Data Sheet

HL6756MG
670nm / 15mW AlGaInP Laser Diode

Features
- Operation temperature: -10~+60°C
- Optical output power: 15mW(CW)
- Visible lasing: 670nm Typ.
- Low operating voltage: 2.7V Max.
- Package: φ5.6mm
- Single transverse mode
- TE mode oscillation

Application
- Laser beam printer
- Measurement
- Sensing

Outline

Internal Circuit

(Unit: mm)
### Absolute Maximum Ratings (Tc=25°C)

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical output power</td>
<td>Po</td>
<td>15</td>
<td>mW</td>
</tr>
<tr>
<td>LD Reverse Voltage</td>
<td>VR(LD)</td>
<td>2</td>
<td>V</td>
</tr>
<tr>
<td>PD Reverse Voltage</td>
<td>VR(PD)</td>
<td>20</td>
<td>V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Topr</td>
<td>-10 ~ +60</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>Tstg</td>
<td>-40 ~ +85</td>
<td>°C</td>
</tr>
</tbody>
</table>

### Optical and Electrical Characteristics (Tc=25°C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Test Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold current</td>
<td>Ith</td>
<td>-</td>
<td>20</td>
<td>30</td>
<td>mA</td>
<td>-</td>
</tr>
<tr>
<td>Operating current</td>
<td>Iop</td>
<td>-</td>
<td>35</td>
<td>45</td>
<td>mA</td>
<td>Po=15mW</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>Vop</td>
<td>-</td>
<td>2.3</td>
<td>2.7</td>
<td>V</td>
<td>Po=15mW</td>
</tr>
<tr>
<td>Beam divergence Parallel to the junction</td>
<td>θ/&gt;</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>°</td>
<td>Po=15mW, FWHM</td>
</tr>
<tr>
<td>Beam divergence Perpendicular to the junction</td>
<td>θ⊥</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>°</td>
<td>Po=15mW, FWHM</td>
</tr>
<tr>
<td>Lasing Wavelength</td>
<td>λp</td>
<td>660</td>
<td>670</td>
<td>680</td>
<td>nm</td>
<td>Po=15mW</td>
</tr>
<tr>
<td>Monitor Current</td>
<td>Is</td>
<td>0.5</td>
<td>1.5</td>
<td>2.5</td>
<td>mA</td>
<td>Po=15mW, VR(PD)=5V</td>
</tr>
</tbody>
</table>
Typical Characteristic Curves

Optical Output Power vs. Forward Current

Threshold Current vs. Case Temperature

Slope Efficiency vs. Case Temperature

Monitor Current vs. Case Temperature

Lasing Wavelength vs. Case Temperature

Far Field Pattern
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![Caution](image)

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