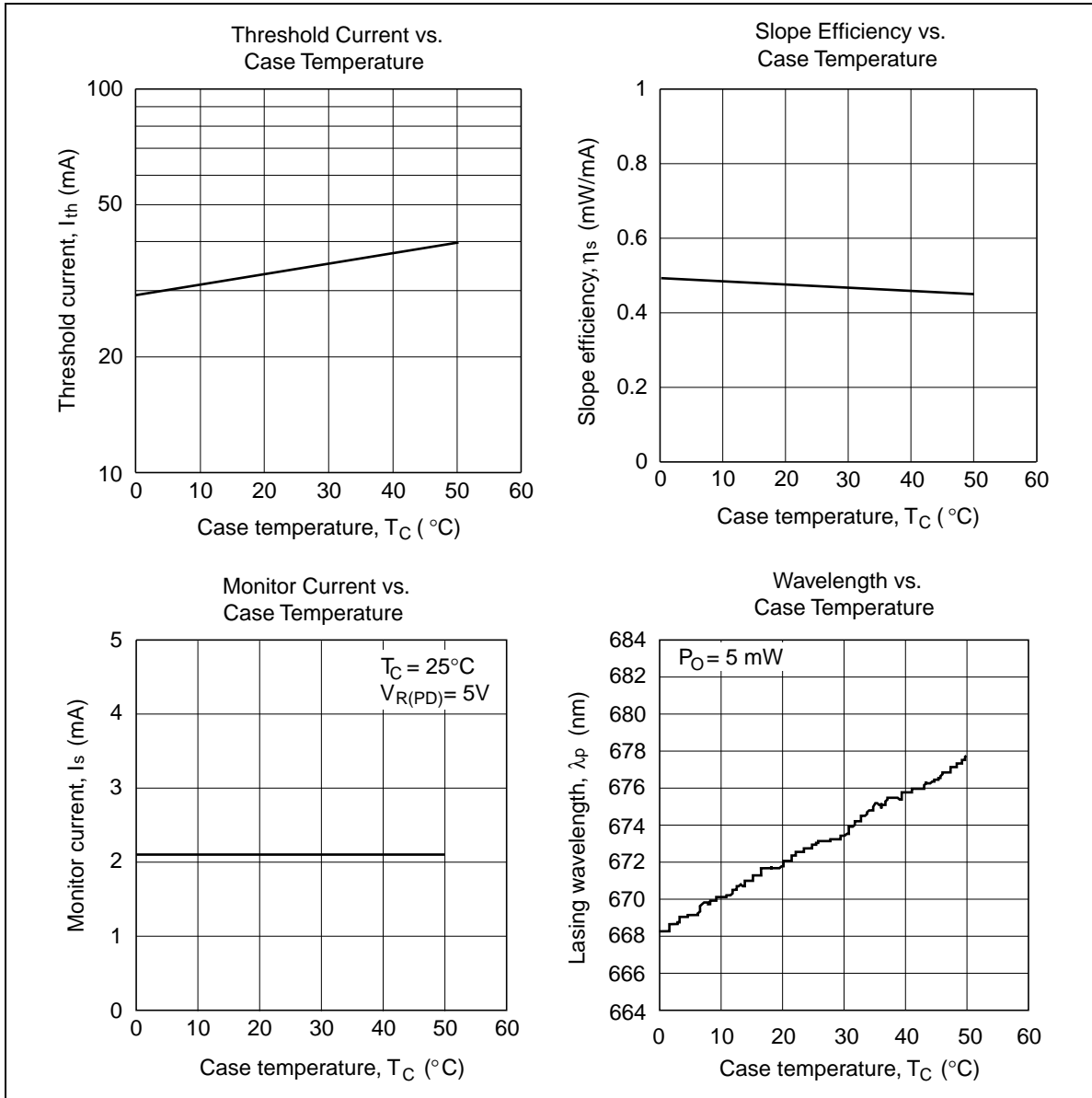
Optical and Electrical Characteristics ($T_c = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_o	5	—	—	mW	Kink free
Threshold current	I_{th}	20	32	55	mA	
Slope efficiency	η	0.3	0.5	0.7	mW/mA	$3\text{ mW}/I_{(4\text{ mW})} - I_{(1\text{ mW})}$
LD operating current	I_{op}	—	42	70	mA	$P_o = 5\text{ mW}$
LD operating voltage	V_{op}	—	—	2.7	V	$P_o = 5\text{ mW}$
Lasing wavelength	λ_p	660	670	680	nm	$P_o = 5\text{ mW}$
Beam divergence (parallel)	$\theta_{//}$	5	8	11	deg.	$P_o = 5\text{ mW}$
Beam divergence (perpendicular)	θ_{\perp}	22	30	38	deg.	$P_o = 5\text{ mW}$
Monitor current	I_s	1	—	3	mA	$P_o = 5\text{ mW}, V_R = 5\text{ V}$

