

Part Number: KA-4040SRCGKCT-R

Super Bright Red
Green

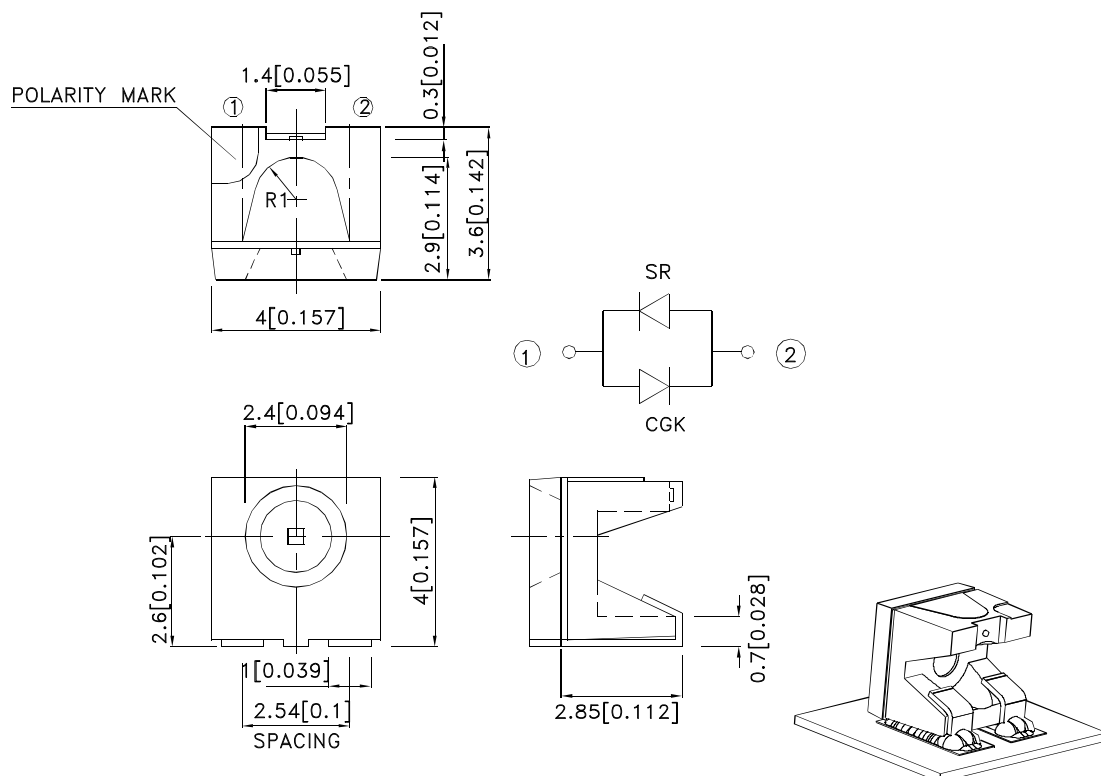
Features

- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Ideal for backlighting.
- Package : 500pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode. The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ 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 |
| KA-4040SRCGKCT-R | Super Bright Red (GaAlAs) | Water Clear | 80 | 200 | 120° |
| | | | *20 | *60 | |
| | Green (AlGaInP) | | 40 | 90 | |
| | | | *40 | *90 | |

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 |
|--------------------|--------------------------|---------------------------|-------------|------------|-------|---------------------------|
| λpeak | Peak Wavelength | Super Bright Red Green | 655 574 | | nm | I _F =20mA |
| λD [1] | Dominant Wavelength | Super Bright Red Green | 640 570 | | nm | I _F =20mA |
| Δλ1/2 | Spectral Line Half-width | Super Bright Red Green | 20 20 | | nm | I _F =20mA |
| C | Capacitance | Super Bright Red Green | 45 15 | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Super Bright Red Green | 1.85 2.1 | 2.5 2.5 | V | I _F =20mA |

Notes:

