

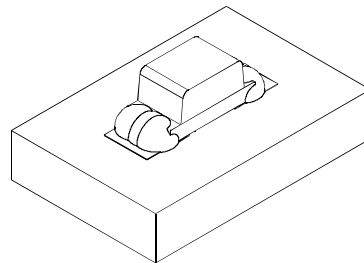
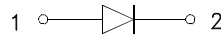
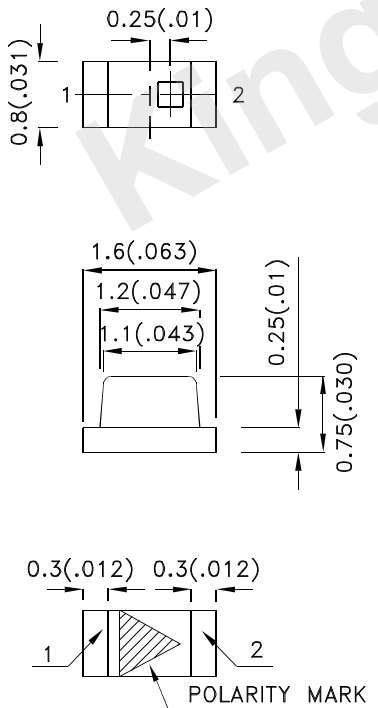
Features

- 1.6mmX0.8mm 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 Hyper Red source color devices are made with Al-GaNp on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 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-1608SURCK | Hyper Red (AlGaInP) | Water Clear | 120 | 230 | 120° |
| | | | *40 | *80 | |

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 | Hyper Red | 645 | | nm | I _F =20mA |
| λ _D [1] | Dominant Wavelength | Hyper Red | 630 | | nm | I _F =20mA |
| Δλ _{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:

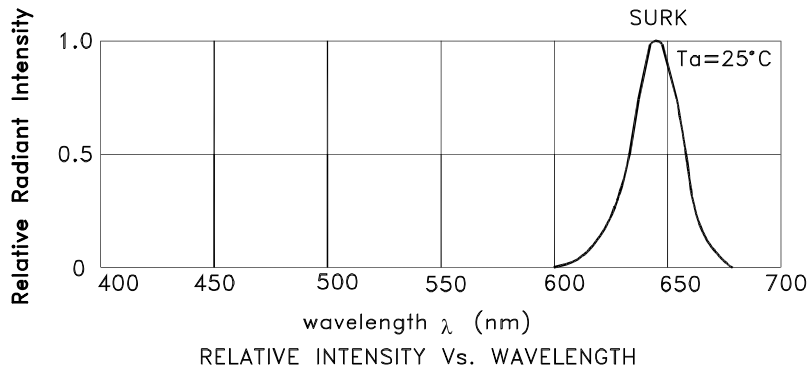
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

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 | |

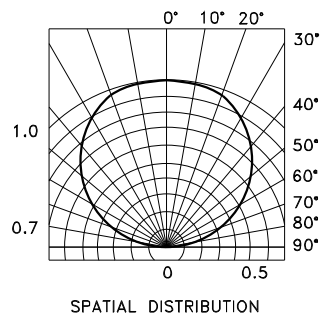
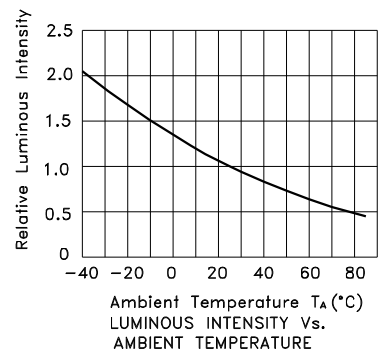
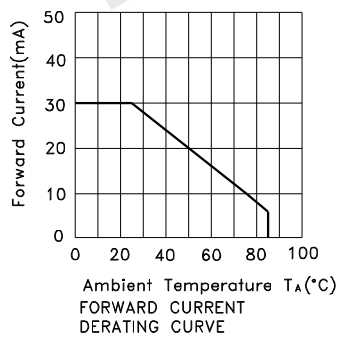
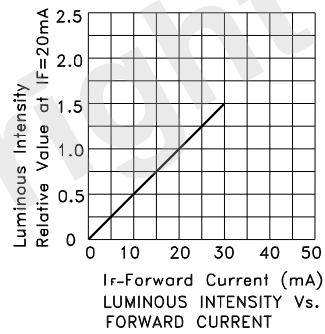
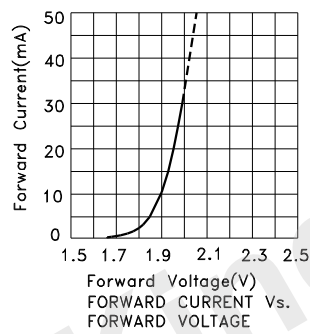
Note:

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



Hyper Red

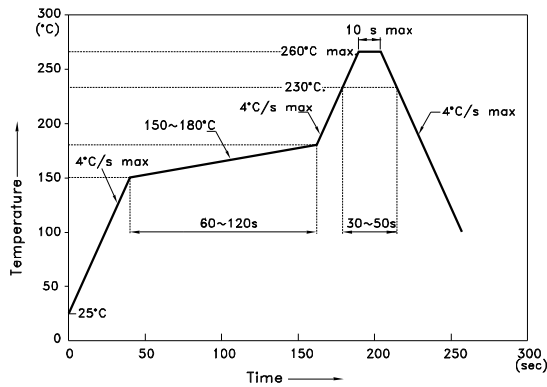
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Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

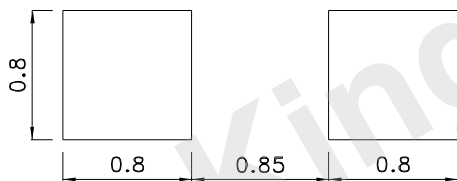
Reflow Soldering Profile For Lead-free SMT Process.



