HL6544FM

Visible High Power Laser Diodes

ODE2069-01 (M)
Rev.1
Mar. 30, 2009

Description

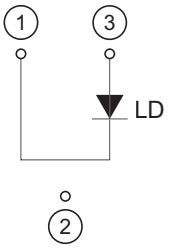
The HL6544FM is a 0.65 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as a light sources for sensor applications and various other types of optical equipment.

Features

- Operation temperature: 75°C Max
- Visible light output: λp =660 nm Typ
- Low operating current: 115 mA Typ (Po=50mW)

Package Type
• HL6544FM: FM

Internal Circuit



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	Unit
Optical output power	P_O	130	mW
LD reverse voltage	$V_{R(LD)}$	2	V
CW Operating temperature	$Topr_{(CW)}$	–10 to +75	°C
Storage temperature	Tstg	–40 to +85	°C

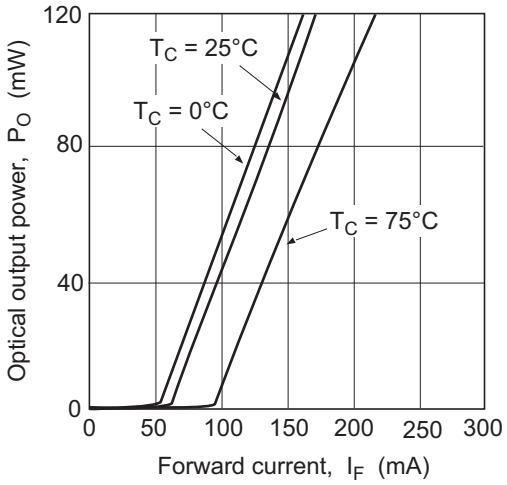
Optical and Electrical Characteristics

(T_C = 25°C)

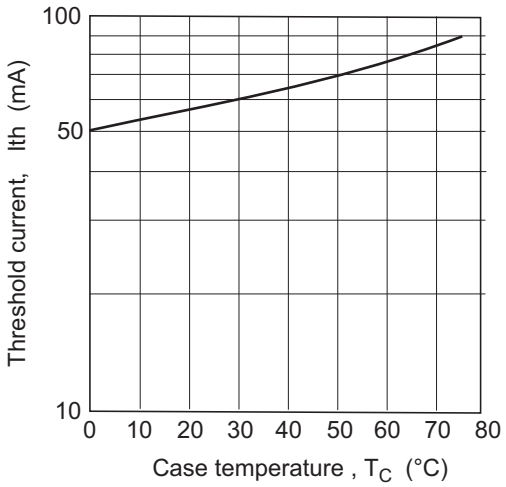
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	Ith	—	60	75	mA	—
Operating current	I_{OP}	—	115	135	mA	P_O = 50 mW
Operating voltage	V_{OP}	—	2.3	2.8	V	P_O = 50 mW
Lasing wavelength	λp	654	660	666	nm	P_O = 50 mW
Beam divergence parallel to the junction	θ//	7.0	10.0	12.0	°	P_O = 50 mW
Beam divergence perpendicular to the junction	θ⊥	15	17	21	°	P_O = 50 mW

Typical Characteristic Curves

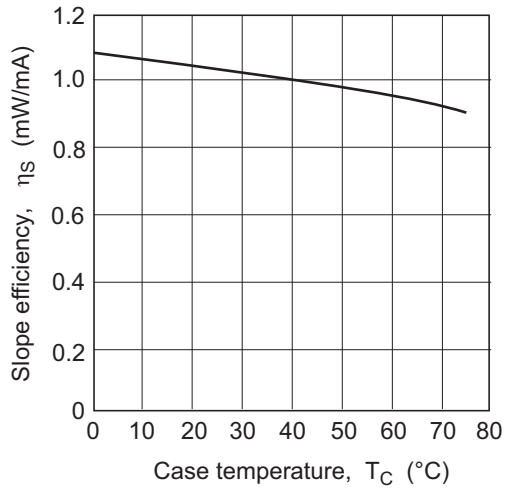
Optical Output Power vs. Forward Current



