
HL6720G

AlGaInP Laser Diode

HITACHI

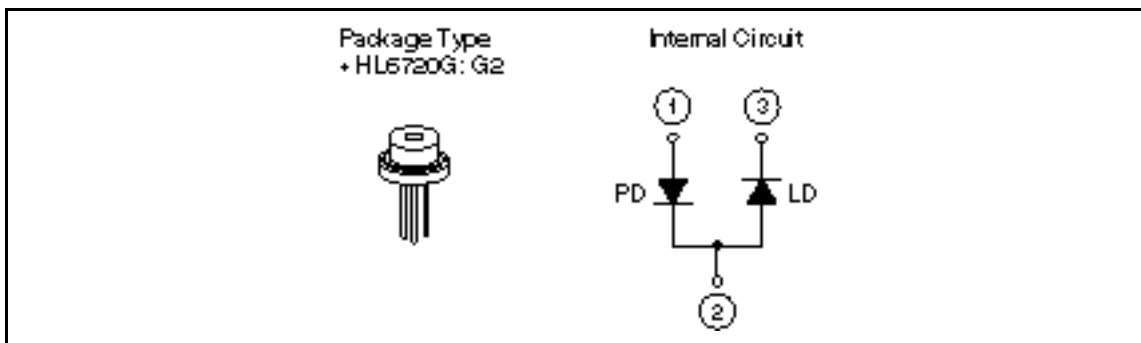
Description

The HL6720G is a 0.67 μm band AlGaInP index-guided laser diode with a double heterostructure.

It is suitable as a light source for pointers, 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
- Single longitudinal mode
- Built-in monitor photodiode



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	$^\circ\text{C}$

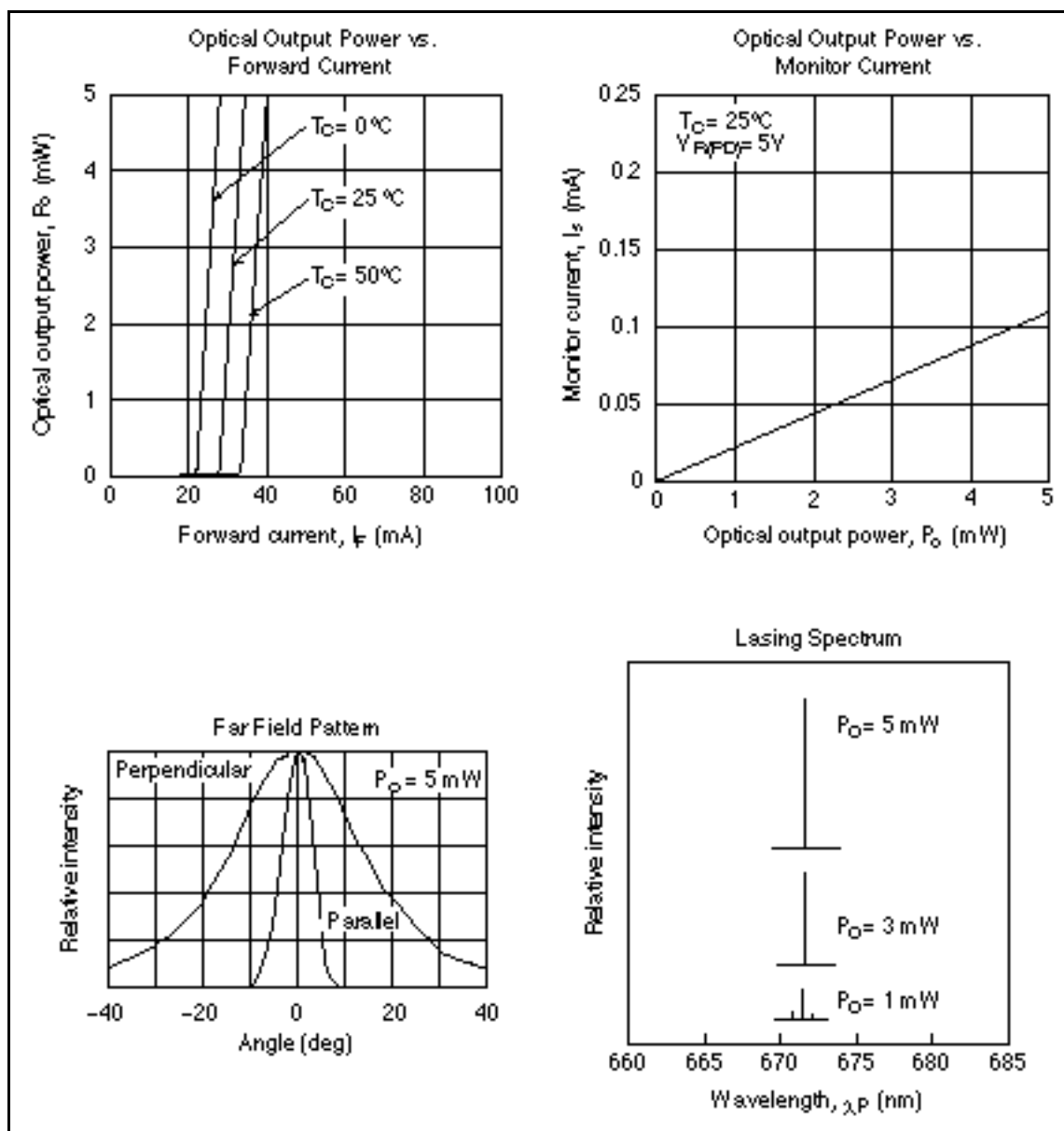
Note: 1. Maximum 50% duty cycle, maximum 1 μs pulse width

