

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KPTB-1612PBASEKC

Blue
Super Bright Orange

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.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

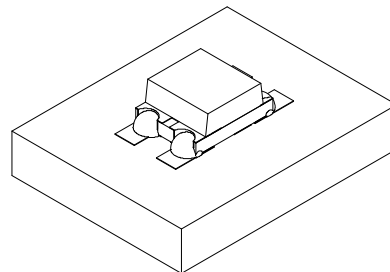
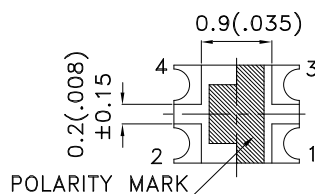
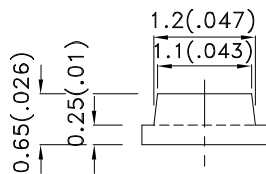
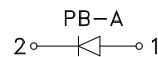
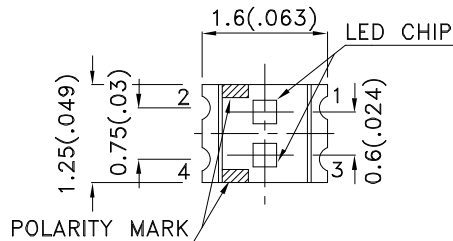
The Super Bright Orange device is made with InGaAlP (on GaAs substrate) light emitting diode chip.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

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.
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 |
| KPTB-1612PBASEKC | Blue (InGaN) | WATER CLEAR | 18 | 60 | 120° |
| | Super Bright Orange (InGaAlP) | | 70 | 140 | |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ Luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|-----------------------------|------------|----------|-------|-----------------|
| λpeak | Peak Wavelength | Blue Super Bright Orange | 468 610 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Blue Super Bright Orange | 470 601 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Blue Super Bright Orange | 21 29 | | nm | IF=20mA |
| C | Capacitance | Blue Super Bright Orange | 100 15 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Blue Super Bright Orange | 3.2 2.1 | 4 2.5 | V | IF=20mA |
| IR | Reverse Current | Blue Super Bright Orange | | 10 10 | uA | VR = 5V |

Notes:

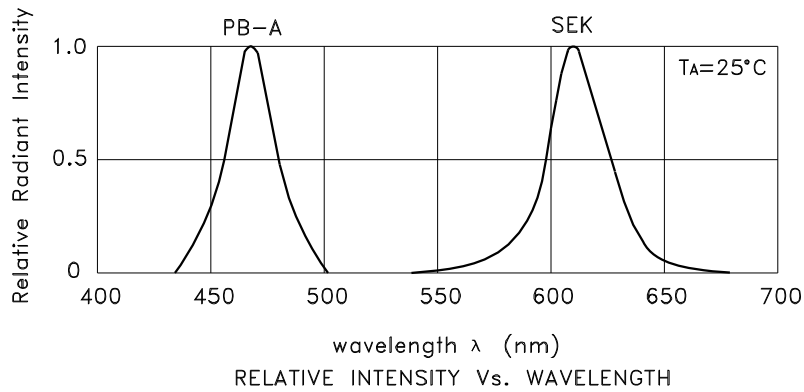
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

