

KPTB-1612SURKCGKC

HYPER RED
GREEN

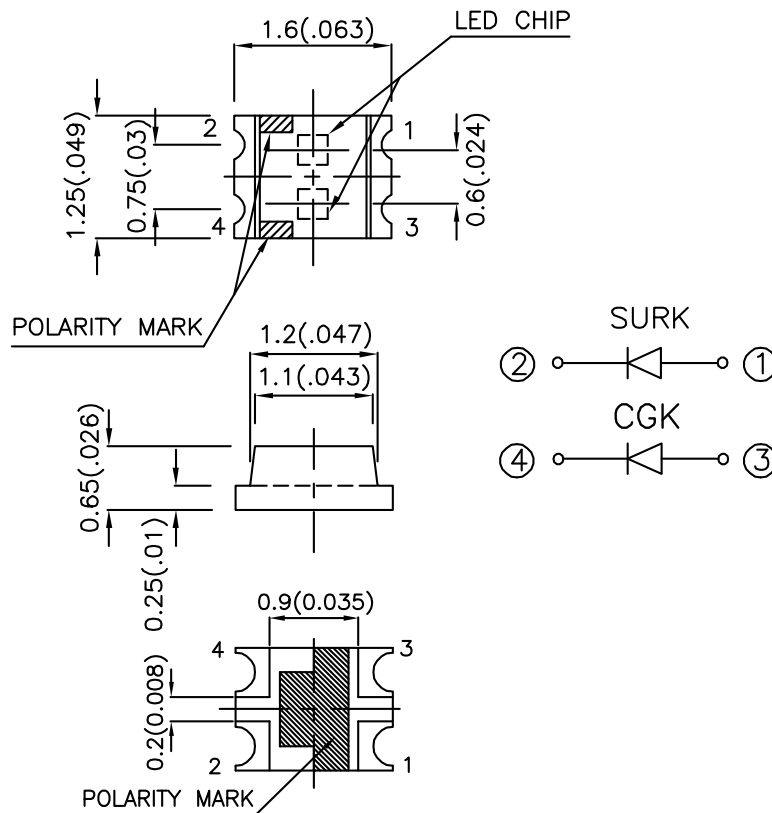
Features

- 1.6mmX1.25mm SMT LED, 0.65mm THICKNESS.
- BI-COLOR, 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 Green source color devices are made with InGaAlP on GaAs substrate 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) @ 20mA | | Viewing Angle |
|-------------------|----------------------|-------------|--------------------|------|------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KPTB-1612SURKCGKC | HYPERS RED (InGaAlP) | WATER CLEAR | 70 | 150 | 120° |
| | GREEN (InGaAlP) | | 18 | 50 | |

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at TA=25°C

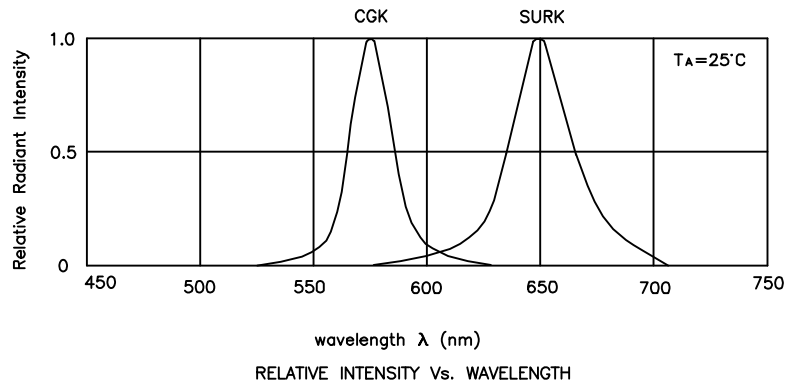
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|--------------------|-------------|------------|-------|-----------------|
| λ_{peak} | Peak Wavelength | Hyper Red Green | 650 574 | | nm | IF=20mA |
| λ_D | Dominant Wavelength | Hyper Red Green | 635 570 | | nm | IF=20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red Green | 28 20 | | nm | IF=20mA |
| C | Capacitance | Hyper Red Green | 35 15 | | pF | VF=0V;f=1MHz |
| VF | Forward Voltage | Hyper Red Green | 1.95 2.1 | 2.5 2.5 | V | IF=20mA |
| IR | Reverse Current | Hyper Red Green | | 10 10 | uA | VR = 5V |