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

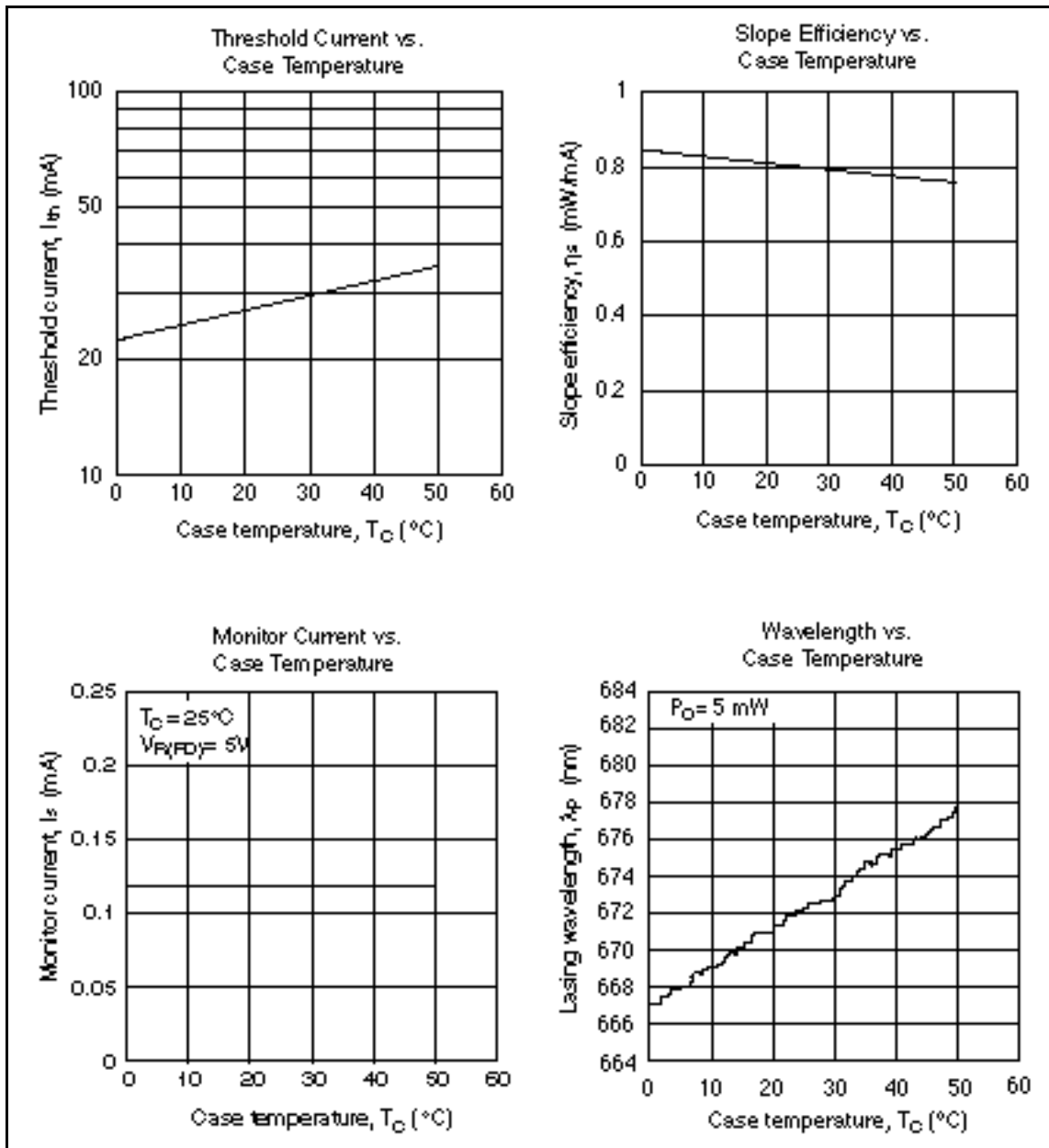
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_O	5	—	—	mW	Kink free
Threshold current	I_{th}	—	30	60	mA	
Slope efficiency		0.4	—	1.0	mW/mA	$3 \text{ mW} / I_{(4 \text{ mW})} - I_{(1 \text{ mW})}$
LD operating current	I_{op}	—	35	70	mA	$P_O = 5 \text{ mW}$
LD operating voltage	V_{op}	—	—	2.7	V	$P_O = 5 \text{ mW}$
Lasing wavelength	λ	660	670	680	nm	$P_O = 5 \text{ mW}$
Beam divergence (parallel)	//	6	9	12	deg.	$P_O = 5 \text{ mW}$
Beam divergence (perpendicular)		20	30	40	deg.	$P_O = 5 \text{ mW}$
Monitor current	I_s	0.03	—	0.2	mA	$P_O = 5 \text{ mW}, V_R = 5 \text{ V}$

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Typical Characteristic Curves



Typical Characteristic Curves (cont)



Typical Characteristic Curves (cont)