
HL6714G

AlGaInP Laser Diode

HITACHI

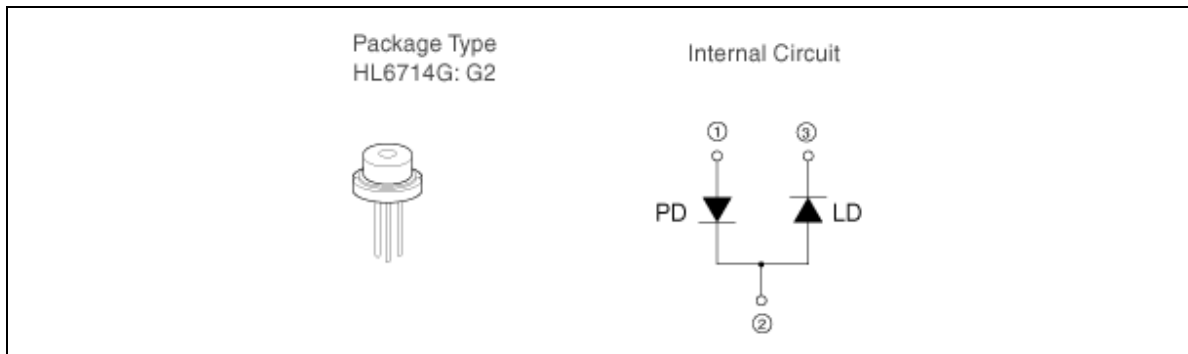
Literature Order Number
Rev 0
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Description

The HL6714G 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 laser beam printers, levelers 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
- Single longitudinal mode
- Low astigmatism: 10 μm Typ
- High output power: 10 mW (CW)
- Built-in monitor photodiode



HL6714G

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

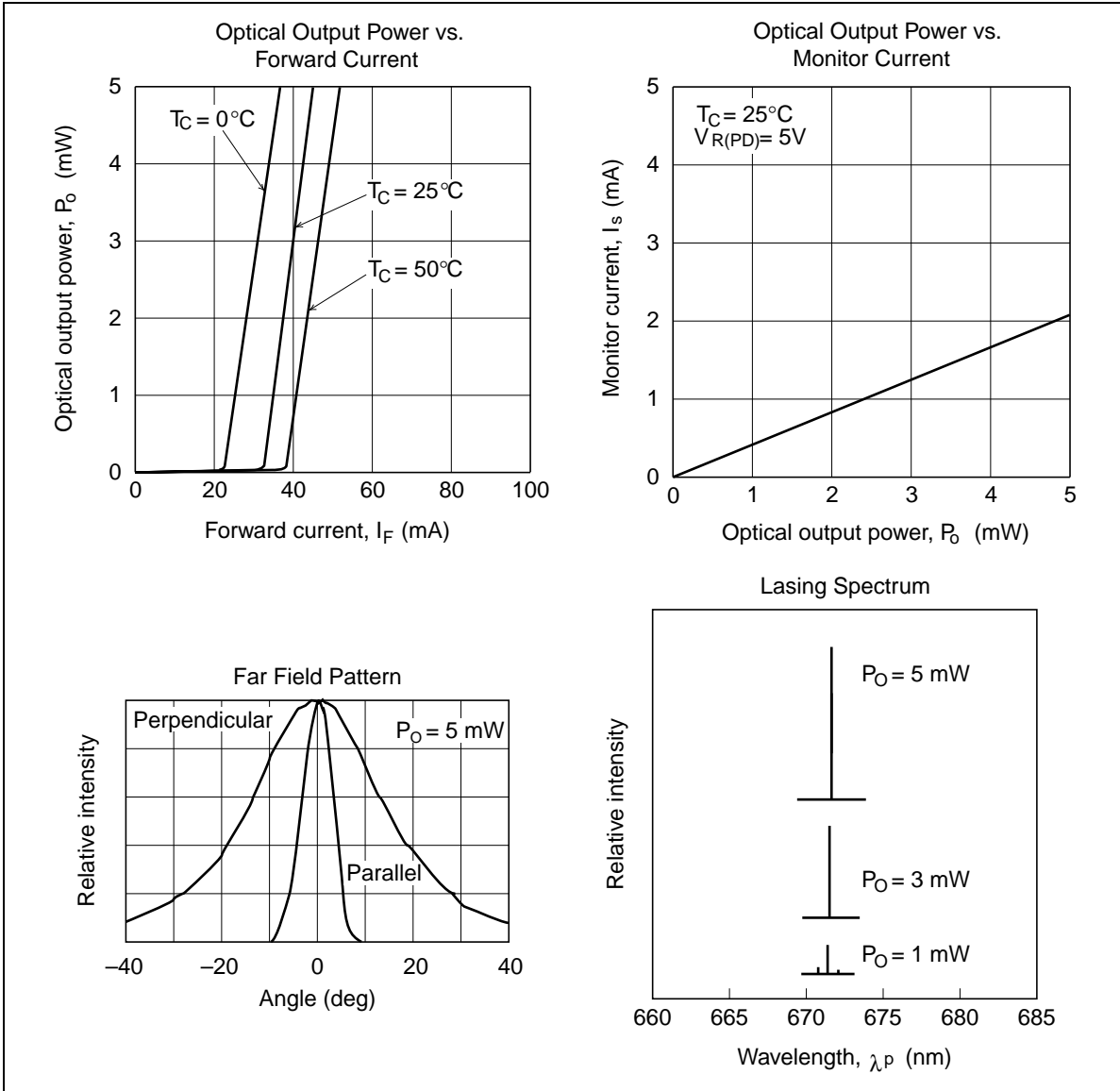
Item	Symbol	Rated Value	Unit
Optical output power	P_o	10	mW
Pulse optical output power	$P_{O(\text{pulse})}$	12 ^{*1}	mW
LD reverse voltage	$V_{R(\text{LD})}$	2	V
PD reverse voltage	$V_{R(\text{PD})}$	30	V
Operating temperature	T_{opr}	-10 to +50	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