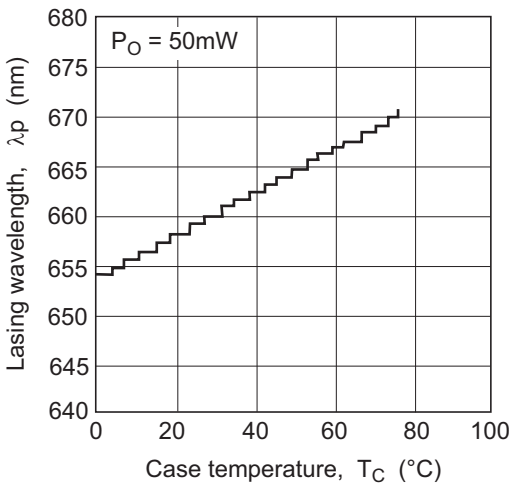
Threshold Current vs. Case Temperature



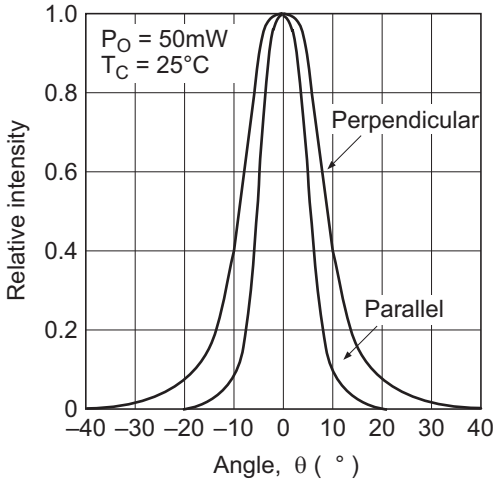
Slope Efficiency vs. Case Temperature



Wavelength vs. Case Temperature



Far Feild Pattern



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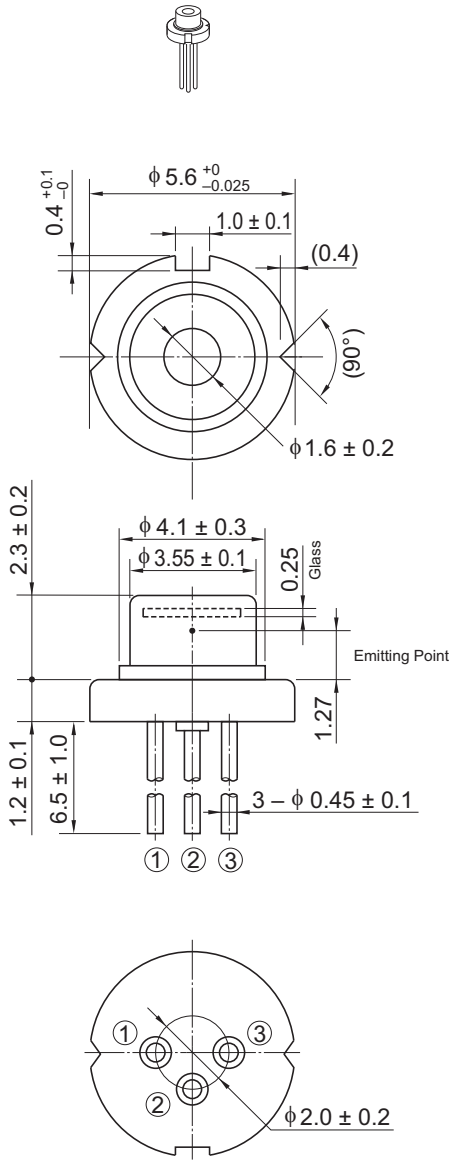
Package Dimensions

Unit: mm



OPJ Code	LD/FM
JEDEC	—
JEITA	—
Mass (reference value)	0.3 g

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3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

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