
HL6726MG

Visible High Power Laser Diode

HITACHI

Description

The HL6726MG is a 0.68 μ m 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.

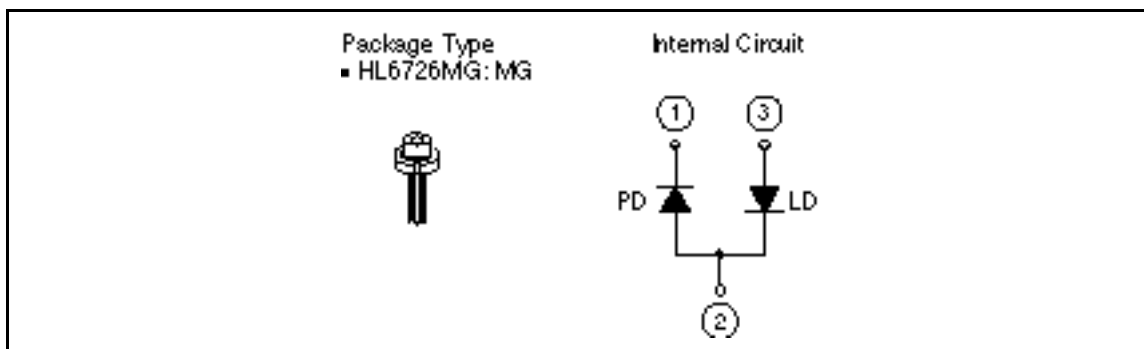
Hermetic sealing of the small package (ϕ 5.6mm) assures high reliability.

Application

- Optical disc memories

Features

- High output power: 30mW (CW)
- Visible light output: $\lambda_p = 675$ to 695nm
- Small package: ϕ 5.6mm dia.
- Low astigmatism: 5mm 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	30	mW
Pulse optical output power	$P_{O(\text{pulse})}$	45 ^{*1}	mW
Laser diode reverse voltage	$V_{R(LD)}$	2	V
Photo diode reverse voltage	$V_{R(PD)}$	30	V
Operating Temperature	T_{opr}	-10 to +60 ^{*2}	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

Note: 1. Pulse condition: Pulse width $\leq 1\text{ms}$, duty $\leq 50\%$
 2. It is recommended that this product is used within the hatched area, as shown in figure 1.

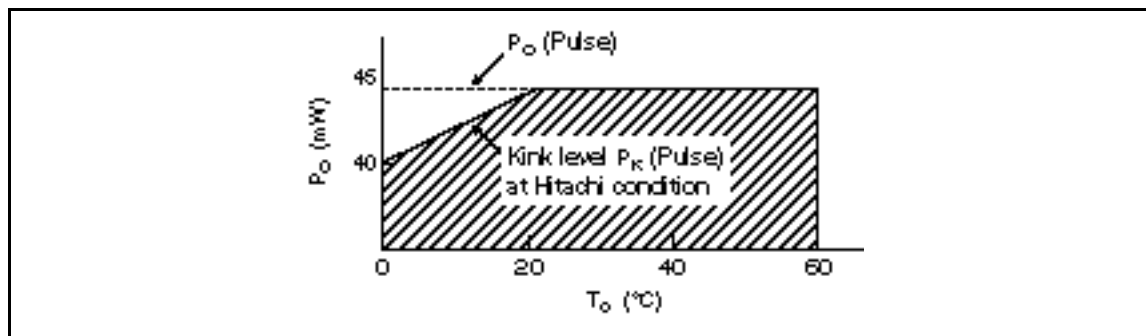


Figure 1 $P_{O(\text{pulse})}$ vs. T_C Recommendatory Condition

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

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_O	30	—	—	mW	Kink free
Threshold current	I_{th}	30	50	70	mA	
Operating voltage	V_{OP}	2.0	2.6	2.8	V	$P_O = 30\text{mW}$
Slope efficiency	h_s	0.5	0.7	0.9	mW/mA	$18(\text{mW}) / (I_{(24\text{mW})} - I_{(6\text{mW})})$
Lasing wavelength	λ_P	675	685	695	nm	$P_O = 30\text{mW}$
Beam divergence parallel to the junction	$q_{//}$	7	9	11	deg	$P_O = 30\text{mW}$
Beam divergence perpendicular to the junction	$q^\perp$	17	19	24	deg	$P_O = 30\text{mW}$
Monitor current	I_S	0.02	0.2	0.45	mA	$P_O = 30\text{mW}$, $V_{R(PD)} = 5\text{V}$
Asigmatism	A_S	—	6	—	mm	$P_O = 5\text{mW}$, $NA = 0.55$

Typical Characteristics Curves

