

HL6513FM

Visible High Power Laser Diode

ODE-208-043 (Z)

Rev.0

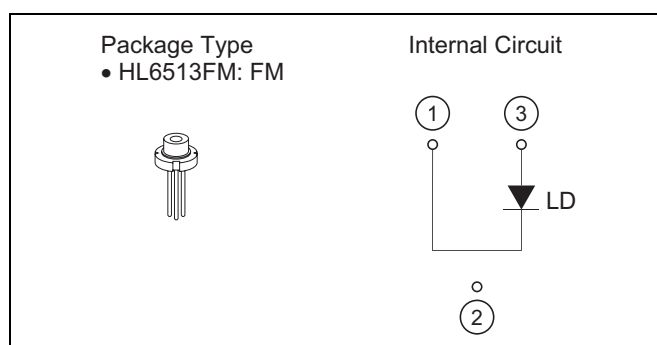
Oct.20, 2006

Description

The HL6513FM is a 0.65 μm band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. Its beam divergence (parallel to the junction) has a small variation to the optical output power. It is suitable as light sources for laser scanners and optical equipment for measurement.

Features

- High output power and Wide operating temperature:
70 mW (pulse), PW = 100ns, duty = 50%,
(Topr = 70°C)
- Small package : ϕ 5.6 mm
- Visible light output : λ_p = 658 nm Typ
- The beam divergence (parallel to the junction) has a small variation to the output power.
- Single longitudinal mode



Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Ratings	Unit
Optical output power	P _O	50	mW
Pulse optical output power	P _{O(pulse)}	70 * ¹	mW
Laser diode reverse voltage	V _{R(LD)}	2	V
Operating temperature	Topr	-10 to +70 * ²	°C
Storage temperature	Tstg	-40 to +85	°C