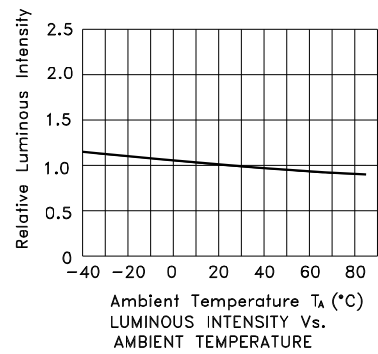
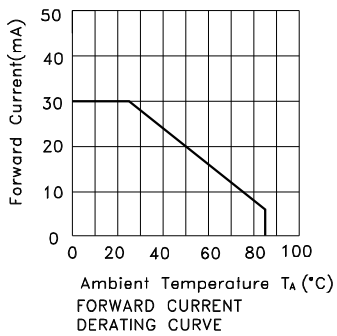
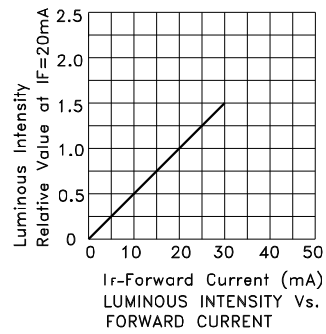
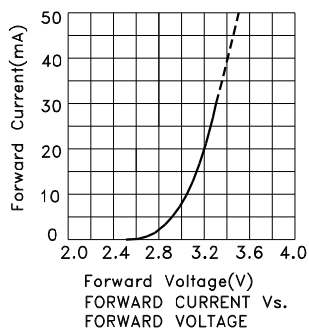
| Parameter | Blue | Super Bright Orange | Units |
|--------------------------|----------------|---------------------|-------|
| Power dissipation | 120 | 75 | mW |
| DC Forward Current | 30 | 30 | mA |
| Peak Forward Current [1] | 100 | 195 | mA |
| Reverse Voltage | 5 | | V |
| Operating Temperature | -40°C To +85°C | | |
| Storage Temperature | -40°C To +85°C | | |

Note:

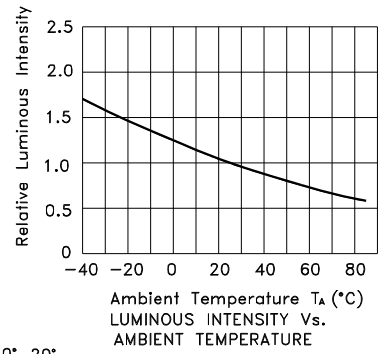
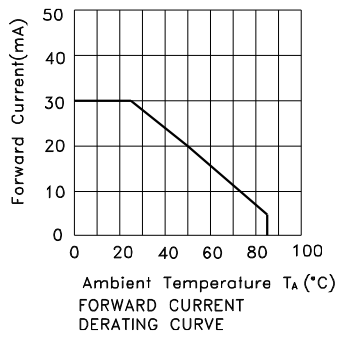
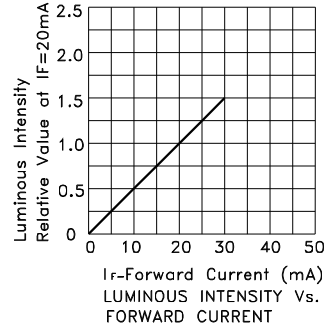
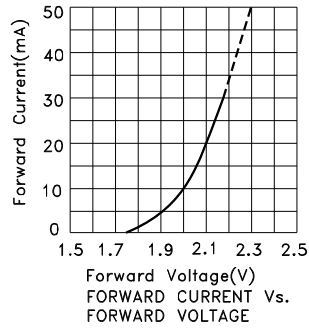
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



KPTB-1612PBASEKC Blue

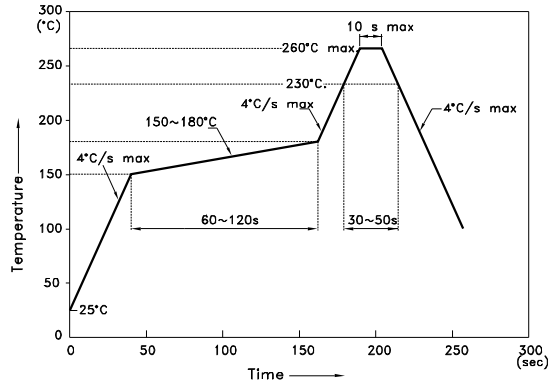


Super Bright Orange



KPTB-1612PBASEKC

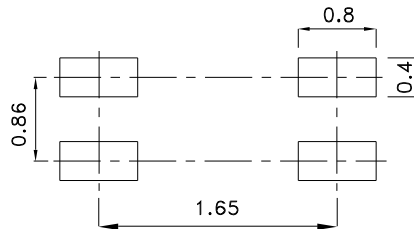
Reflow Soldering Profile For Lead-free SMT Process.



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)



Tape Specifications (Units : mm)