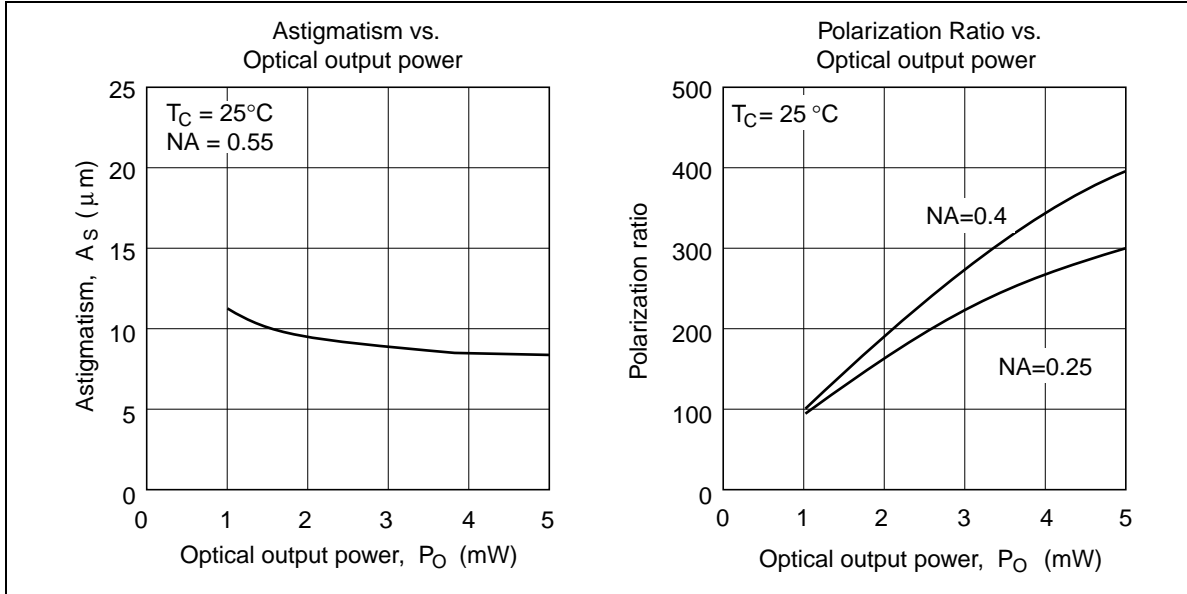
Typical Characteristic Curves



Typical Characteristic Curves (cont)



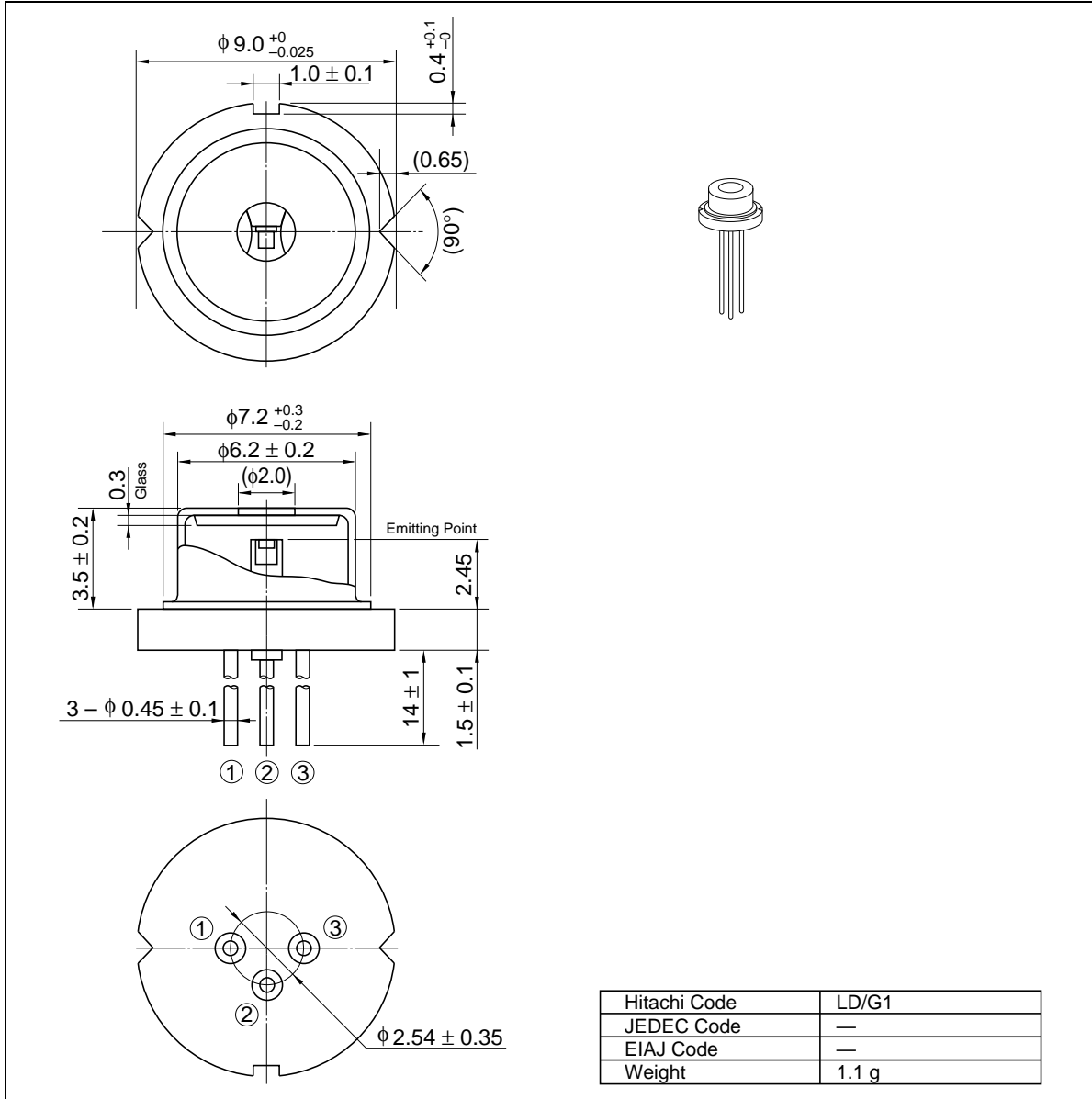
Typical Characteristic Curves (cont)



HL6722G

Package Dimensions

Unit: mm



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