
HL6734FM

Visible High Power Laser Diode

HITACHI

Description

The HL6734FM is a 0.68 mm 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.

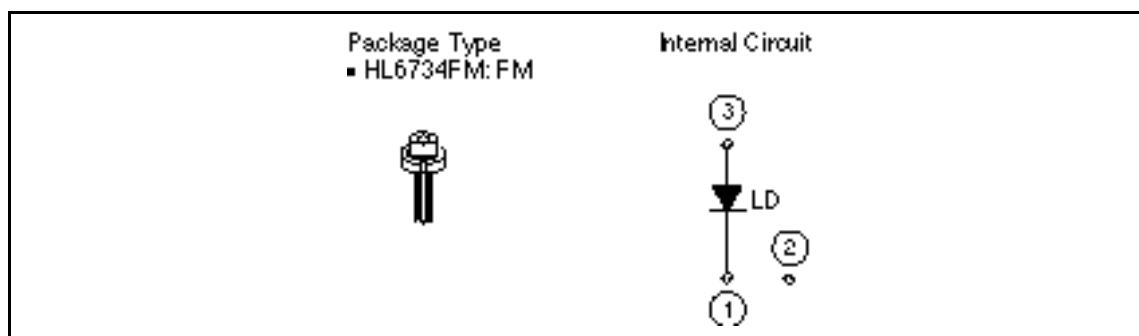
It does not have a photodiode, and the GND pin is not connected to the LD chip. The outline is the same as MG-type (5.6 mmf).

Application

- Σ Optical disc memories
- Σ Optical equipment

Features

- Σ High output power : 50 mW (CW)
- Σ Visible light output : $\lambda_p = 675$ to 695 nm
- Σ Small package : ϕ 5.6 mm
- Σ Low astigmatism : 5 mm Typ ($P_o = 5$ mW)



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

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	T_{opr}	-10 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

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

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

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	$P_O = 50 \text{ mW}$
Slope efficiency	h_s	0.5	0.7	0.9	mW/mA	$30 \text{ (mW)} / (I_{(40 \text{ mW})} - I_{(10 \text{ mW})})$
Lasing wavelength	λ_p	675	685	695	nm	$P_O = 50 \text{ mW}$
Beam divergence parallel to the junction	$q_{//}$	7	8.5	11	deg.	$P_O = 50 \text{ mW}$
Beam divergence perpendicular to the junction	$q^\perp$	16	19	23	deg.	$P_O = 50 \text{ mW}$
Asigmatism	A_s	—	5	—	mm	$P_O = 5 \text{ mW}$, $NA = 0.55$