

Part Number: KPT-2012SRD-PRV

Super Bright Red

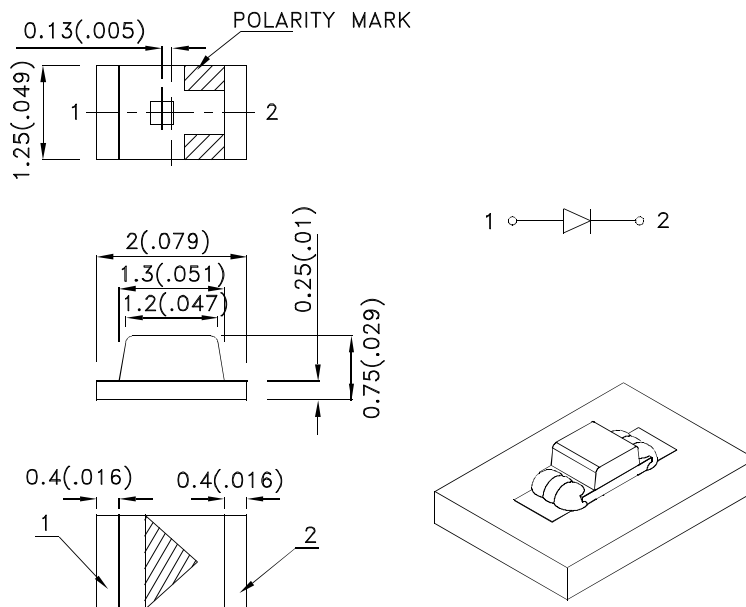
Features

- 2.0mm x1.25mm SMT LED,0.75mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ " unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|-----------------|---------------------------|--------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KPT-2012SRD-PRV | Super Bright Red (GaAlAs) | Red Diffused | 55 | 80 | 120° |
| | | | *12 | *25 | |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

2. Luminous intensity/ luminous Flux: +/-15%.

*Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | | Max. | Units | Test Conditions |
|--------------------|--------------------------|------------------|------|------|------|-------|---------------------------|
| λ _{peak} | Peak Wavelength | Super Bright Red | 660 | *655 | | nm | I _F =20mA |
| λ _D [1] | Dominant Wavelength | Super Bright Red | 640 | *640 | | nm | I _F =20mA |
| Δλ _{1/2} | Spectral Line Half-width | Super Bright Red | 20 | | | nm | I _F =20mA |
| C | Capacitance | Super Bright Red | 45 | | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Super Bright Red | 1.85 | | 2.5 | V | I _F =20mA |
| I _R | Reverse Current | Super Bright Red | | | 10 | uA | V _R =5V |

Notes:

1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

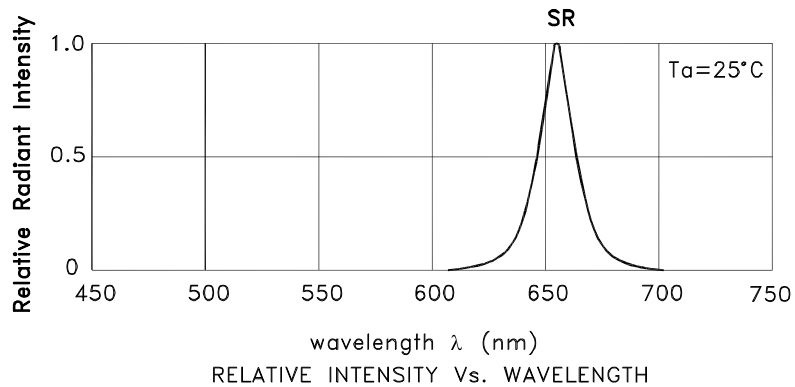
*Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

| Parameter | Super Bright Red | Units |
|--------------------------|------------------|-------|
| Power dissipation | 75 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 155 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

