

# HL6554MG

## AlGaInP Laser Diodes

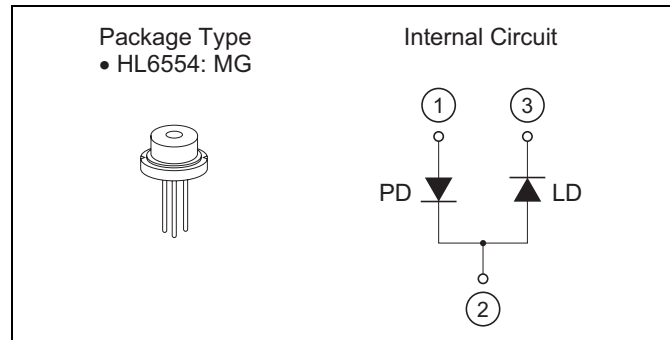
ODE-208-036C (Z)  
Rev.3  
May 09, 2007

### Description

The HL6554MG is a 0.65  $\mu\text{m}$  band AlGaInP laser diode (LD) with a multi-quantum well (MQW) structure. It is suitable as light sources in bar code readers, laser levelers and various other types of optical equipment.

### Features

- Visible light output :  $\lambda_p = 658 \text{ nm}$  Typ
- Single longitudinal mode
- Optical output power : 10 mW CW
- Low operating voltage : 2.8 V Max
- Built-in photodiode for monitoring laser output
- Small package :  $\phi 5.6 \text{ mm}$



### Absolute Maximum Ratings

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

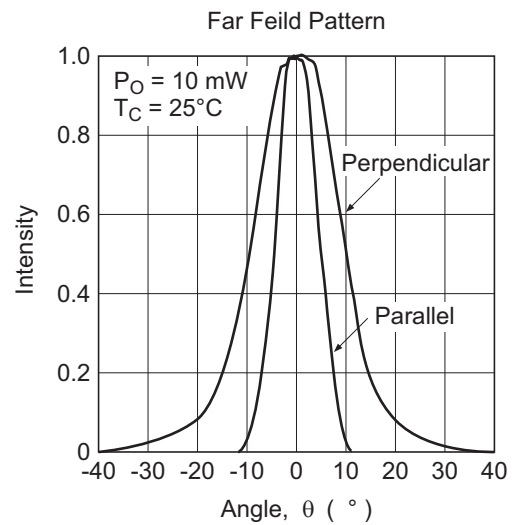
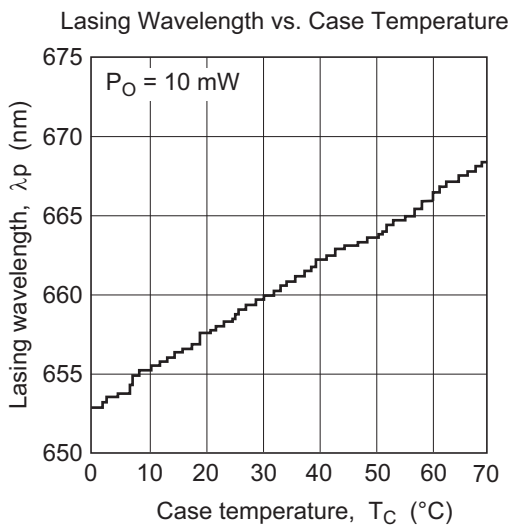
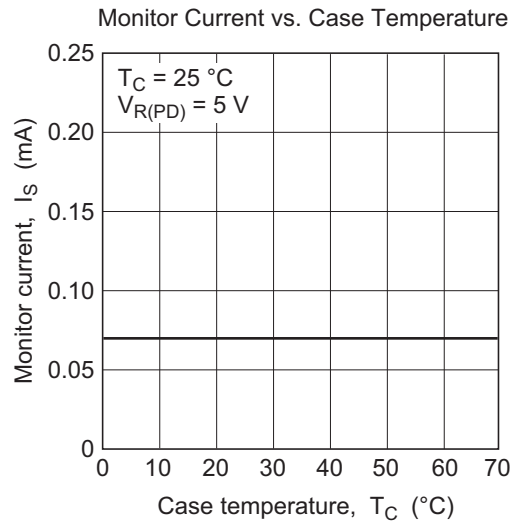
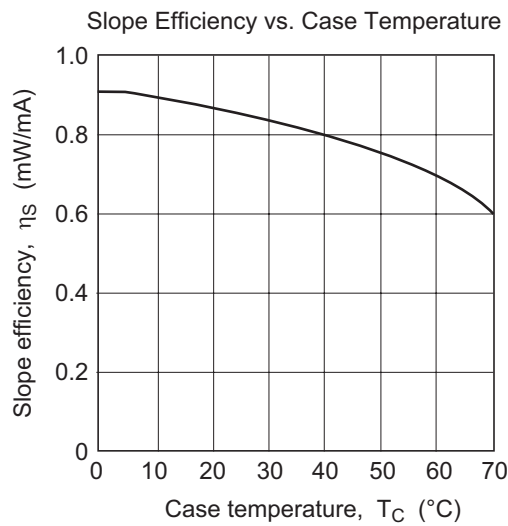
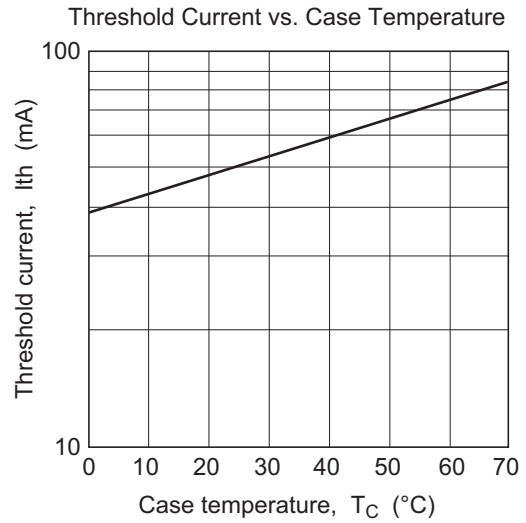
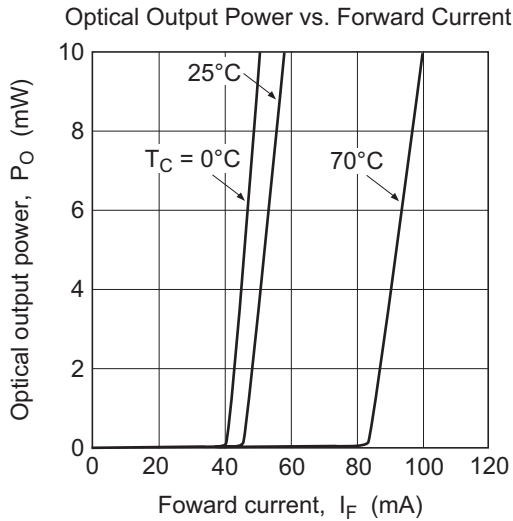
Item	Symbol	Ratings	Unit
Optical output power	$P_O$	12	mW
LD reverse voltage	$V_{R(LD)}$	2	V
PD reverse voltage	$V_{R(PD)}$	30	V
Operating temperature	$T_{opr}$	-10 to +70	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

