HL6734FM

Visible High Power Laser Diode

HITACHI

ADE-208-517B (Z)
Target Specification
3rd Edition
April 1998

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 (ϕ 5.6 mm).

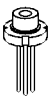
Application

- Optical disc memories.
- Optical equipment

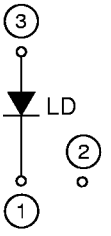
Features

- High output power : 50 mW (CW)
- Visible light output : λp = 690nm Typ
- Small package : ϕ 5.6 mm
- Low astigmatism : 5 μm Typ (P_o = 5 mW)

Package Type
• HL6734FM: FM



Internal Circuit



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)	70 *	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%

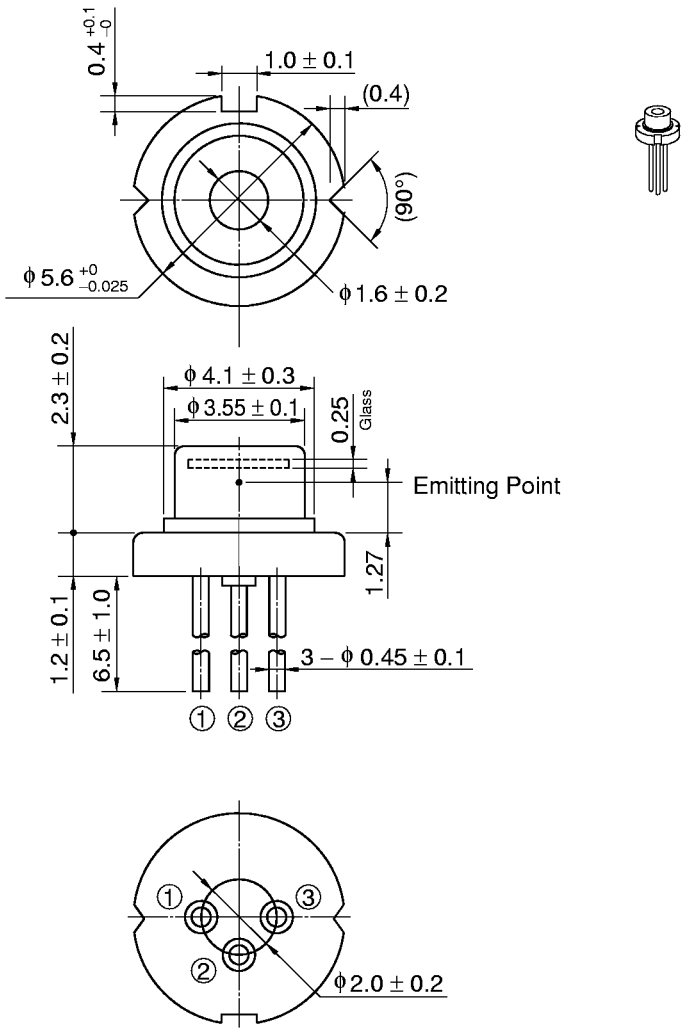
Optical and Electrical Characteristics (T_C = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_o	50	—	—	mW	Kink free*
Pluse optical output power	$P_{O(Pulse)}$	70	—	—	mW	Kink free*
Threshold current	Ith	30	40	(45)	mA	—
Operating voltage	V_{OP}	2.1	2.6	(2.8)	V	P_o = 50 mW
Slope efficiency	ηs	0.7	0.9	1.1	mW/mA	30(mW) / ($I_{(40mW)}$ – $I_{(10mW)}$)
Lasing wavelength	λp	675	690	695	nm	P_o = 50 mW
Beam divergence parallel to the junction	θ//	(7.5)	9	(12)	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

Note: Kink free confirmed temperature of 25°C

Package Dimensions

Unit: mm



Hitachi Code	LD/FM
JEDEC	—
EIAJ	—
Weight (reference value)	—