# 5385X Series

Single Color φ5 Round Shape Type

## Features

<table>
<thead>
<tr>
<th>Package</th>
<th>φ5 Round shape type, BG,PG : Pale Green Surface Diffused epoxy, PY,AY : Pale Yellow Surface Diffused epoxy, AA : Pale Orange Surface Diffused epoxy, VR,BR,PR : Pale Red Surface Diffused epoxy</th>
</tr>
</thead>
</table>
| Product features | • Outer Dimension φ5 Round shape type  
• Operation temperature range.  
Storage Temperature : -30 °~ 100 °  
Operating Temperature : -30 °~ 85 °  
• Lead-free soldering compatible  
• RoHS compliant |
| Dominant wavelength | Green : 558nm (BG)  
Yellow Green : 572nm (PY)  
Yellow : 590nm (AY)  
Orange : 606nm (AA)  
Red : 624nm (VR)  
: 647nm (BR)  
: 630nm (PR) |
PG,BR : 151 deg.  
AY : 139 deg.  
VR : 118 deg. |
| Die materials | BG,PG,PY,PR : GaP  
AY,AA,VR : GaAsP  
BR : GaAlAs |
| Rank grouping parameter | Sorted by luminous intensity per rank taping |
| Soldering methods | TTW (Through The Wave) soldering and manual soldering |
| ESD | More than 2kV(HBM) |
| Packing | Bulk : 200pcs(MIN.) |

## Recommended Applications

Amusement Equipment, Electric Household Appliances, OA/FA, Other General Applications

2012.11.09
## Color and Luminous Intensity

**5385X Series**

**Single Color φ5 Round Shape Type**

(Ta=25°C)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Material</th>
<th>Emitted Color</th>
<th>Lens Color</th>
<th>Dominant Wavelength $\lambda_d$ (nm)</th>
<th>Luminous Intensity $I_v$ (mcd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>TYP.</strong></td>
<td><strong>MIN.</strong></td>
</tr>
<tr>
<td>BG5385X</td>
<td>GaP</td>
<td>Green</td>
<td>Pale Green</td>
<td>558</td>
<td>20</td>
</tr>
<tr>
<td>PG5385X</td>
<td>GaP</td>
<td>Yellow Green</td>
<td>Pale Yellow</td>
<td>567</td>
<td>20</td>
</tr>
<tr>
<td>PY5385X</td>
<td>GaP</td>
<td>Yellow Green</td>
<td>Pale Yellow</td>
<td>572</td>
<td>20</td>
</tr>
<tr>
<td>AY5385X</td>
<td>GaAsP</td>
<td>Yellow</td>
<td>Pale Orange</td>
<td>590</td>
<td>20</td>
</tr>
<tr>
<td>AA5385X</td>
<td>GaAsP</td>
<td>Orange</td>
<td>Pale Orange</td>
<td>606</td>
<td>20</td>
</tr>
<tr>
<td>VR5385X</td>
<td>GaAs</td>
<td>Red</td>
<td>Pale Red</td>
<td>624</td>
<td>20</td>
</tr>
<tr>
<td>BR5385X</td>
<td>GaAlAs</td>
<td>Red</td>
<td>Pale Red</td>
<td>647</td>
<td>20</td>
</tr>
<tr>
<td>PR5385X</td>
<td>GaP</td>
<td>Red</td>
<td>Pale Red</td>
<td>630</td>
<td>10</td>
</tr>
</tbody>
</table>
### Absolute Maximum Ratings

(Ta=25°C)

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Absolute Maximum Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dissipation</td>
<td>P_d</td>
<td>BG 125 PG 125 PY 125 AY 125 AA 125 VR 75 BR 100 PR 75</td>
<td>mW</td>
</tr>
<tr>
<td>Forward Current</td>
<td>I_f</td>
<td>50 50 50 50 50 30 50 30</td>
<td>mA</td>
</tr>
<tr>
<td>Pulse Forward Current ✷1</td>
<td>I_{FRM}</td>
<td>100 100 100 100 100 100 300 100</td>
<td>mA</td>
</tr>
<tr>
<td>Derating (Ta=25°C or higher)</td>
<td>ΔI_f</td>
<td>0.67 0.67 0.67 0.67 0.67 0.33 0.67 0.33</td>
<td>mA/°C</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>V_R</td>
<td>4 4 4 4 4 4 4 4</td>
<td>V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>T_{opr}</td>
<td>-30~ +85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_{stg}</td>
<td>-30~ +100</td>
<td>°C</td>
</tr>
</tbody>
</table>

▷ 1 I_{FRM} Measurement condition: Pulse Width □ 1ms., Duty □ 1/20.
## Electro-Optical Characteristics (BG, PG, PY, AY, AA, VR, BR)

### Conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Characteristics</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Voltage</td>
<td>( I_F = 20 \text{mA} )</td>
<td>( V_F )</td>
<td>TYP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAX.</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>( V_R = 4 \text{V} )</td>
<td>( I_R )</td>
<td>MAX.</td>
</tr>
<tr>
<td>Peak Wavelength</td>
<td>( I_F = 20 \text{mA} )</td>
<td>( \lambda_p )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Dominant Wavelength</td>
<td>( I_F = 20 \text{mA} )</td>
<td>( \lambda_d )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Spectral Line Half Width</td>
<td>( I_F = 20 \text{mA} )</td>
<td>( \Delta \lambda )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Half Intensity Angle</td>
<td>( I_F = 20 \text{mA} )</td>
<td>( 2 \theta \ 1/2 )</td>
<td>TYP.</td>
</tr>
</tbody>
</table>

### Electro-Optical Characteristics (PR)

### Conditions

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>Characteristics</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Voltage</td>
<td>( I_F = 10 \text{mA} )</td>
<td>( V_F )</td>
<td>TYP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAX.</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>( V_R = 4 \text{V} )</td>
<td>( I_R )</td>
<td>MAX.</td>
</tr>
<tr>
<td>Peak Wavelength</td>
<td>( I_F = 10 \text{mA} )</td>
<td>( \lambda_p )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Dominant Wavelength</td>
<td>( I_F = 10 \text{mA} )</td>
<td>( \lambda_d )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Spectral Line Half Width</td>
<td>( I_F = 10 \text{mA} )</td>
<td>( \Delta \lambda )</td>
<td>TYP.</td>
</tr>
<tr>
<td>Half Intensity Angle</td>
<td>( I_F = 10 \text{mA} )</td>
<td>( 2 \theta \ 1/2 )</td>
<td>TYP.</td>
</tr>
</tbody>
</table>
Luminous Intensity Rank  
(Ta=25°C)

<table>
<thead>
<tr>
<th>Rank</th>
<th>BG</th>
<th>PG</th>
<th>PY</th>
<th>AY</th>
<th>AA</th>
<th>VR</th>
<th>BR</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=20mA</td>
<td>I_F=10mA</td>
</tr>
<tr>
<td></td>
<td>MIN.</td>
<td>MAX.</td>
<td>MIN.</td>
<td>MAX.</td>
<td>MIN.</td>
<td>MAX.</td>
<td>MIN.</td>
<td>MAX.</td>
</tr>
<tr>
<td>A</td>
<td>0.80</td>
<td>1.60</td>
<td>2.5</td>
<td>5.0</td>
<td>3.0</td>
<td>6.0</td>
<td>2.5</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>6.0</td>
<td>3.0</td>
<td>6.0</td>
<td>3.0</td>
<td>6.0</td>
<td>0.60</td>
<td>1.20</td>
</tr>
<tr>
<td>B</td>
<td>1.12</td>
<td>2.24</td>
<td>3.5</td>
<td>7.0</td>
<td>4.2</td>
<td>8.4</td>
<td>4.2</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td>8.4</td>
<td>4.2</td>
<td>8.4</td>
<td>0.84</td>
<td>1.68</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>1.60</td>
<td>3.20</td>
<td>5.0</td>
<td>10.0</td>
<td>6.0</td>
<td>12.0</td>
<td>6.0</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>6.0</td>
<td>12.0</td>
<td>6.0</td>
<td>12.0</td>
<td>6.0</td>
<td>12.0</td>
<td>1.20</td>
<td>2.40</td>
</tr>
<tr>
<td>D</td>
<td>2.24</td>
<td>4.48</td>
<td>7.0</td>
<td>14.0</td>
<td>8.4</td>
<td>16.8</td>
<td>8.4</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>8.4</td>
<td>16.8</td>
<td>8.4</td>
<td>16.8</td>
<td>1.68</td>
<td>3.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>3.20</td>
<td>-</td>
<td>10.0</td>
<td>-</td>
<td>12.0</td>
<td>-</td>
<td>12.0</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>12.0</td>
<td>-</td>
<td>12.0</td>
<td>-</td>
<td>12.0</td>
<td>-</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Please contact our sales staff concerning rank designation.
Technical Data(BG)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition : Ta = 25 °C, If = 20mA

Spatial Distribution Example
Condition : Ta = 25 °C

Forward Voltage vs. Forward Current
Condition : Ta = 25 °C

Forward Current vs. Relative Intensity
Condition : Ta = 25 °C
Technical Data (BG)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency: f = 50Hz

Ambient Temperature vs. Relative Intensity
Condition: If = 20mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature

Ambient Temperature: Ta(°C)

Maximum Forward Current: If MAX (mA)

Forward Voltage: VF (V)

Power Dissipation: Pd (mW)
Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition : $T_a = 25 \degree C$

Pulse Width vs. Maximum Tolerable Peak Current
Condition : $T_a = 25 \degree C$

Pulse Width : $t_w$ (μs)

Duty (%)
Technical Data (PG)

- **Spectral Distribution**
  - Relative Intensity vs. Wavelength
  - Condition: $T_a = 25$ °C, $I_F = 20$ mA
  - Graph showing relative intensity vs. wavelength.

- **Spatial Distribution Example**
  - Condition: $T_a = 25$ °C
  - Graph showing spatial distribution.

- **Forward Voltage vs. Forward Current**
  - Condition: $T_a = 25$ °C
  - Graph showing forward voltage vs. forward current.

- **Forward Current vs. Relative Intensity**
  - Condition: $T_a = 25$ °C
  - Graph showing forward current vs. relative intensity.
Technical Data (PG)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency: f = 50Hz

Ambient Temperature vs. Relative Intensity
Condition: IF=20mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature
Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition: Ta = 25°C

Pulse Width vs. Maximum Tolerable Peak Current
Condition: Ta = 25°C
Technical Data (PY)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition: Ta = 25 °C, If = 20 mA

Spatial Distribution Example
Condition: Ta = 25 °C

Forward Voltage vs. Forward Current
Condition: Ta = 25 °C

Forward Current vs. Relative Intensity
Condition: Ta = 25 °C
Technical Data (PY)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency: \( f = 50 \text{Hz} \)

Ambient Temperature vs. Relative Intensity
Condition: \( I_f = 20 \text{mA} \)

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature
Technical Data (PY)

Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition: Ta = 25 °C

Pulse Width vs. Maximum Tolerable Peak Current
Condition: Ta = 25 °C
Technical Data (AY)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition: \( T_a = 25 \), \( I_F = 20 \text{mA} \)

Spatial Distribution Example
Condition: \( T_a = 25 \)°

Forward Voltage vs. Forward Current
Condition: \( T_a = 25 \)°

Forward Current vs. Relative Intensity
Condition: \( T_a = 25 \)°
Technical Data (AY)

**Derating**
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency : \( f = 50\text{Hz} \)

**Ambient Temperature vs. Relative Intensity**
Condition : \( I_f = 20\text{mA} \)

**Ambient Temperature vs. Forward Voltage**

**Power Dissipation vs. Ambient Temperature**

---

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Technical Data (AY)

Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition : Ta = 25 °C

Pulse Width vs. Maximum Tolerable Peak Current
Condition : Ta = 25 °C
Technical Data (AA)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition: $T_a = 25^\circ$, $I_f = 20\, \text{mA}$

Spatial Distribution Example
Condition: $T_a = 25^\circ$

Forward Voltage vs. Forward Current
Condition: $T_a = 25^\circ$

Forward Current vs. Relative Intensity
Condition: $T_a = 25^\circ$
Technical Data (AA)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency : f = 50Hz