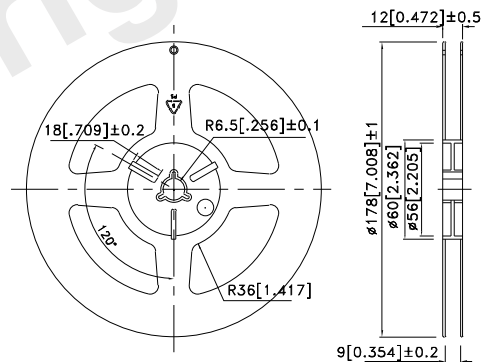
NOTES:

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.

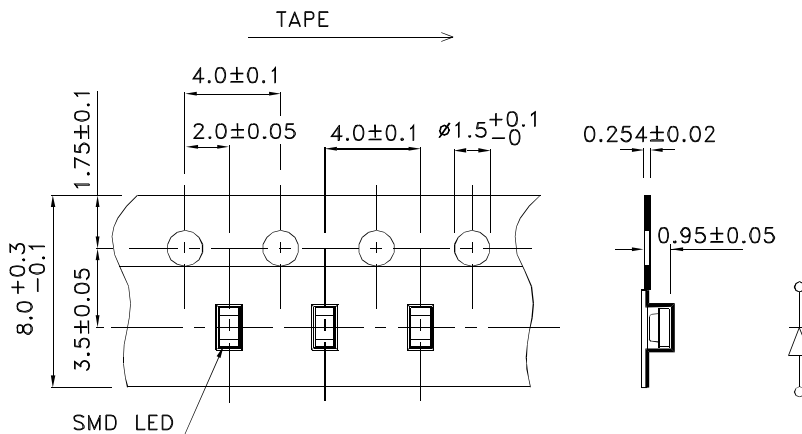
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

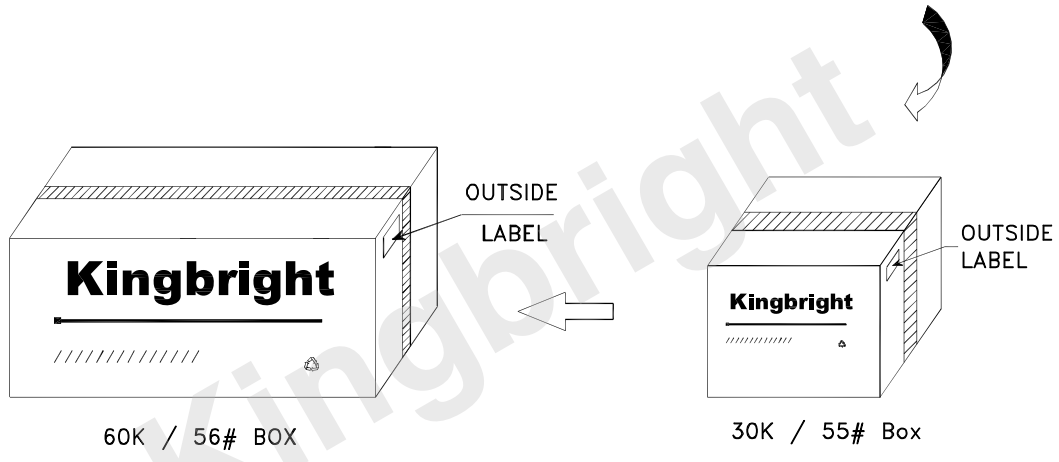
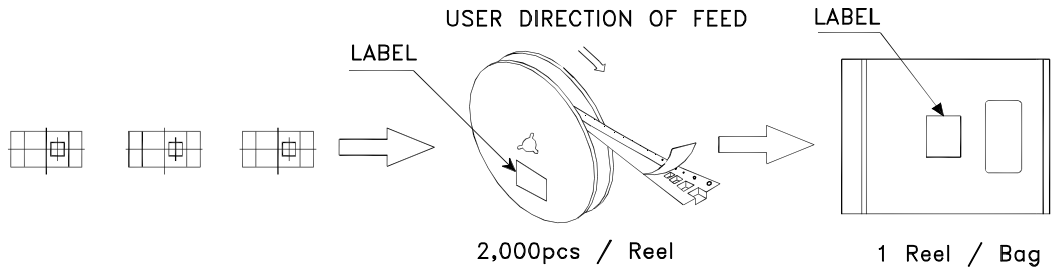


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPT-1608SURCK



| | |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <h2 style="margin: 0;">Kingbright</h2> | |
| P/NO: KPT-1608xxx | |
| QTY: 2,000 pcs | Q.C. |
| S/N: XXXX | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> Q C xx xx xxxx PASSED </div> |
| CODE: XXX | |
| LOT NO: | |
| <small>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx</small> | |
| RoHS Compliant | |

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