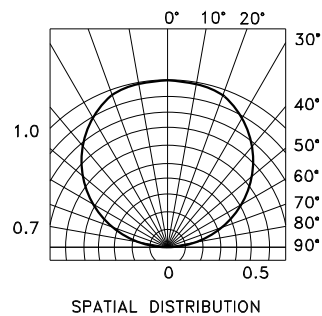
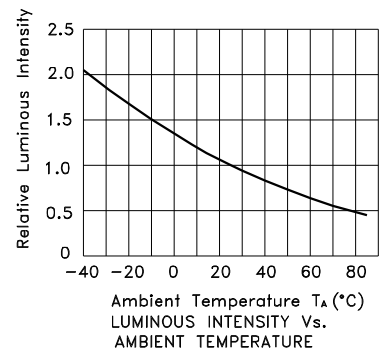
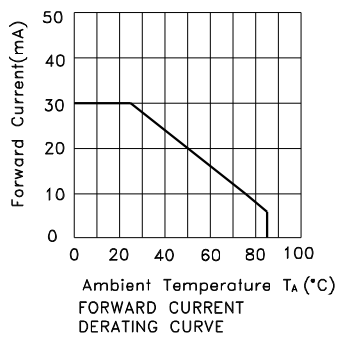
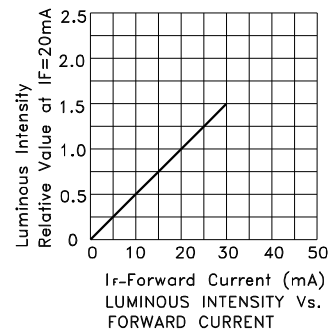
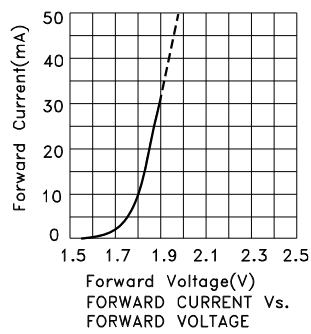
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



Super Bright Red

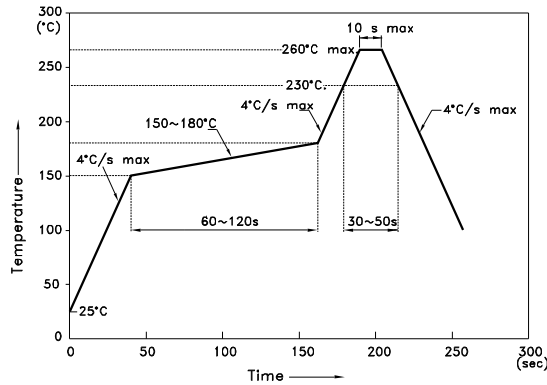
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Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

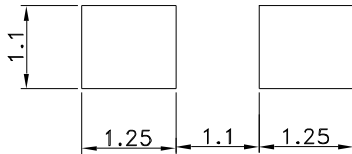
Reflow Soldering Profile For Lead-free SMT Process.



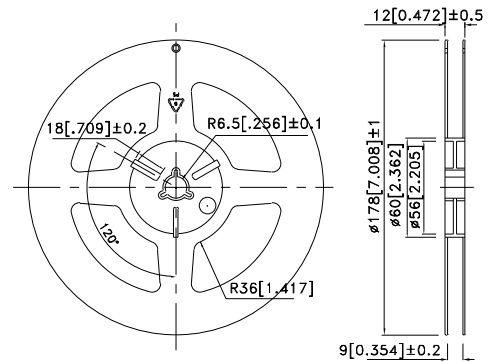
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

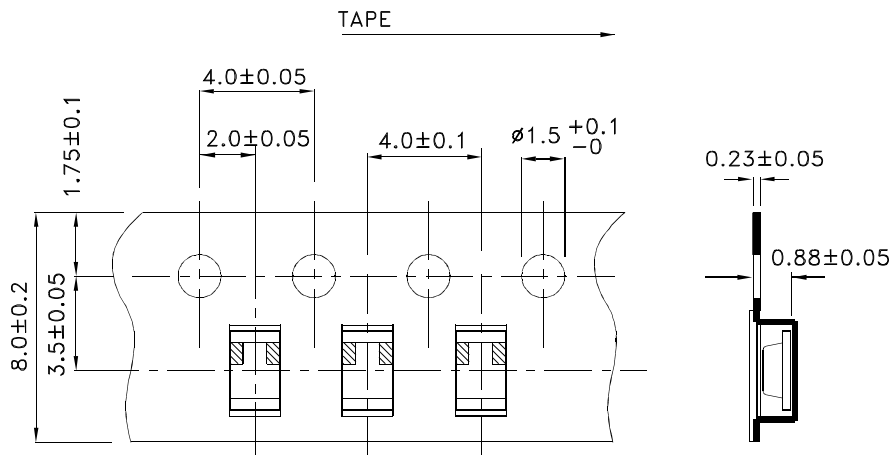
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