Ambient Temperature vs. Relative Intensity
Condition : IF = 20mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature

Ambient Temperature vs. Maximum Forward Current
Repetition Frequency : f = 50Hz

Ambient Temperature : Ta(°C)

Relative Intensity

Maximum Forward Current : IF MAX. (mA)

Forward Voltage VF(V)

Power Dissipation : Pd (mW)

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Technical Data (AA)

**Dynamic Drive Rating**
Duty cycle vs. Maximum Forward Current
Condition: $T_a = 25^\circ C$

<table>
<thead>
<tr>
<th>Duty (%)</th>
<th>Maximum Forward Current: $I_{MAX}$ (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500</td>
</tr>
<tr>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>120</td>
<td>2</td>
</tr>
</tbody>
</table>

---

**Pulse Width vs. Maximum Tolerable Peak Current**
Condition: $T_a = 25^\circ C$

- $I_{peak Max.}/I_{DC MAX.}$ vs. Pulse Width ($tw$ (μs))
- Various current levels: 100mA, 200mA, 300mA, 500mA
Technical Data (VR)

**Spectral Distribution**
Relative Intensity vs. Wavelength
Condition: $T_a = 25 \degree$, $I_F = 20mA$

**Spatial Distribution Example**
Condition: $T_a = 25 \degree$

**Forward Voltage vs. Forward Current**
Condition: $T_a = 25 \degree$

**Forward Current vs. Relative Intensity**
Condition: $T_a = 25 \degree$
Technical Data (VR)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency: f 50Hz

Ambient Temperature vs. Relative Intensity
Condition: If=20mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature
Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition: Ta = 25°C

Pulse Width vs. Maximum Tolerable Peak Current
Condition: Ta = 25°C

Pulse Width: \( t_w (\mu s) \)

Maximum Forward Current: \( I_{F MAX} \) (mA)

IF peak Max./IF DC MAX.
Technical Data (BR)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition: $T_a = 25^\circ$, $I_F = 20mA$

Spatial Distribution Example
Condition: $T_a = 25^\circ$

Forward Voltage vs. Forward Current
Condition: $T_a = 25^\circ$

Forward Current vs. Relative Intensity
Condition: $T_a = 25^\circ$

Downloaded from Arrow.com.
Technical Data (BR)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency : f = 50Hz

Ambient Temperature vs. Relative Intensity
Condition : I_f = 20mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature

Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition : Ta = 25 °C

Pulse Width vs. Maximum Tolerable Peak Current
Condition : Ta = 25 °C
Technical Data (PR)

Spectral Distribution
Relative Intensity vs. Wavelength
Condition : Ta = 25 °C, I_f = 10mA

Spatial Distribution Example
Condition : Ta = 25 °C

Forward Voltage vs. Forward Current
Condition : Ta = 25 °C

Forward Current vs. Relative Intensity
Condition : Ta = 25 °C
Technical Data(PR)

Derating
Ambient Temperature vs. Maximum Forward Current
Repetition Frequency : f = 50Hz

Ambient Temperature vs. Relative Intensity
Condition : I_F = 10mA

Ambient Temperature vs. Forward Voltage

Power Dissipation vs. Ambient Temperature

2012.11.09

STANLEY ELECTRIC CO., LTD.
Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition : Ta = 25°C

Pulse Width vs. Maximum Tolerable Peak Current
Condition : Ta = 25°C
Package Dimensions

(5385X Series)
Single Color φ5 Round Shape Type

Mass : (0.34)g

(Unit: mm)
TTW (Through The Wave) soldering Conditions

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-heating</td>
<td>100 °C</td>
<td>(MAX.)</td>
</tr>
<tr>
<td>Solder Bath Temp.</td>
<td>265 °C</td>
<td>(MAX.)</td>
</tr>
<tr>
<td>Dipping Time</td>
<td>5 s</td>
<td>(MAX.)</td>
</tr>
</tbody>
</table>

1) The dip soldering process shall be 2 times maximum.
2) The product shall be cooled to room temp. before the second dipping process.

