HL6734FM

Visible High Power Laser Diode

HITACHI

Description

The HL6734FM is a 0.68 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a light source for large capacity optical disc memories and various other types of optical equipment.

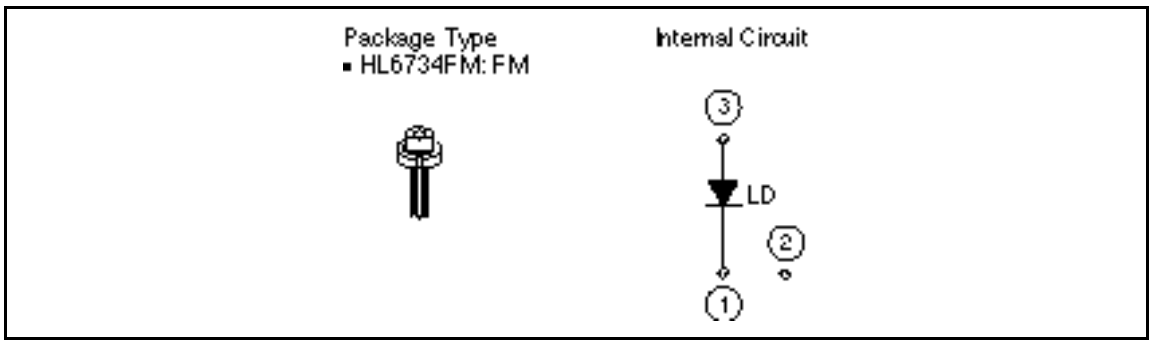
It does not have a photodiode, and the GND pin is not connected to the LD chip. The outline is the same as MG-type (5.6 mmφ).

Application

- Optical disc memories
- Optical equipment

Features

- High output power : 50 mW (CW)
- Visible light output : λp = 675 to 695 nm
- Small package : φ5.6 mm
- Low astigmatism : 5 μm Typ (P_O = 5 mW)



Absolute Maximum Ratings (T_C = 25°C)

Item	Symbol	Value	Unit
Optical output power	P_O	50	mW
Pulse optical output power	P_O (pulse)	65 *	mW
Laser diode reverse voltage	$V_{R(LD)}$	2	V
Operating temperature	Topr	–10 to +70	°C
Storage temperature	Tstg	–40 to +85	°C

Note: Pulse condition : Pulse width = 100 ns, duty = 50%

Optical and Electrical Characteristics (T_C = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_O	50	—	—	mW	Kink free
Threshold current	I_{th}	30	50	70	mA	—
Operating voltage	V_{OP}	2.1	2.6	2.8	V	P_O = 50 mW
Slope efficiency	ηs	0.5	0.7	0.9	mW/mA	30 (mW) / ($I_{(40\ mW)} – I_{(10\ mW)}$)
Lasing wavelength	λp	675	685	695	nm	P_O = 50 mW
Beam divergence parallel to the junction	θ//	7	8.5	11	deg.	P_O = 50 mW
Beam divergence parpendicular to the junction	θ	16	19	23	deg.	P_O = 50 mW
Asitgmatism	A_S	—	5	—	µm	P_O = 5 mW, NA = 0.55