

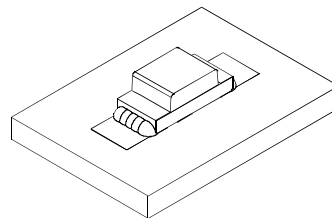
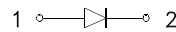
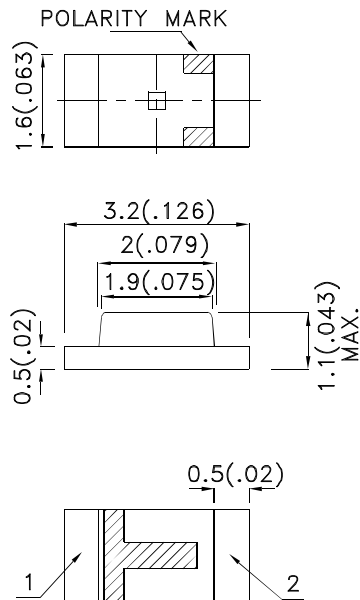
Features

- 3.2mmx1.6mm SMT LED, 1.1mm 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 Hyper Red source color devices are made with Al-GaN on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.0079)$ 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. | |
| KP-3216SURCK-RY | Hyper Red (AlGaInP) | Water Clear | 120 | 230 | 120° |
| | | | *20 | *80 | |

Notes:

1. $\theta_{1/2}$ 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 | Hyper Red | 650 | *645 | | nm | I _F =20mA |
| λ_D [1] | Dominant Wavelength | Hyper Red | 630 | *630 | | nm | I _F =20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red | 28 | | | nm | I _F =20mA |
| C | Capacitance | Hyper Red | 35 | | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Hyper Red | 1.95 | | 2.5 | V | I _F =20mA |
| I _R | Reverse Current | Hyper Red | | | 10 | uA | V _R =5V |

Notes:

1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

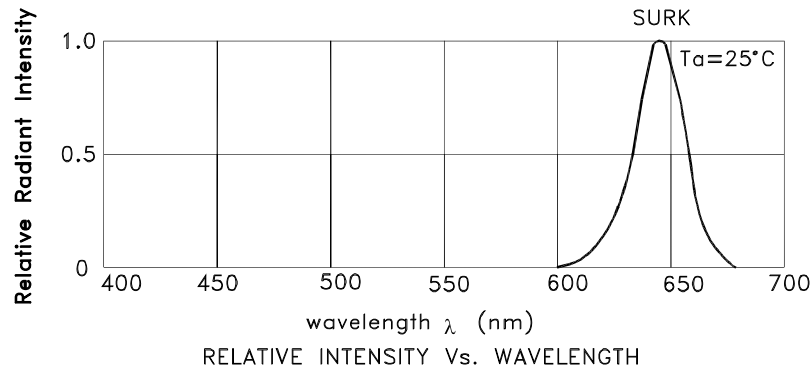
* Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

| Parameter | Hyper Red | Units |
|--------------------------|----------------|-------|
| Power dissipation | 75 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 185 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

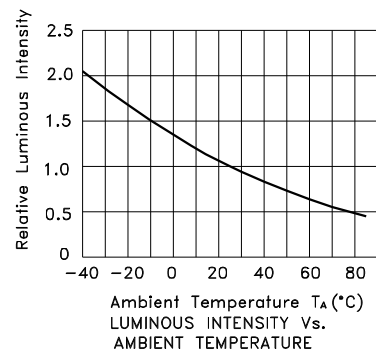
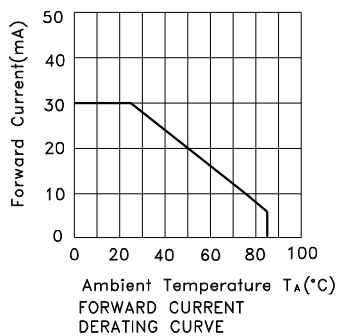
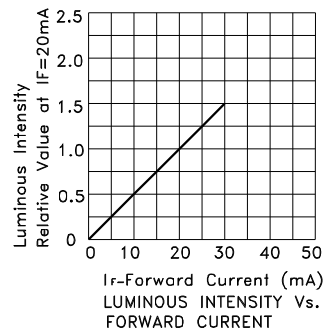
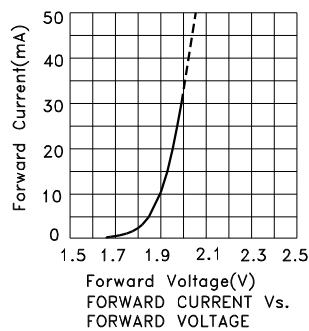
Note:

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



Hyper Red

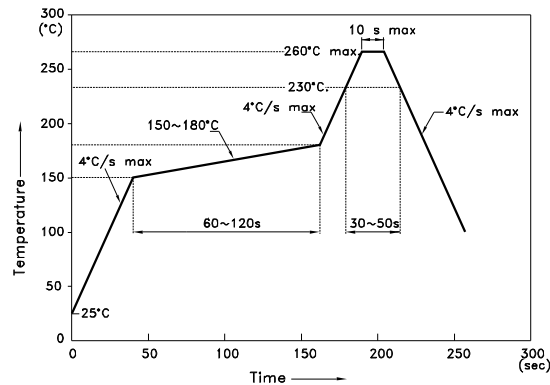
KP-3216SURCK-RY



KP-3216SURCK-RY

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.

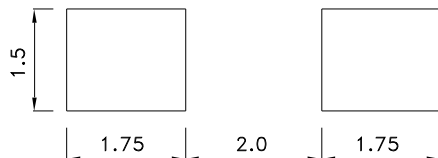
Reflow Soldering Profile For Lead-free SMT Process.



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.

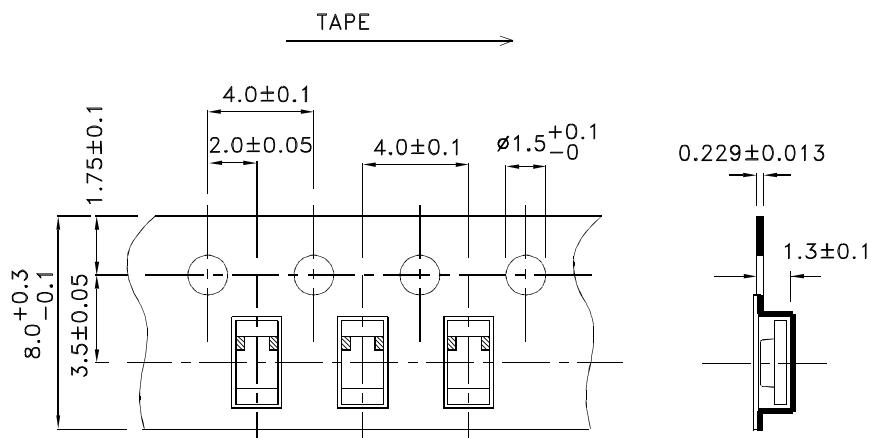
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

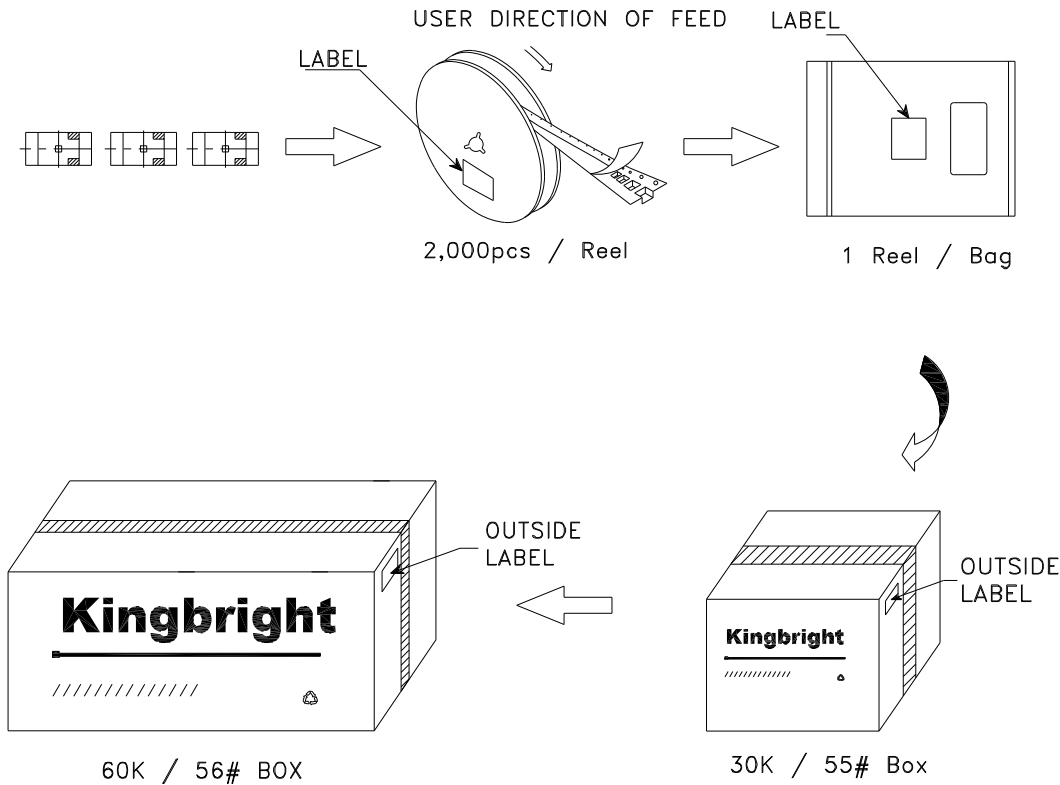



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KP-3216SURCK-RY



| | |
|---|-----------------|
| Kingbright | |
| P/NO: KP-3216XXX | |
| QTY: 2,000 pcs | Q.C. Q C |
| S/N: XXXX | XX XX XXXX |
| CODE: XXX | PASSED |
| LOT NO: | |
|  | |
| RoHS Compliant | |