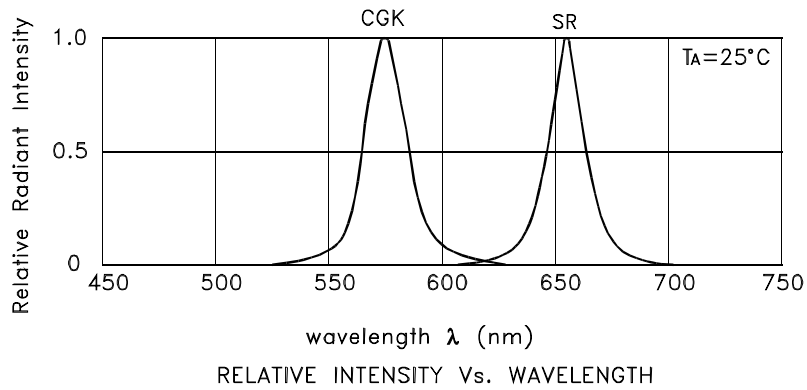
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

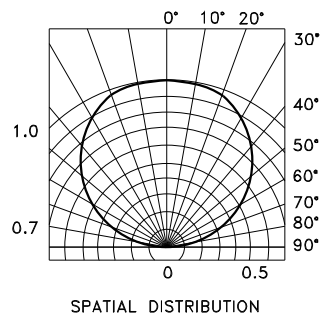
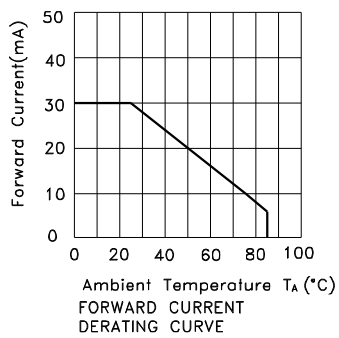
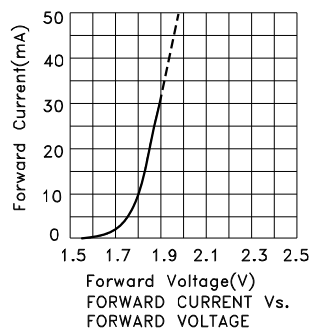
| Parameter | Super Bright Red | Green | Units |
|--------------------------|------------------|-------|-------|
| Power dissipation | 75 | 75 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 155 | 150 | mA |
| Operating Temperature | -40°C To +85°C | | |
| Storage Temperature | -40°C To +85°C | | |

Note:

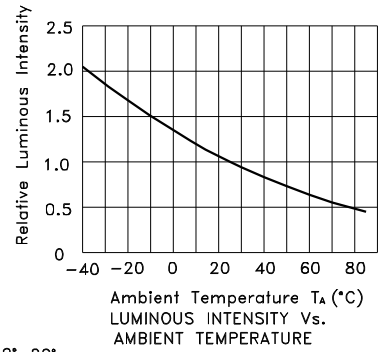
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



KA-4040SRCGKCT-R Super Bright Red



Green



KA-4040SRCGKCT-R

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.

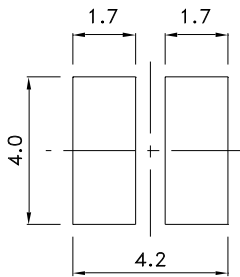
Reflow Soldering Profile For Lead-free SMT Process.



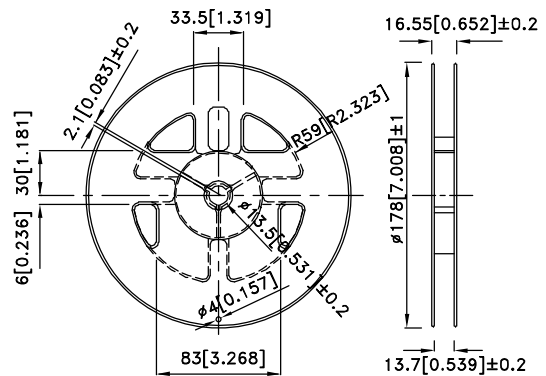
NOTES:

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.

