



## Selection Guide

| Part No.         | Dice                          | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|------------------|-------------------------------|-------------|------------------------|------|----------------------|
|                  |                               |             | Min.                   | Typ. | 2θ1/2                |
| KPB-3227SURKSYKC | Hyper Red (AlGaInP)           | Water Clear | 120                    | 250  | 100°                 |
|                  | Super Bright Yellow (AlGaInP) |             | 100                    | 150  |                      |

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%.

## Electrical / Optical Characteristics at TA=25°C

| Symbol                | Parameter                | Device                           | Typ.       | Max.       | Units | Test Conditions           |
|-----------------------|--------------------------|----------------------------------|------------|------------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red<br>Super Bright Yellow | 650<br>590 |            | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Hyper Red<br>Super Bright Yellow | 630<br>590 |            | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red<br>Super Bright Yellow | 28<br>20   |            | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Hyper Red<br>Super Bright Yellow | 35<br>20   |            | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Hyper Red<br>Super Bright Yellow | 1.95<br>2  | 2.5<br>2.5 | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Hyper Red<br>Super Bright Yellow |            | 10<br>10   | uA    | V <sub>R</sub> = 5V       |

Notes:

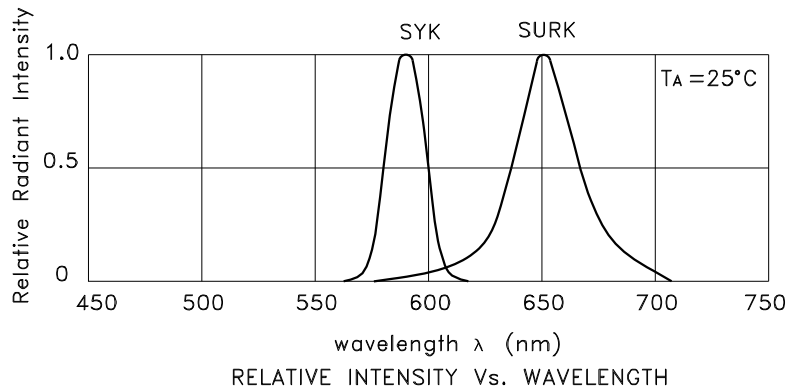
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

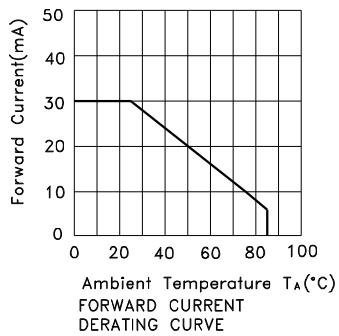
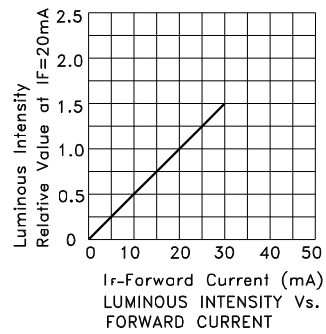
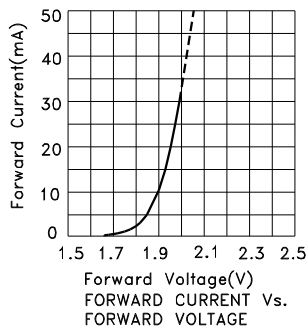
| Parameter                | Hyper Red      | Super Bright Yellow | Units |
|--------------------------|----------------|---------------------|-------|
| Power dissipation        | 75             | 75                  | mW    |
| DC Forward Current       | 30             | 30                  | mA    |
| Peak Forward Current [1] | 185            | 175                 | 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.

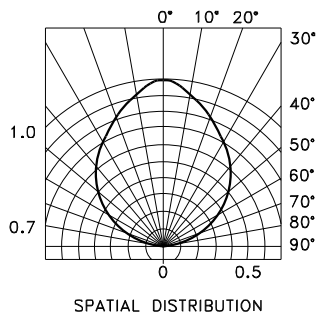
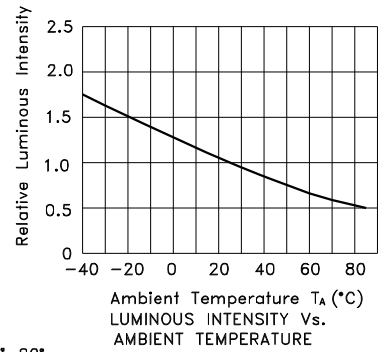
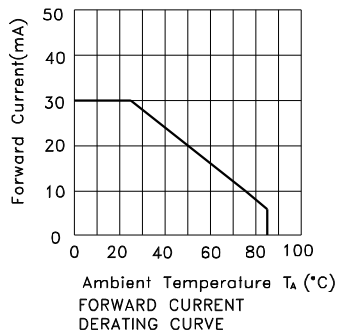
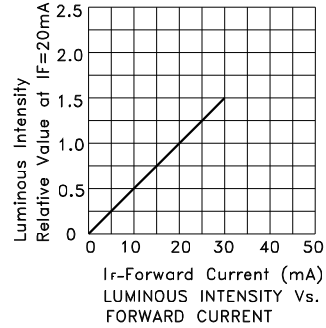
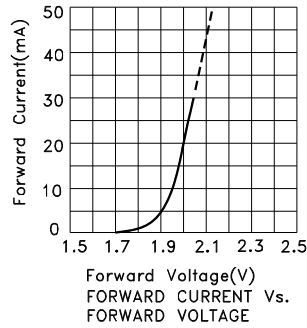


## KPB-3227SURKSYKC Hyper Red



# Kingbright

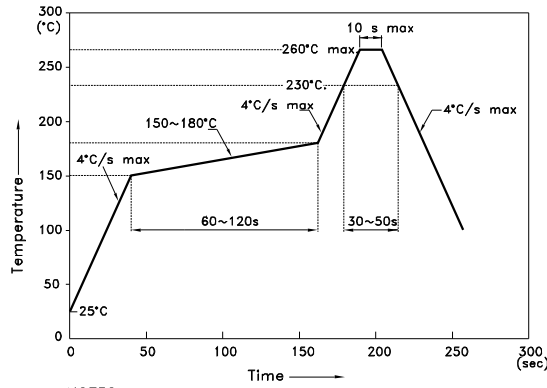
## Super Bright Yellow



## KPB-3227SURKSYKC

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.