Absolute Maximum Ratings at TA=25°C

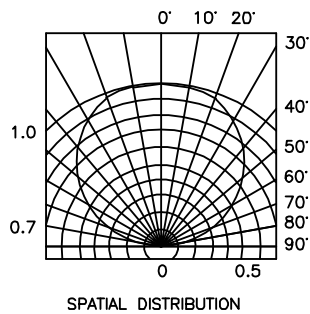
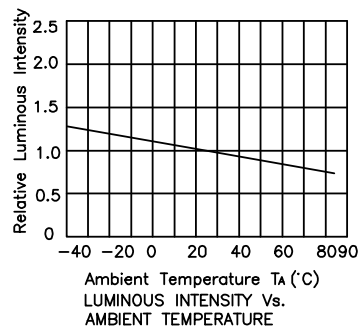
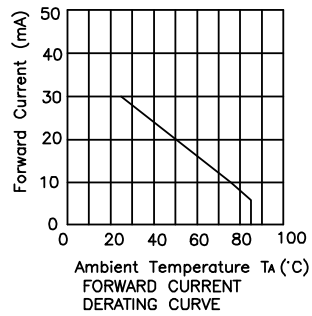
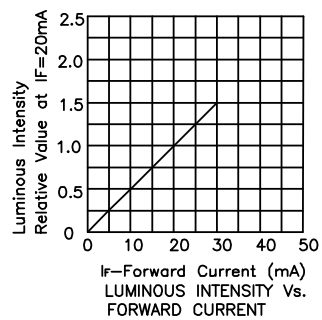
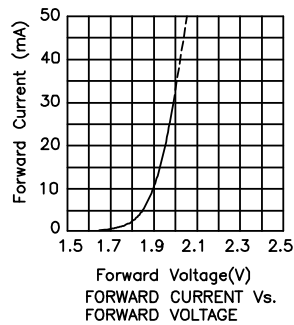
| Parameter | Hyper Red | Green | Units |
|---------------------------------|----------------|-------|-------|
| Power dissipation | 170 | 105 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 185 | 150 | mA |
| Reverse Voltage | 5 | 5 | V |
| Operating / storage Temperature | -40°C To +85°C | | |

Note:

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

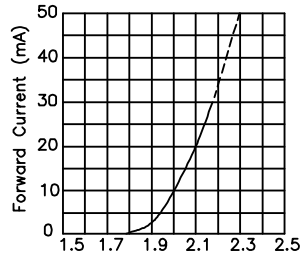


KPTB-1612SURKCGKC Hyper Red

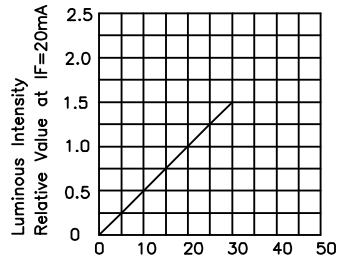


Kingbright

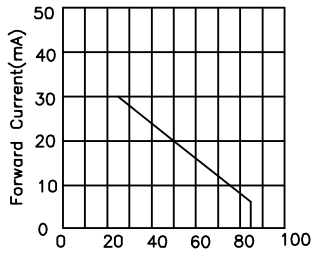
Green



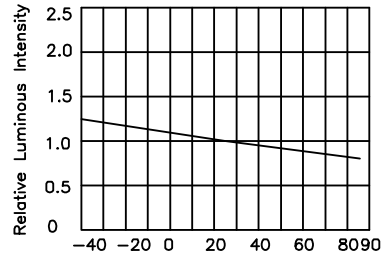
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



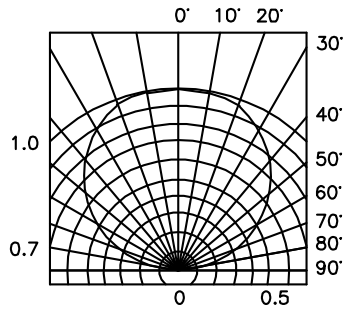
IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_a (°C)
FORWARD CURRENT
DERATING CURVE



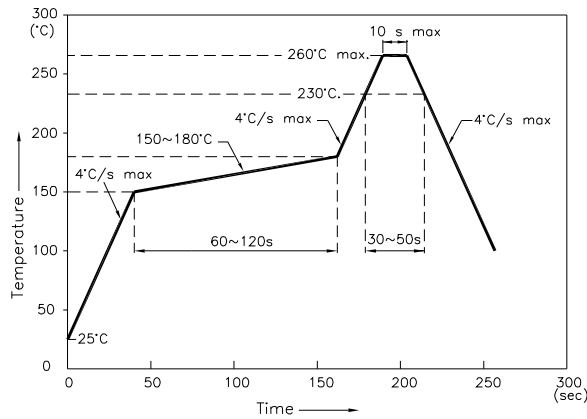
Ambient Temperature T_a (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

KPTB-1612SURKCGKC

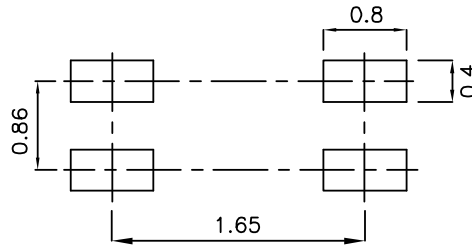
Reflow Soldering Profile For Lead-free SMT Process.



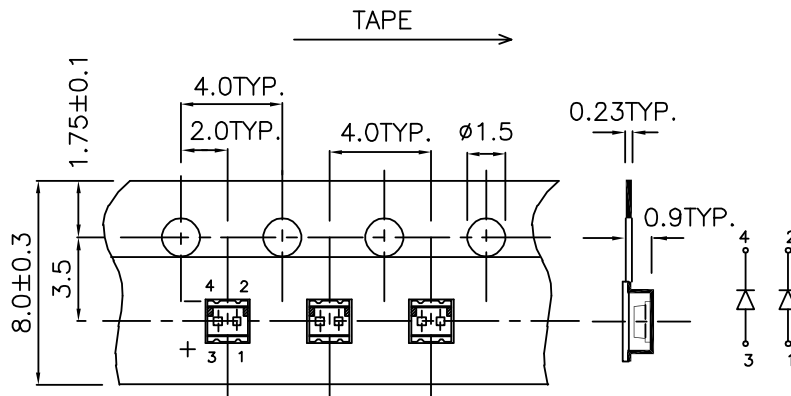
NOTES:

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: +/-1nm
2. Luminous Intensity/ Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.