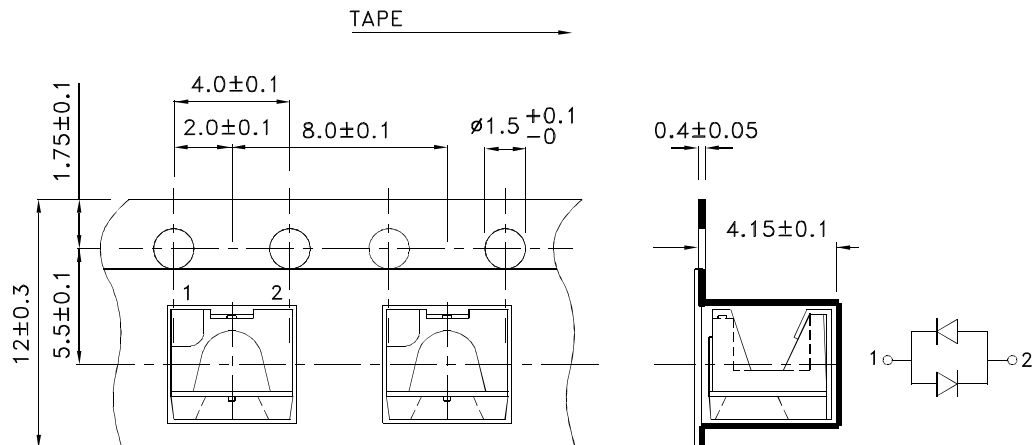
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



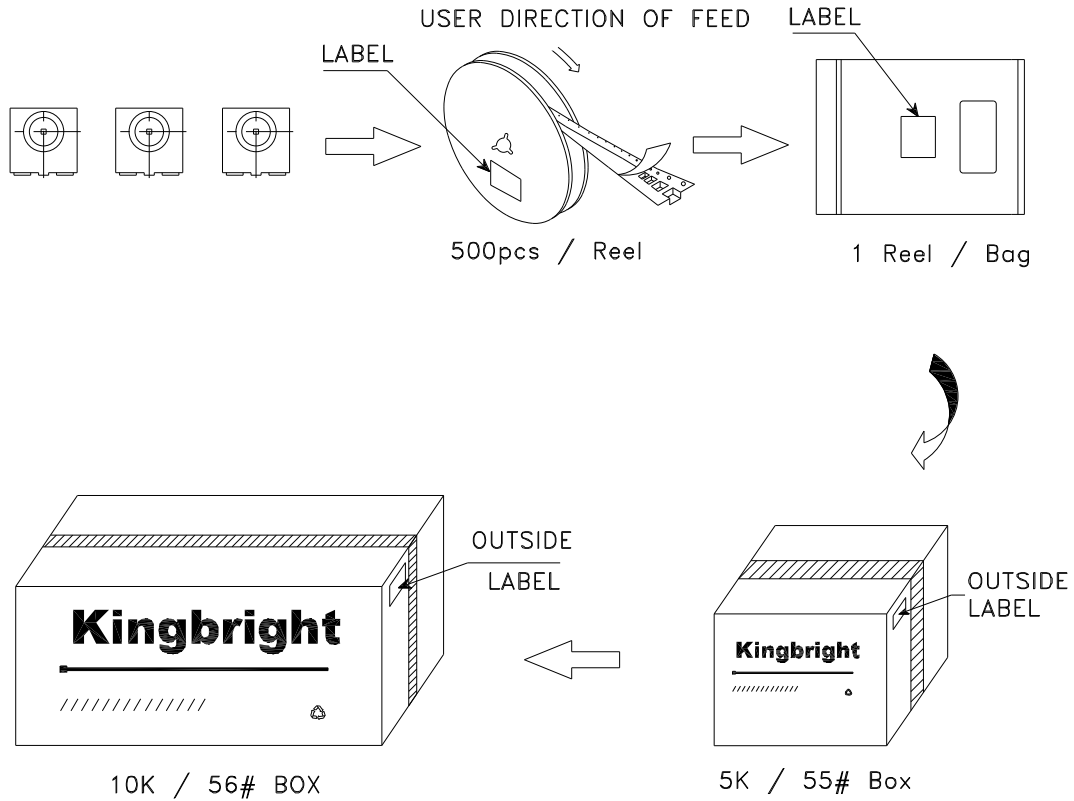
Tape Dimensions (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

KA-4040SRCGKCT-R



| | |
|---|--|
| Kingbright | |
| P/NO: KA-4040xxx | |
| QTY: 500 pcs | Q.C. Q C xx xx xxxx PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  <small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small> | |
| RoHS Compliant | |

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