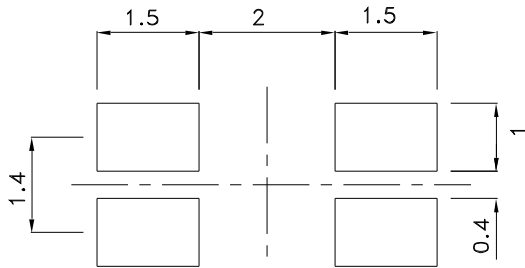
Reflow Soldering Profile For Lead-free SMT Process.



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.

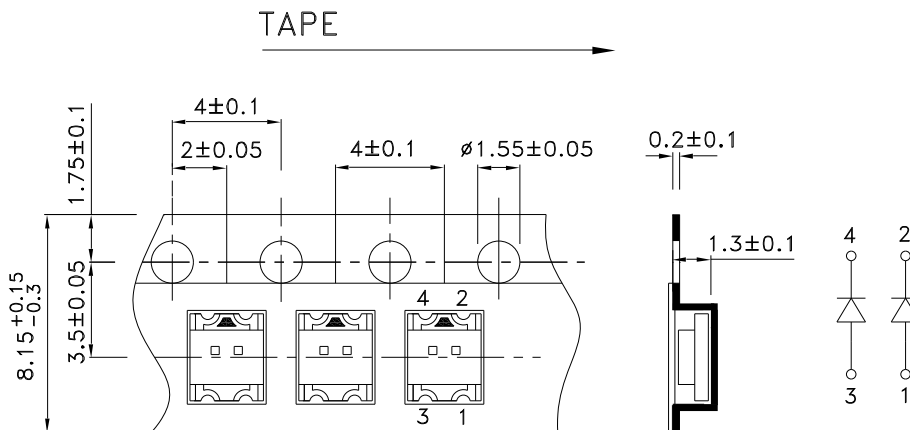
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

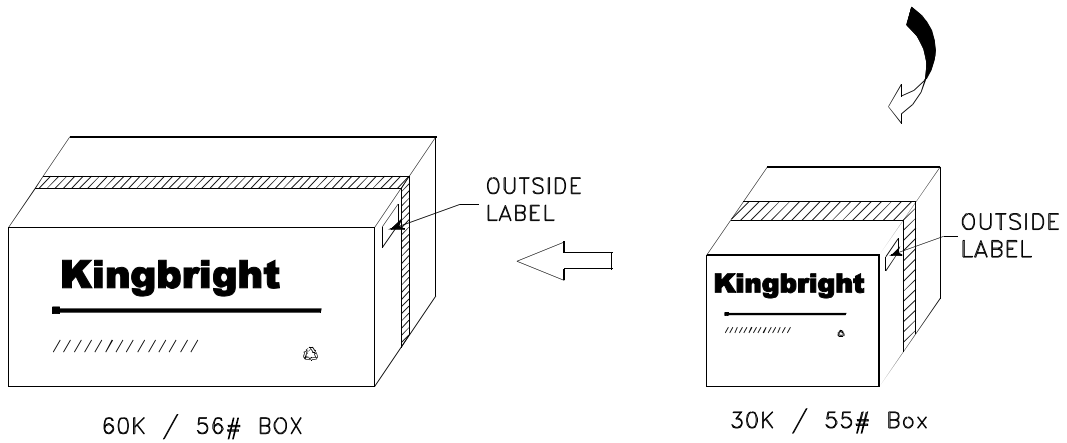
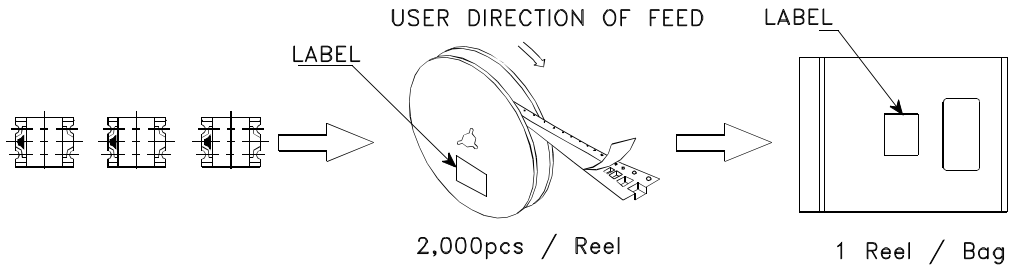



### Tape Dimensions (Units : mm)



**PACKING & LABEL SPECIFICATIONS**

**KPB-3227SURKSYKC**



|  |  |
|--|--|
| <h1>Kingbright</h1>  |  |
| P/NO: KPB-3227xxx  |  |
| QTY: 2,000 pcs   | Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C<br/>XX XX XXXX<br/>PASSED</span> |
| S/N: XXXX  |  |
| CODE: XXX  |  |
| LOT NO:  |  |
| <br>xxxxxxxxxxxxxxxxxxxxxxxx |  |
| RoHS Compliant   |  |