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

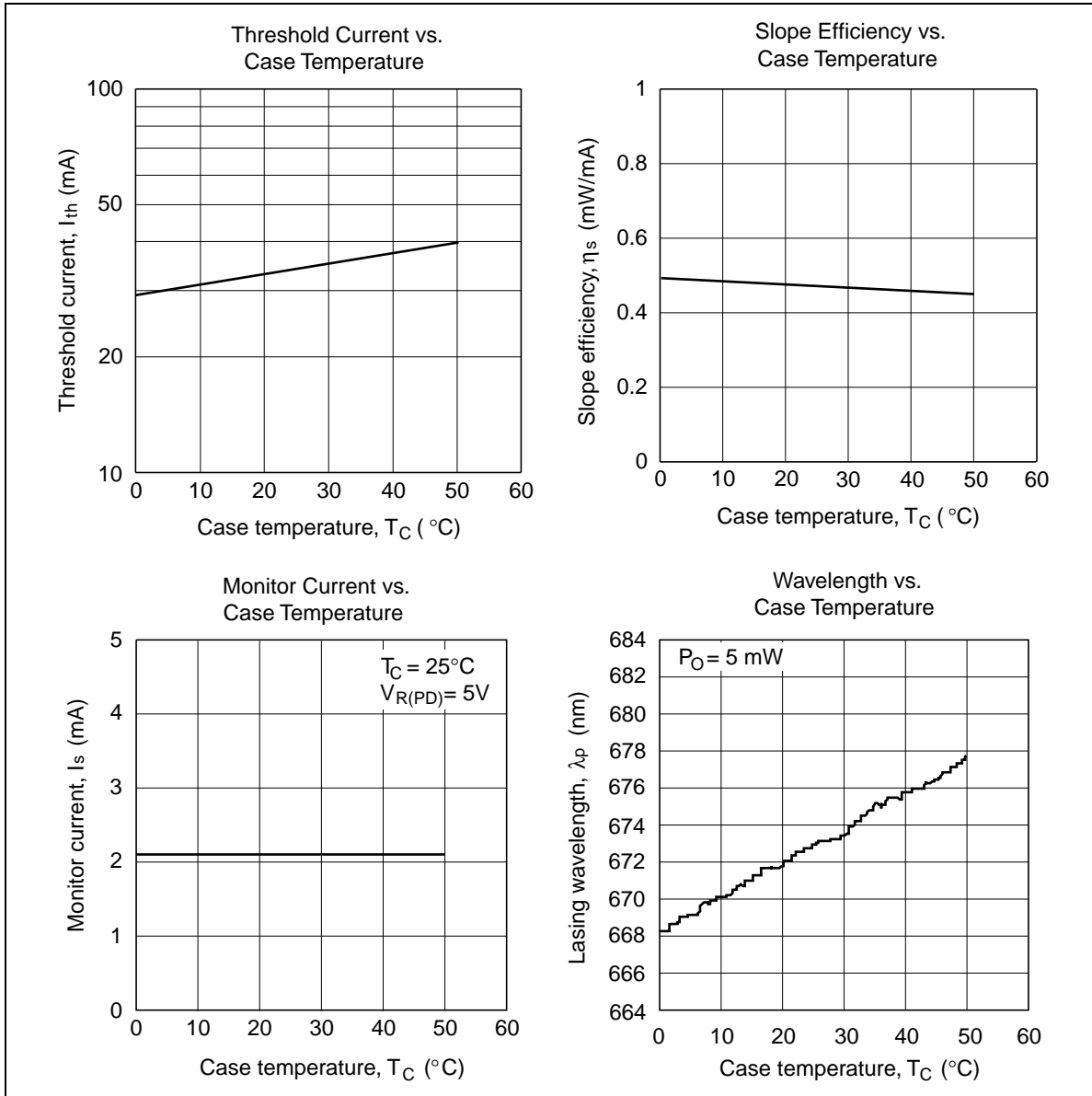
Optical and Electrical Characteristics ($T_c = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_o	10	—	—	mW	Kink free
Threshold current	I_{th}	20	35	60	mA	
Slope efficiency	η	0.3	0.5	0.8	mW/mA	$6 \text{ (mW)} / I_{(8 \text{ mW})} - I_{(2 \text{ mW})}$
LD Operating Voltage	V_{OP}	—	—	2.7	V	$P_o = 10 \text{ mW}$
Lasing wavelength	λ_p	660	670	680	nm	$P_o = 10 \text{ mW}$
Beam divergence (parallel)	$\theta_{//}$	5	8	11	deg.	$P_o = 10 \text{ mW}$, FWHM
Beam divergence (perpendicular)	θ_{\perp}	18	22	30	deg.	$P_o = 10 \text{ mW}$, FWHM
Monitor current	I_s	0.3	0.8	1.5	mA	$P_o = 10 \text{ mW}$, $V_{R(\text{PD})} = 5 \text{ V}$
Astigmatism	A_s	—	10	—	μm	$P_o = 10 \text{ mW}$, NA = 0.55

Typical Characteristic Curves



Typical Characteristic Curves (cont)



Typical Characteristic Curves (cont)