Notes: 1. Pulse condition : Pulse width = 100 ns, duty = 50%

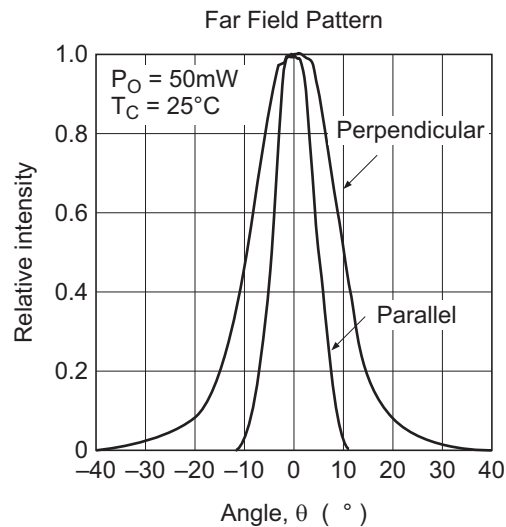
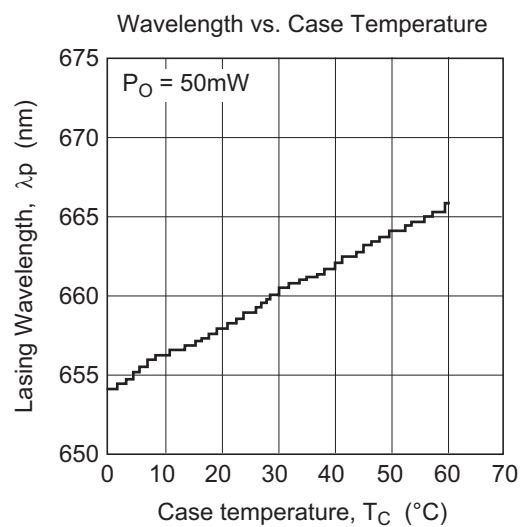
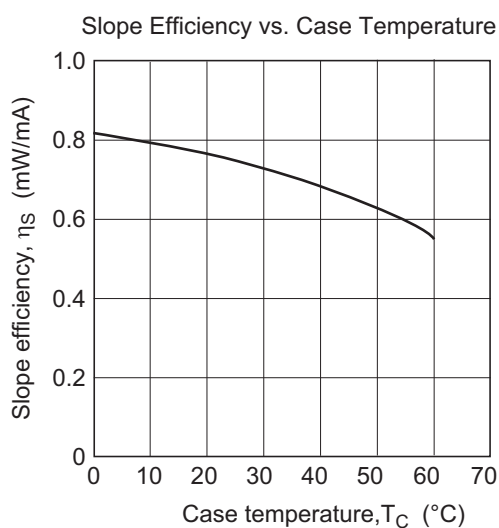
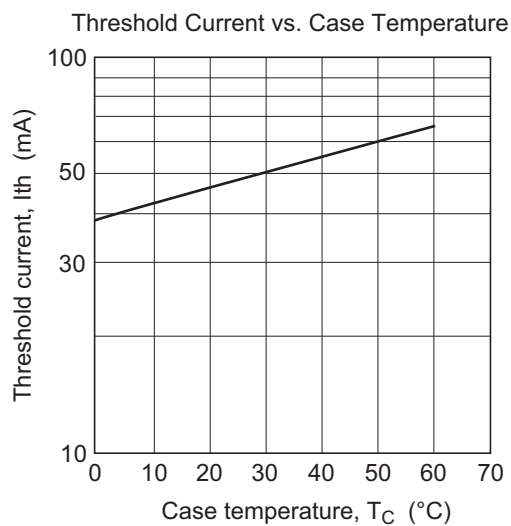
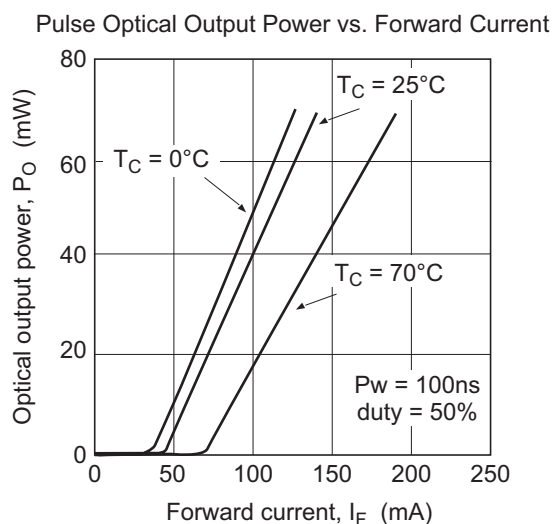
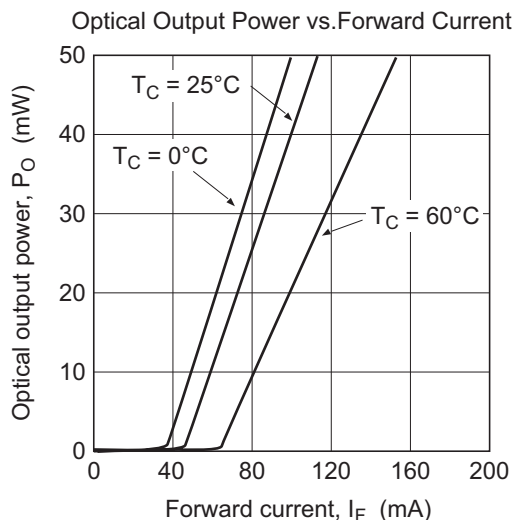
2. The value of -10 to +70°C is effective under pulse operation. The value under CW operation is -10 to +60°C.

Optical and Electrical Characteristics

(T_C = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I _{th}	30	45	60	mA	—
Operating current	I _{op}	—	115	135	mA	P _O = 50 mW
Operating voltage	V _{OP}	2.1	2.6	3.0	V	P _O = 50 mW
Beam divergence parallel to the junction	$\theta_{//}$	7	8.5	11	°	P _O = 50 mW
Beam divergence perpendicular to the junction	$\theta_{\perp}$	18	21	26	°	P _O = 50 mW
Astigmatism	A _S	—	5	—	μm	P _O = 5 mW, NA = 0.55
Lasing wavelength	λ_p	655	658	662	nm	P _O = 50 mW

Typical Characteristic Curves



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Sales Offices



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