The detail is described to LED and Photodetector handling precautions of home page:
"Mounting through-hole Type Devices" and "Soldering", and use it after the confirmation, please.

Manual Soldering Conditions

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron tip temp.</td>
<td>360 °C</td>
<td>(MAX.)</td>
</tr>
<tr>
<td>Soldering time and frequency</td>
<td>3 s 2 times</td>
<td>(MAX.)</td>
</tr>
</tbody>
</table>

The detail is described to LED and Photodetector handling precautions of home page:
"Mounting through-hole Type Devices" and "Soldering", and use it after the confirmation, please.
# Reliability Testing Result

<table>
<thead>
<tr>
<th>Reliability Testing Result</th>
<th>Applicable Standard</th>
<th>Testing Conditions</th>
<th>Duration</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Temp. Operating Life</td>
<td>EIAJ ED-4701/100(101)</td>
<td>Ta = 25°C, If = Maximum Rated Current</td>
<td>1,000 h</td>
<td>0/25</td>
</tr>
<tr>
<td>Resistance to Soldering Heat</td>
<td>EIAJ ED-4701/300(302)</td>
<td>260±5°C, 3mm from package base</td>
<td>10s</td>
<td>0/25</td>
</tr>
<tr>
<td>Temperature Cycling</td>
<td>EIAJ ED-4701/100(105)</td>
<td>Minimum Rated Storage Temperature(30min) ~ Normal Temperature(15min) ~ Maximum Rated Storage Temperature(30min) ~ Normal Temperature(15min)</td>
<td>5 cycles</td>
<td>0/25</td>
</tr>
<tr>
<td>Wet High Temp. Storage Life</td>
<td>EIAJ ED-4701/100(103)</td>
<td>Ta = 60±2°C, RH = 90±5%</td>
<td>1,000 h</td>
<td>0/25</td>
</tr>
<tr>
<td>High Temp. Storage Life</td>
<td>EIAJ ED-4701/200(201)</td>
<td>Ta = Maximum Rated Storage Temperature</td>
<td>1,000 h</td>
<td>0/25</td>
</tr>
<tr>
<td>Low Temp. Storage Life</td>
<td>EIAJ ED-4701/200(202)</td>
<td>Ta = Minimum Rated Storage Temperature</td>
<td>1,000 h</td>
<td>0/25</td>
</tr>
<tr>
<td>Lead Tension</td>
<td>EIAJ ED-4701/400(401)</td>
<td>10N,1time (□0.4 and Flat Package : 5N)</td>
<td>10s</td>
<td>0/10</td>
</tr>
<tr>
<td>Vibration, Variable Frequency</td>
<td>EIAJ ED-4701/400(403)</td>
<td>98.1m/s² (10G), 100 ~ 2KHz sweep for 20min., XYZ each direction</td>
<td>2 h</td>
<td>0/10</td>
</tr>
</tbody>
</table>

# Failure Criteria

<table>
<thead>
<tr>
<th>Items</th>
<th>Symbols</th>
<th>Conditions</th>
<th>Failure criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminous Intensity</td>
<td>I&lt;sub&gt;v&lt;/sub&gt;</td>
<td>I&lt;sub&gt;v&lt;/sub&gt; Value of each product Luminous Intensity</td>
<td>Testing Min. Value &lt; Spec. Min. Value × 0.5</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>V&lt;sub&gt;f&lt;/sub&gt;</td>
<td>V&lt;sub&gt;f&lt;/sub&gt; Value of each product Forward Voltage</td>
<td>Testing Max. Value &gt; Spec. Max. Value × 1.2</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>I&lt;sub&gt;r&lt;/sub&gt;</td>
<td>V&lt;sub&gt;r&lt;/sub&gt; = Maximum Rated Reverse Voltage V</td>
<td>Testing Max. Value &gt; Spec. Max. Value × 2.5</td>
</tr>
<tr>
<td>Cosmetic Appearance</td>
<td>-</td>
<td>-</td>
<td>Occurrence of notable decoloration, deformation and cracking</td>
</tr>
</tbody>
</table>
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1) The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

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