**1111C Series**

**Flat Lens Type 1.6X0.8mm**

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### Absolute Maximum Ratings

<table>
<thead>
<tr>
<th></th>
<th>SC</th>
<th>PG</th>
<th>PY</th>
<th>AY</th>
<th>AA</th>
<th>BR</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Dissipation</strong></td>
<td>Pd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mW</td>
</tr>
<tr>
<td><strong>Forward Current</strong></td>
<td>IF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td><strong>Peak Forward Current</strong></td>
<td>IFM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td><strong>Reverse Voltage</strong></td>
<td>Vth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>Top</td>
<td>-30~+85</td>
<td>-30~+85</td>
<td>-30~+85</td>
<td>-30~+85</td>
<td>-30~+85</td>
<td>°C</td>
</tr>
<tr>
<td><strong>Storage Temp.</strong></td>
<td>Tstg</td>
<td>-40~+100</td>
<td>-40~+100</td>
<td>-40~+100</td>
<td>-40~+100</td>
<td>-40~+100</td>
<td>°C</td>
</tr>
<tr>
<td><strong>Derating</strong></td>
<td>∆IF</td>
<td>0.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA/°C</td>
</tr>
</tbody>
</table>

* The current derating for operation applies when temperature is above 25°C.
* **IFm Condition**: tw ≤ 1ms, Duty ≤ 1/20

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### Electro-Optical Characteristics

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Chip</th>
<th>Lens Color</th>
<th>Material</th>
<th>Emitted Color</th>
<th>Luminous Intensity</th>
<th>Wavelength</th>
<th>Forward Voltage</th>
<th>Reverse Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG1111C</td>
<td>GaP</td>
<td>Pure Green</td>
<td>White</td>
<td>Milky</td>
<td>1.4 2.4 20</td>
<td>558 555 30 20</td>
<td>2.1 2.8 20 100</td>
<td>4</td>
</tr>
<tr>
<td>PG1111C</td>
<td>GaP</td>
<td>Green</td>
<td>White</td>
<td>Milky</td>
<td>3.6 6.4 20</td>
<td>567 560 30 30</td>
<td>2.1 2.8 20 100</td>
<td>4</td>
</tr>
<tr>
<td>PV1111C</td>
<td>GaP</td>
<td>Yellow</td>
<td>White</td>
<td>Milky</td>
<td>7.0 11.7 20</td>
<td>572 570 30 20</td>
<td>2.1 2.8 20 100</td>
<td>4</td>
</tr>
<tr>
<td>AY1111C</td>
<td>GaAsP</td>
<td>Orange</td>
<td>White</td>
<td>Milky</td>
<td>2.0 3.4 20</td>
<td>590 580 30 30</td>
<td>2.2 2.8 20 100</td>
<td>4</td>
</tr>
<tr>
<td>AA1111C</td>
<td>GaAsP</td>
<td>Orange</td>
<td>White</td>
<td>Milky</td>
<td>2.0 3.4 20</td>
<td>605 605 30 30</td>
<td>2.2 2.8 20 100</td>
<td>4</td>
</tr>
<tr>
<td>BR1111C</td>
<td>GaAlAs</td>
<td>Red</td>
<td>White</td>
<td>Milky</td>
<td>7.0 11.7 20</td>
<td>647 660 30 30</td>
<td>1.7 2.3 20 100</td>
<td>4</td>
</tr>
</tbody>
</table>

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### Package Dimensions

**Unit**: mm

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### Spatial Distribution

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### Taping Specification

**Unit**: mm

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* Quantity 4,000 pcs/Reel
**BG1111C**

- **Power Dissipation vs. Ambient Temperature**
  - Graph showing power dissipation (Pd in mW) plotted against ambient temperature (Ta in °C).
- **Ambient Temperature vs. Maximum Forward Current**
  - Graph showing maximum forward current (IF in mA) plotted against ambient temperature (Ta in °C).
- **Pulse Duration vs. Maximum Tolerable Peak Current**
  - Graph showing ratio of maximum tolerable peak current plotted against pulse duration.
- **Forward Voltage vs. Forward Current**
  - Graph showing forward voltage (Vf in V) plotted against forward current (If in mA) at Ta=25°C.
- **Forward Current vs. Relative Intensity**
  - Graph showing relative intensity plotted against forward current (If in mA) at Ta=25°C.
- **Ambient Temperature vs. Relative Intensity**
  - Graph showing relative intensity plotted against ambient temperature (Ta in °C) at Ir=20mA.
- **Spectral Distribution**
  - Graph showing spectral distribution with wave length (λ in nm) plotted against relative intensity at Ta=25°C and Ir=20mA.
**SURFACE MOUNT LED**

**PY1111C**

- **Power Dissipation vs. Ambient Temperature**
- **Ambient Temperature vs. Maximum Forward Current**
- **Pulse Duration vs. Maximum Tolerable Peak Current**

- **Forward Voltage vs. Forward Current**
- **Forward Current vs. Relative Intensity**
- **Ambient Temperature vs. Relative Intensity**

- **Spectral Distribution**

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**Ambient Temperature vs. Maximum Forward Current**

- Duty 5%
- Duty 10%
- Duty 20%
- Duty 50%

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**Forward Current vs. Relative Intensity**

- Relative Intensity vs. Ambient Temperature

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**Spectral Distribution**

- Relative Intensity vs. Wave Length

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**Technical Specifications**

- **Forward Voltage** $V_F$ (V)
- **Forward Current** $I_F$ (mA)
- **Relative Intensity**
- **Ambient Temperature** $T_a$ (°C)
- **Power Dissipation** $P_d$ (mW)

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**Other Graphs**

- Power Dissipation vs. Ambient Temperature
- Ambient Temperature vs. Maximum Forward Current
- Pulse Duration vs. Maximum Tolerable Peak Current

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**Note:**

- Ta=25°C
- IF =20mA
- Pulse Duration $t_{pul}$
- Duty $D$%
- $f\geq 50$Hz
- $t_{w}\leq 1$ms
- IF =20mA
- Ta=25°C