HUIYUAN ELECTRONIC CO., LTD.
慧源电子有限公司

TECHNOLOGY DATE SHEET & SPECIFICATIONS

MODEL: 10034R1C-CSE-D

Features
- High efficiency
- Low Power consumption
- General purpose leads
- Selected minimum intensities
- Available on tape and reel
- Pb free

Descriptions
- The series is specially designed for applications requiring higher brightness
- The LED lamps are available with different colors, intensities, epoxy colors, etc
- Superior performance in outdoor environment

Usage Notes:
- The ultra bright LED is an electrostatic insensitive device, so static electricity and surge will damage the LED. It is required to wear a wrist-band when handling the LED. All device, equipment, machinery, desk and ground must be properly grounded
- When using LED, it must use a protective resistor in series with DC current about 20mA

Applications
- Status indicators
- Commercial use
- Advertising Signs
- Back lighting

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### MODEL: 10034R1C-CSE-D

#### Device Selection Guide

<table>
<thead>
<tr>
<th>LED Part No.</th>
<th>Chip</th>
<th>Lens Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>10034R1C-CSE-D</td>
<td>AlGaInP</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water clear</td>
</tr>
</tbody>
</table>

#### Package Dimensions

![Package Dimensions Diagram]

**UNIT:** mm

#### Notes:

- Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Protruded resin under flange is 1.5mm Max LED.
- Bare copper alloy is exposed at tie-bar portion after cutting.
Absolute Maximum Rating (T_a=25°C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Absolute Maximum Rating</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Pulse Current</td>
<td>I_{FPM}</td>
<td>70</td>
<td>mA</td>
</tr>
<tr>
<td>Forward Current</td>
<td>I_{FM}</td>
<td>30</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>V_R</td>
<td>5</td>
<td>V</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>P_D</td>
<td>140</td>
<td>mW</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>T_{opr}</td>
<td>-40~+80</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_{stg}</td>
<td>-40~+100</td>
<td>°C</td>
</tr>
<tr>
<td>Soldering Heat (5s)</td>
<td>T_{sol}</td>
<td>260</td>
<td>°C</td>
</tr>
</tbody>
</table>

Electro-Optical Characteristics (T_a=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>Luminous Intensity</td>
<td>I_v</td>
<td>8000</td>
<td>9000</td>
<td>---</td>
<td>mcd</td>
<td>IF=20mA(Note1)</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>\theta_{1/2}</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>Deg</td>
<td>(Note 2)</td>
</tr>
<tr>
<td>Peak Emission Wavelength</td>
<td>\lambda_p</td>
<td>620</td>
<td>630</td>
<td>635</td>
<td>nm</td>
<td>IF=20mA</td>
</tr>
<tr>
<td>Spectral Line Half-Width</td>
<td>\Delta \lambda</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>nm</td>
<td>IF=20mA</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>V_F</td>
<td>1.9</td>
<td>---</td>
<td>2.5</td>
<td>V</td>
<td>IF=20mA</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>I_R</td>
<td>---</td>
<td>---</td>
<td>10</td>
<td>\mu A</td>
<td>VR=5V</td>
</tr>
</tbody>
</table>

Note:
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. \theta_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
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Typical Electro-Optical Characteristics Curves

- **Relative Intensity VS. Wavelength**
  - Wavelength (nm) vs. Relative Intensity (a.u.)
  - Graph showing intensity changes with wavelength from 500 to 700 nm.

- **Forward Current VS. Forward Voltage**
  - Forward Voltage (V) vs. Forward Current (mA)
  - Graph showing voltage-current relationship.

- **Relative Intensity VS. Ambient Temp**
  - Ambient Temperature Ta (°C) vs. Relative Intensity (a.u.)
  - Graph showing intensity changes with temperature.

- **Forward Current VS. Ambient Temp**
  - Ambient Temperature Ta (°C) vs. Forward Current (mA)
  - Graph showing current-flow relationship with temperature.

- **Forward Voltage VS. Relative Intensity**
  - Forward Voltage (V) vs. Relative Intensity (a.u.)
  - Graph showing voltage-intensity relationship.

- **Radiation Characteristics**
  - Radiation Angle vs. Relative Intensity
  - Graph showing intensity distribution across different angles.

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Notes

1. Above specification may be changed without notice. HYLED will reserve authority on material change for above specification.

2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. HYLED assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

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