### Optical and Electrical Characteristics

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

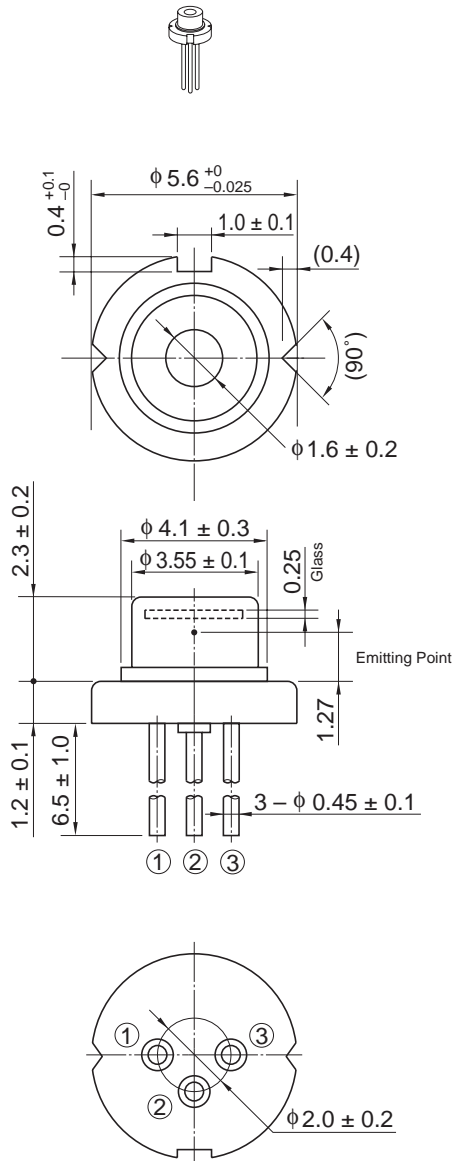
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	$I_{th}$	30	45	70	mA	—
Operating current	$I_{OP}$	—	60	90	mA	$P_O = 10 \text{ mW}$
Operating voltage	$V_{OP}$	—	—	2.8	V	$P_O = 10 \text{ mW}$
Beam divergence parallel to the junction	$\theta_{//}$	7	8.5	10.5	$^\circ$	$P_O = 10 \text{ mW}$
Beam divergence perpendicular to the junction	$\theta_{\perp}$	18	22	26	$^\circ$	$P_O = 10 \text{ mW}$
Astigmatism	$A_s$	—	6	—	—	$P_O = 5 \text{ mW}, NA = 0.55$
Lasing wavelength	$\lambda_p$	645	658	665	nm	$P_O = 10 \text{ mW}$
Monitor current	$I_s$	0.03	0.07	0.15	mA	$P_O = 10 \text{ mW}, V_{R(PD)} = 5 \text{ V}$

### Typical Characteristic Curves



Package Dimensions

As of July, 2002  
Unit: mm



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

## Cautions

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2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.  
When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
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## Sales Offices



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