Visible Laser Diode Module  AML-D450-RGB050-01

**RGB Laser Module**

**Features**
- APC (auto power control) driver circuit
- Output powers up to 50 mW
- High quality glass lens for output beam
- easy integration
- low maintenance

**Applications**
1. Highly Efficient RGB Laser Light Source
2. laser projector
3. laser light shows

**Part No. Indications:**

AML– D 450 – RGB 050 – 01

- Serial No.
- Output power option “050” =50mW
- Wavelength(638nm,515nm,450nm)
- Outline dimensions “250” =25mm x 25mm
- Laser type: D — Laser Dot

**Absolute maximum ratings (T_c=25 °C)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Rating</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>V_{cc}</td>
<td>9</td>
<td>V</td>
</tr>
<tr>
<td>Laser Module optical output power</td>
<td>P_o</td>
<td>50</td>
<td>mW</td>
</tr>
<tr>
<td>Operation Case Temperature</td>
<td>T_c</td>
<td>0–30</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_{stg}</td>
<td>-40~80</td>
<td>°C</td>
</tr>
</tbody>
</table>

**Electrical and optical characteristics (T_c=25 °C)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Red</th>
<th>Green</th>
<th>Blue</th>
<th>Unit</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength</td>
<td>$\lambda$</td>
<td>638</td>
<td>520</td>
<td>450</td>
<td>nm</td>
<td></td>
</tr>
<tr>
<td>Output power</td>
<td>P_{out}</td>
<td>20</td>
<td>9</td>
<td>14</td>
<td>mW</td>
<td>$V_{cc}=9V$</td>
</tr>
<tr>
<td>Operation current</td>
<td>I_{op}</td>
<td>100</td>
<td>150</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laser Beam spot size at 10m</td>
<td></td>
<td></td>
<td>&lt;20mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divergence angle</td>
<td></td>
<td></td>
<td>2 mrad</td>
<td></td>
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</table>

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**AML-D450-RGB050-01**

**Outline dimensions (Units: mm)**

![Diagram of module dimensions]

- **Red wire**: Vcc  
- **Black wire**: GND

**Laser Safety Precautions**

1. Do not look into the laser beam directly by eyes. The laser beam may cause severe damage to human eyes.
2. Optical Lens is made of glass. Do not contaminate lens by soiling, oil or chemical.