

KPTB-1615SURKSGC

HYPER RED

SUPER BRIGHT GREEN

### Features

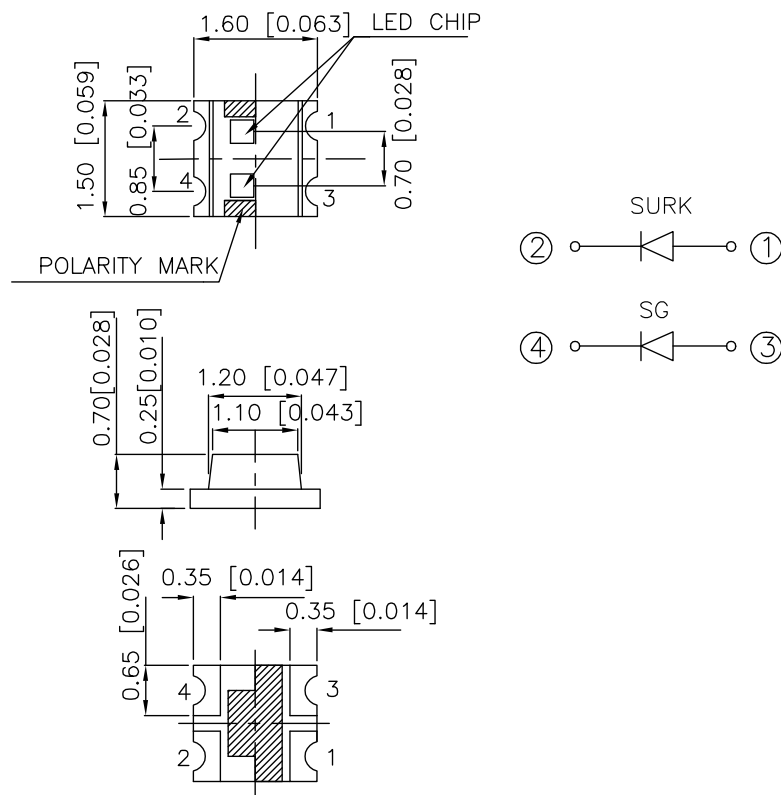
- 1.6mmx1.5mm SMT LED, 0.7mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

### Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2$  (0.008") unless otherwise noted.
3. Specifications are subject to change without notice.

## Selection Guide

| Part No.         | Dice                     | Lens Type   | Iv (mcd)<br>@ 20mA |      | Viewing<br>Angle |
|------------------|--------------------------|-------------|--------------------|------|------------------|
|                  |                          |             | Min.               | Typ. | 2 $\theta$ 1/2   |
| KPTB-1615SURKSGC | HYPER RED (InGaAlP)      | WATER CLEAR | 70                 | 150  | 120°             |
|                  | SUPER BRIGHT GREEN (GaP) |             | 4                  | 12   |                  |

Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

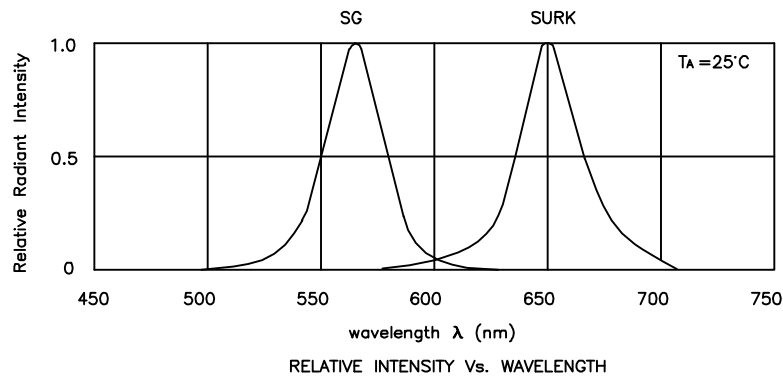
| Symbol                | Parameter                | Device                          | Typ.        | Max.       | Units | Test Conditions |
|-----------------------|--------------------------|---------------------------------|-------------|------------|-------|-----------------|
| $\lambda_{peak}$      | Peak Wavelength          | Hyper Red<br>Super Bright Green | 650<br>565  |            | nm    | IF=20mA         |
| $\lambda_D$           | Dominant Wavelength      | Hyper Red<br>Super Bright Green | 635<br>568  |            | nm    | IF=20mA         |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red<br>Super Bright Green | 28<br>30    |            | nm    | IF=20mA         |
| C                     | Capacitance              | Hyper Red<br>Super Bright Green | 35<br>15    |            | pF    | VF=0V;f=1MHz    |
| VF                    | Forward Voltage          | Hyper Red<br>Super Bright Green | 1.95<br>2.2 | 2.5<br>2.5 | V     | IF=20mA         |
| IR                    | Reverse Current          | Hyper Red<br>Super Bright Green |             | 10<br>10   | uA    | VR = 5V         |

## Absolute Maximum Ratings at TA=25°C

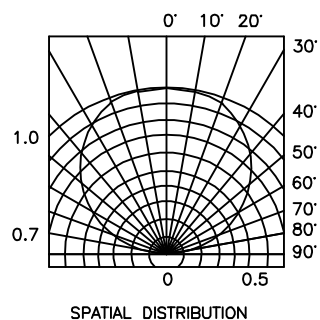
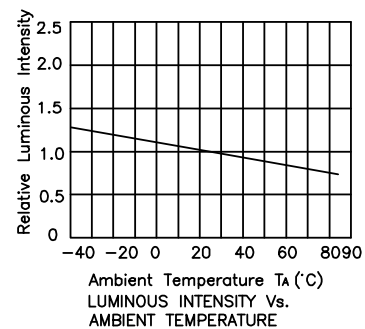
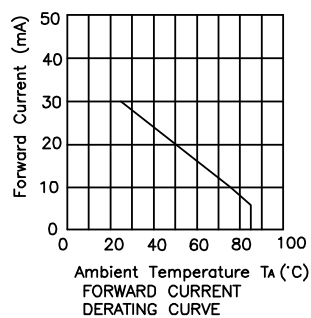
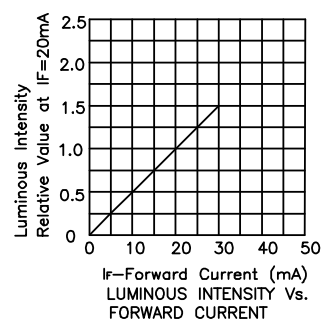
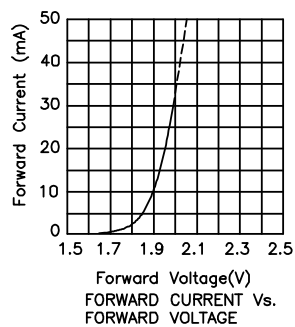
| Parameter                     | Hyper Red      | Super Bright Green | Units |
|-------------------------------|----------------|--------------------|-------|
| Power dissipation             | 170            | 105                | mW    |
| DC Forward Current            | 30             | 25                 | mA    |
| Peak Forward Current [1]      | 185            | 140                | mA    |
| Reverse Voltage               | 5              |                    | V     |
| Operating/storage Temperature | -40°C To +85°C |                    |       |

Note:

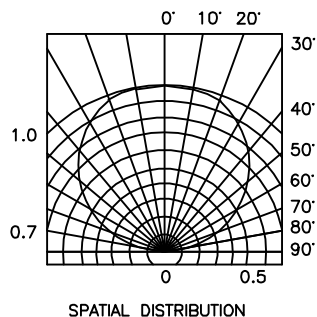
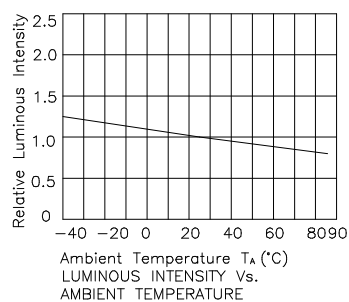
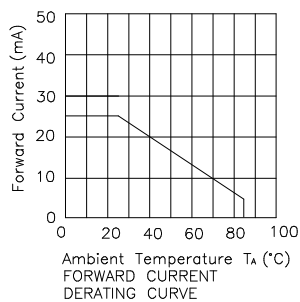
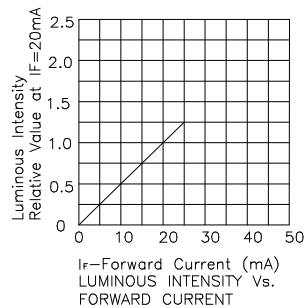
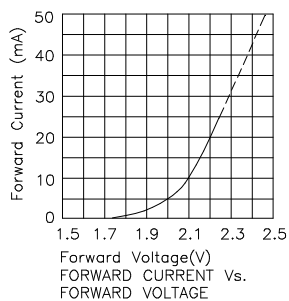
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



KPTB-1615SURKSGC  
Hyper Red

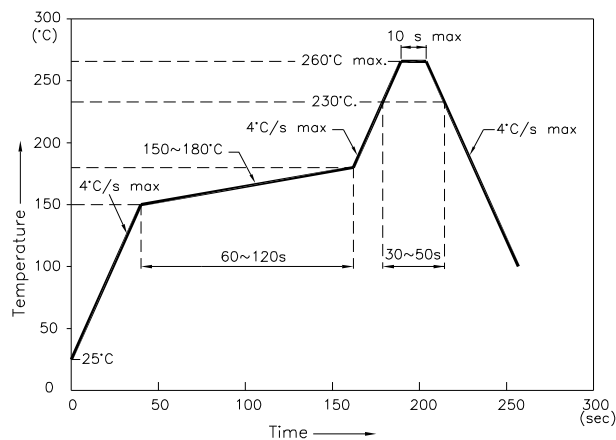


## Super Bright Green



**KPTB-1615SURKSGC**

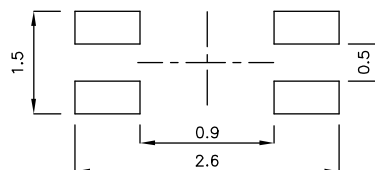
## Reflow Soldering Profile For Lead-free SMT Process.



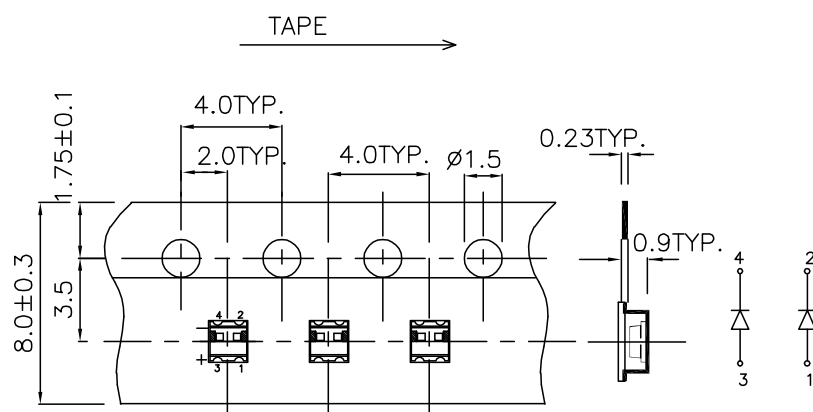
NOTES:

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)



### Tape Specifications (Units : mm)



## Remarks:

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous intensity/ luminous flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.