Kingbright

**3.2x1.6mm SMD CHIP LED LAMP**

**ATTENTION**
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

KP-3216PBC BLUE

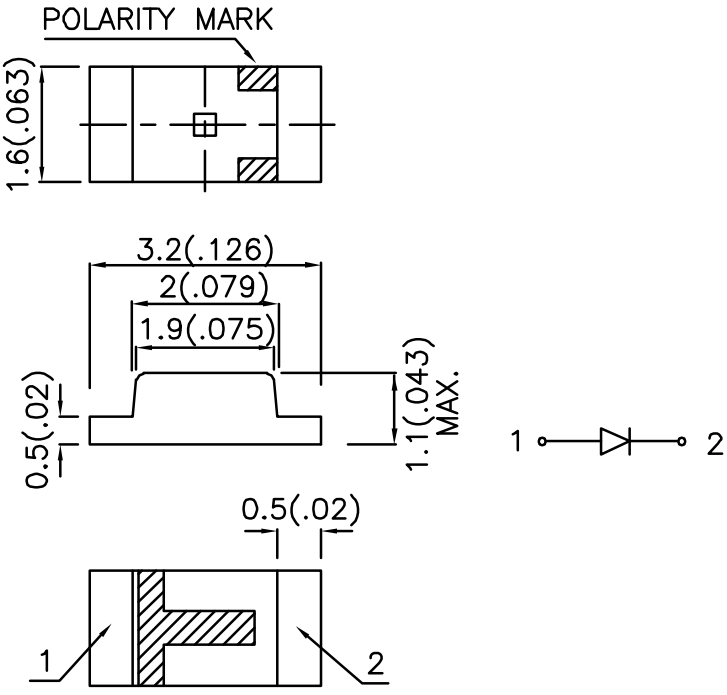
## Features

- ●3.2mmx1.6mm SMT LED, 1.1mm 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 Blue source color devices are made with InGaN on SiC Light Emitting Diode.
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 ±0.2(0.0079") unless otherwise noted.
3. Specifications are subject to change without notice.

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## Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 20mA | | Viewing Angle |
|---|---|---|---|---|---|
| | | | Min. | Typ. | 2θ1/2 |
| KP-3216PBC | BLUE (InGaN) | WATER CLEAR | 18 | 60 | 120° |

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

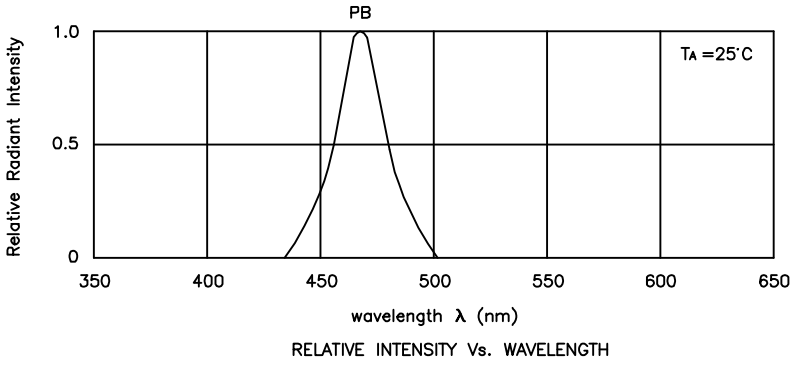
## Electrical / Optical Characteristics at $T_A$=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|---|---|---|---|---|---|---|
| λpeak | Peak Wavelength | Blue | 468 | | nm | $I_F$=20mA |
| λD | Dominant Wavelength | Blue | 470 | | nm | $I_F$=20mA |
| Δλ1/2 | Spectral Line Half-width | Blue | 25 | | nm | $I_F$=20mA |
| C | Capacitance | Blue | 65 | | pF | $V_F$=0V;f=1MHz |
| $V_F$ | Forward Voltage | Blue | 3.65 | 4.2 | V | $I_F$=20mA |
| $I_R$ | Reverse Current | Blue | | 10 | uA | $V_R$ = 5V |

## Absolute Maximum Ratings at $T_A$=25°C

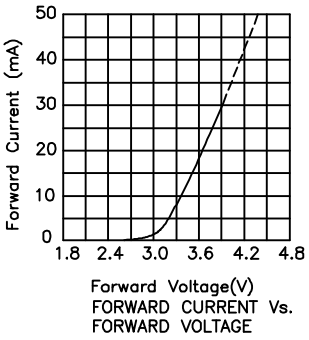
| Parameter | Blue | Units |
|---|---|---|
| Power dissipation | 102 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 160 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | |

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

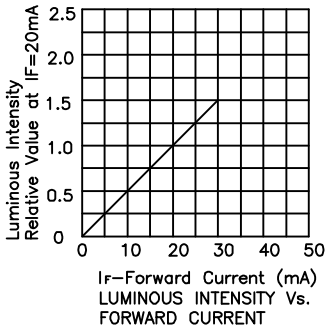



RELATIVE INTENSITY Vs. WAVELENGTH

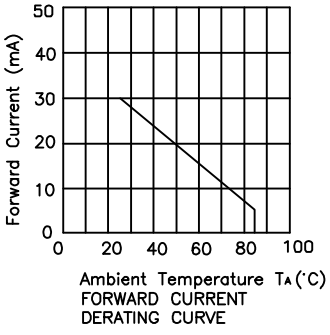
**Blue** **KP-3216PBC**



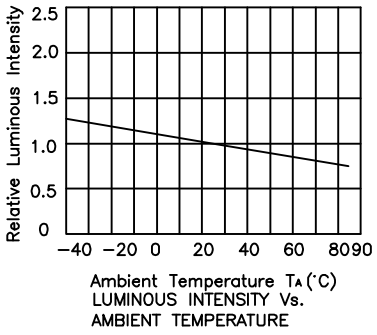

FORWARD CURRENT Vs.
FORWARD VOLTAGE



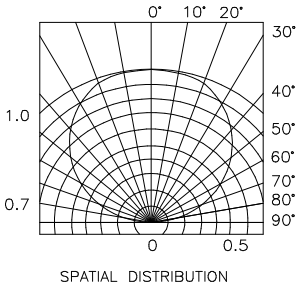

LUMINOUS INTENSITY Vs.
FORWARD CURRENT




FORWARD CURRENT
DERATING CURVE



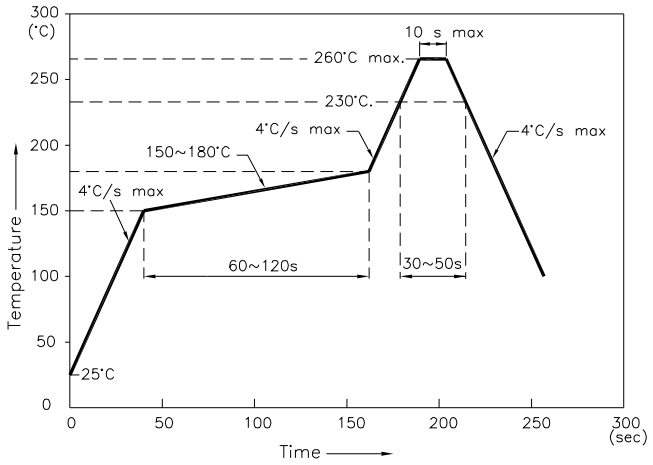

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE




SPATIAL DISTRIBUTION

**KP-3216PBC**

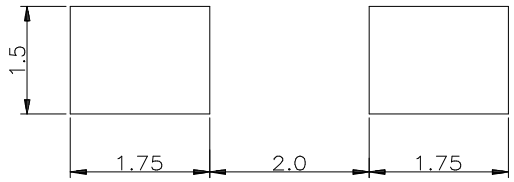
Reflow Soldering Profile For Lead-free SMT Process.



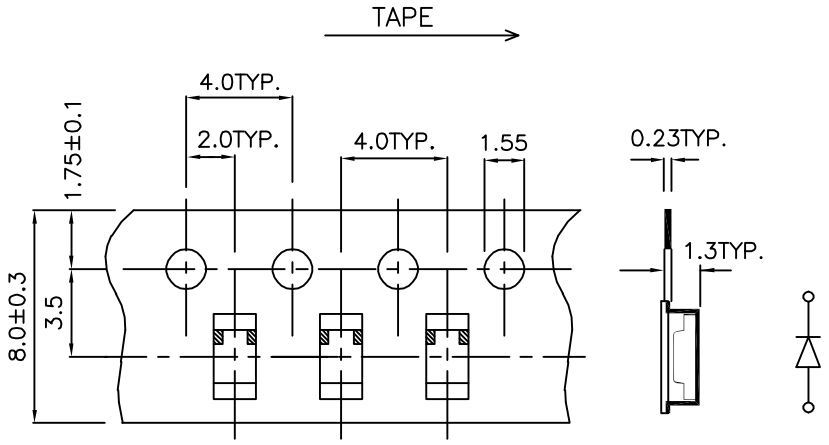

NOTES:

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, or wavelength), the typical accuracy of the sorting process is as follows:

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

Note: Accuracy may depend on the sorting parameters.