

Part Number: AA3022SRC-4.5SF

Super Bright Red

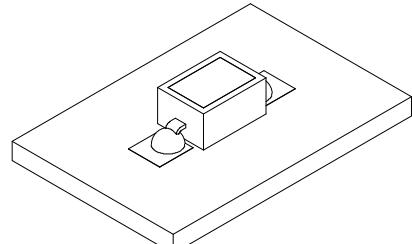
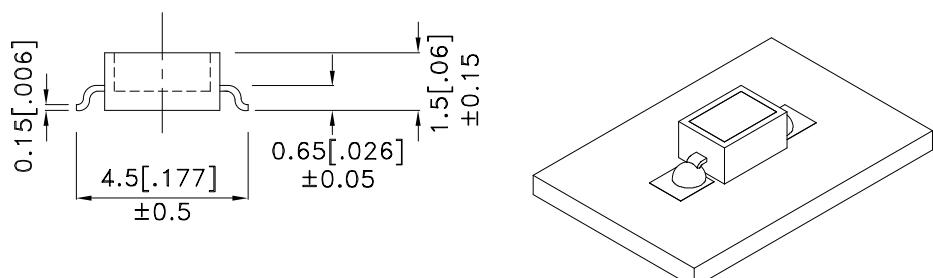
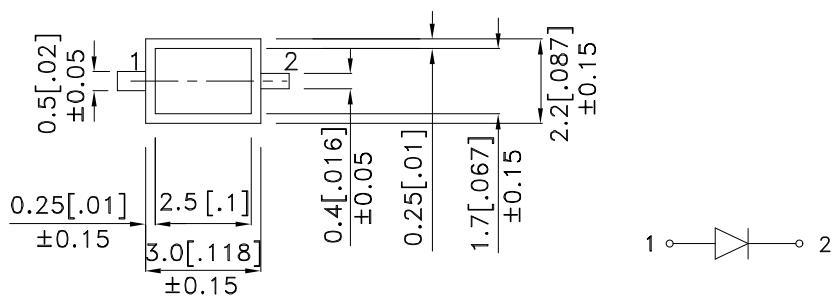
Features

- 3.0mm x 2.2mm SMT LED, 1.5mm thickness.
- White reflector to maximize reflection of light.
- Ultra-compact type assures space saving.
- High efficiency & low power consumption.
- 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.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01")$ unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.
5. The device has a single mounting surface. The device must be mounted according to the specifications.



Kingbright

Selection Guide

| Part No. | Dice | Lens Type | I _v (mcd) [2] @ 20mA | | Viewing Angle [1] |
|-----------------|---------------------------|-------------|---------------------------------|------|-------------------|
| | | | Min. | Typ. | |
| AA3022SRC-4.5SF | Super Bright Red (GaAlAs) | WATER CLEAR | 36 | 150 | 90° |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|--------------------|--------------------------|------------------|------|------|-------|---------------------------|
| λpeak | Peak Wavelength | Super Bright Red | 660 | | nm | I _F =20mA |
| λD [1] | Dominant Wavelength | Super Bright Red | 640 | | nm | I _F =20mA |
| Δλ1/2 | 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:

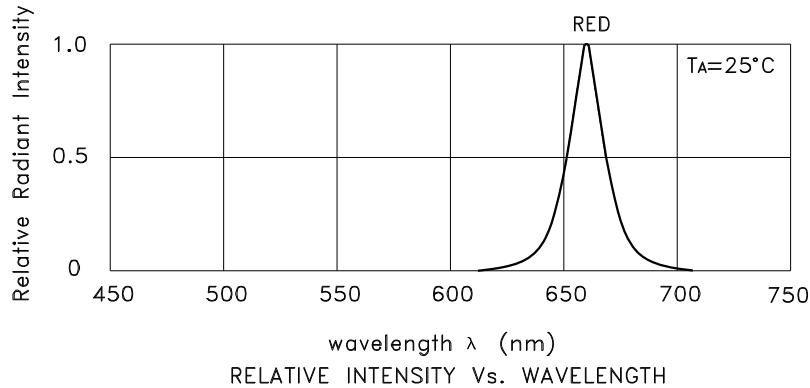
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

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 | |

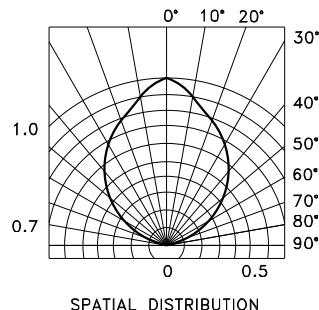
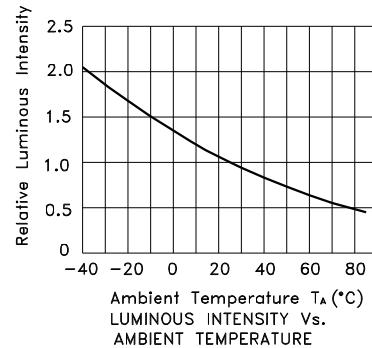
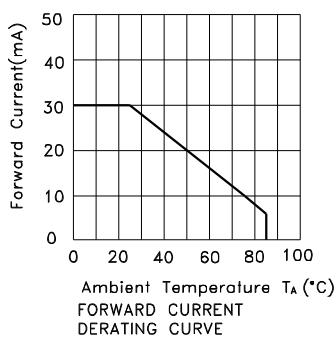
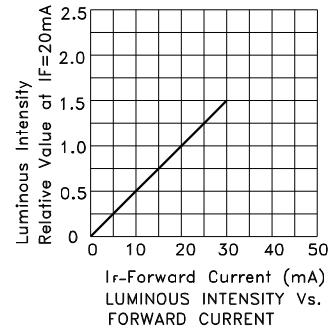
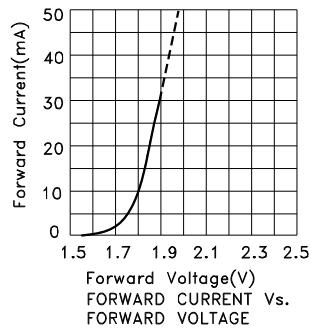
Note:

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



Super Bright Red

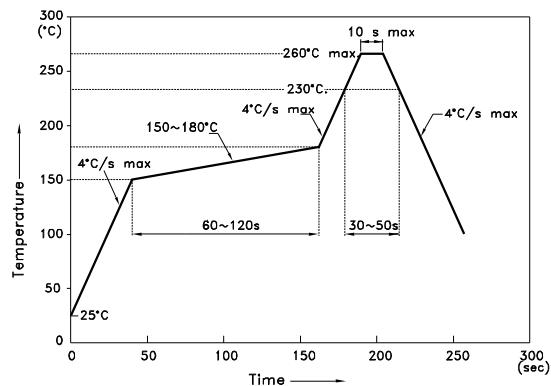
AA3022SRC-4.5SF



AA3022SRC-4.5SF

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.

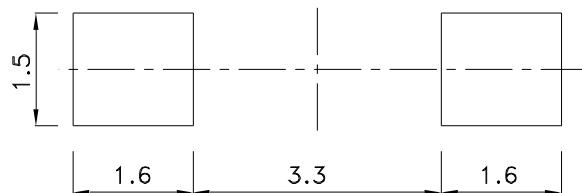


NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (+/- 5^{\circ}\text{C})$. 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.

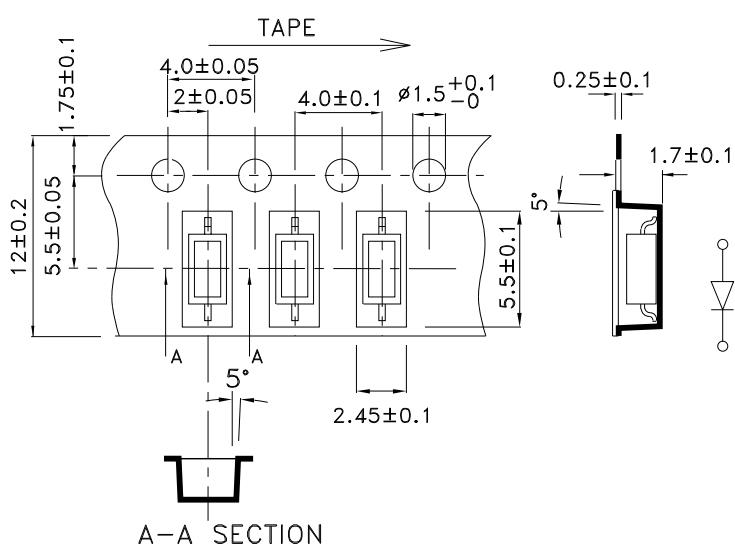
Recommended Soldering Pattern

(Units : mm; Tolerance: ± 0.1)



Tape Dimensions

(Units : mm)



Kingbright

PACKING & LABEL SPECIFICATIONS

AA3022SRC-4.5SF