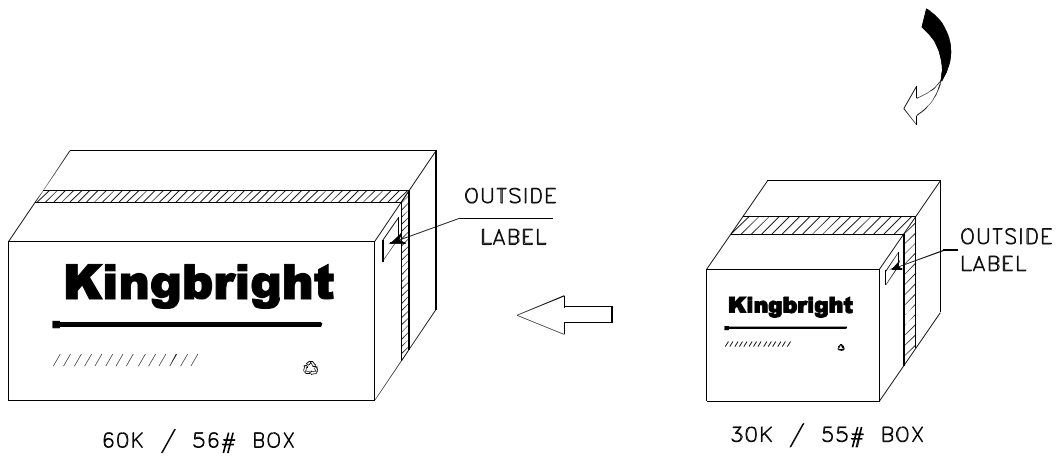
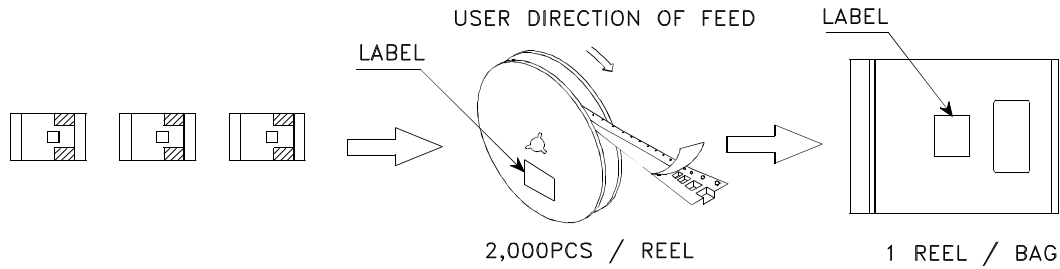
Tape Dimensions (Units : mm)



Kingbright

PACKING & LABEL SPECIFICATIONS

KPT-2012SRD-PRV



| | | | | |
|---------------------|---|-----|------------|--------|
| <h1>Kingbright</h1> | | | | |
| P/NO: KPT-2012xxx | | | | |
| QTY: 2,000 pcs | Q.C. | | | |
| S/N: XXXX | <table border="1"> <tr> <td>Q C</td> </tr> <tr> <td>XX XX XXXX</td> </tr> <tr> <td>PASSED</td> </tr> </table> | Q C | XX XX XXXX | PASSED |
| Q C | | | | |
| XX XX XXXX | | | | |
| PASSED | | | | |
| CODE: XXX | | | | |
| LOT NO: | | | | |
| | | | | |
| RoHS Compliant | | | | |

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes