**Features**
- Optical output power: 1,000mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating current: 1,000mA Typ.
- Low operating voltage: 5.0V Max.
- Package: ø9.0mm
- Multiple transverse mode
- TE mode oscillation

**Application**
- Direct imaging for PCB
- Industry
- Display
- Bio & Medical
## 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>1,100</td>
<td>mW</td>
</tr>
<tr>
<td>LD Reverse Voltage</td>
<td>VR(LD)</td>
<td>2</td>
<td>V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Topr</td>
<td>0 ~ +30</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>250</td>
<td>320</td>
<td>400</td>
<td>mA</td>
<td>-</td>
</tr>
<tr>
<td>Operating current</td>
<td>Iop</td>
<td>-</td>
<td>1,000</td>
<td>1,300</td>
<td>mA</td>
<td>Po=1,000mW</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>Vop</td>
<td>-</td>
<td>-</td>
<td>5.0</td>
<td>V</td>
<td>Po=1,000mW</td>
</tr>
<tr>
<td>Beam divergence Parallel to the junction</td>
<td>θ//</td>
<td>5</td>
<td>13</td>
<td>25</td>
<td>°</td>
<td>Po=1,000mW, Full angle 1/e²</td>
</tr>
<tr>
<td>Beam divergence Perpendicular to the junction</td>
<td>θ⊥</td>
<td>30</td>
<td>42</td>
<td>50</td>
<td>°</td>
<td>Po=1,000mW, Full angle 1/e²</td>
</tr>
<tr>
<td>Lasing Wavelength</td>
<td>λp</td>
<td>400</td>
<td>405</td>
<td>410</td>
<td>nm</td>
<td>Po=1,000mW</td>
</tr>
</tbody>
</table>
Typical Characteristic Curves

**Optical output power vs. Forward current**

- Optical output power $P_o$ (mW) vs. Forward current $I_F$ (mA)

**Forward voltage vs. Forward current**

- Forward voltage $V_F$ (V) vs. Forward current $I_F$ (mA)

**Threshold current vs. Case temperature**

- Threshold current $I_{th}$ (mA) vs. Case temperature $T_c$ (°C)

**Slope efficiency vs. Case temperature**

- Slope efficiency $\eta_s$ (mW/mA) vs. Case temperature $T_c$ (°C)

**Lasing wavelength vs. Case temperature**

- Lasing wavelength $\lambda_p$ (nm) vs. Case temperature $T_c$ (°C)

**Far field pattern**

- Relative intensity vs. Angle $\theta$ (°)

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Po=1,000mW  
$T_c=25$°C

Parallel, Perpendicular

Po=1,000mW  
$T_c=25$°C

Parallel, Perpendicular
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