



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KPA-1606VBC-D

Blue

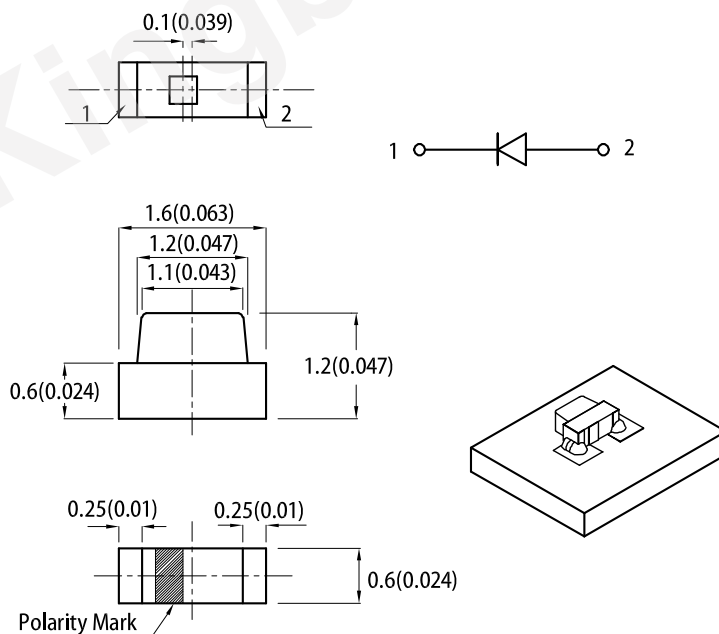
Features

- 1.6x1.2x0.6mm right angle SMD LED, 0.6mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package :2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Descriptions

- The Blue source color devices are made with InGaN Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

| Part No. | Emitting Color (Material) | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|---------------|---------------------------|-------------|------------------------|------|-------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KPA-1606VBC-D | Blue (InGaN) | Water Clear | 120 | 200 | 110° |

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%.
3. Luminous intensity value is traceable to CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Emitting Color | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|----------------|------|------|-------|-----------------|
| λpeak | Peak Wavelength | Blue | 465 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Blue | 470 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Blue | 22 | | nm | IF=20mA |
| C | Capacitance | Blue | 100 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Blue | 3.3 | 4 | V | IF=20mA |
| IR | Reverse Current | Blue | | 50 | uA | VR=5V |

Notes:

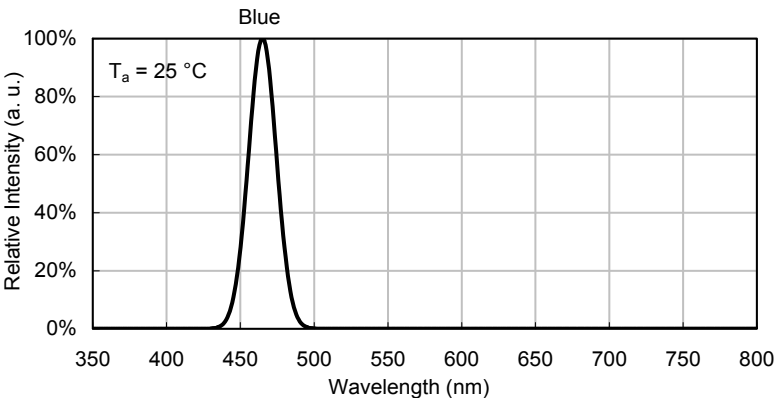
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

| Parameter | Values | Units |
|---|----------------|-------|
| Power dissipation | 120 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 100 | mA |
| Reverse Voltage | 5 | V |
| Electrostatic Discharge Threshold (HBM) | 250 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

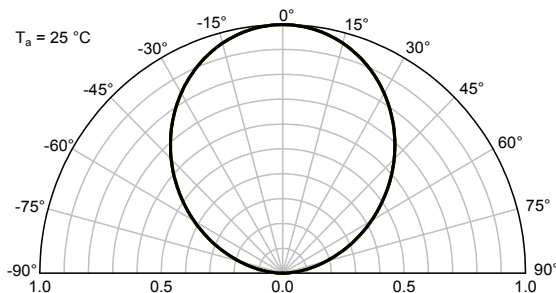
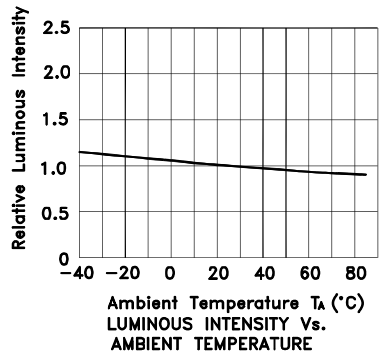
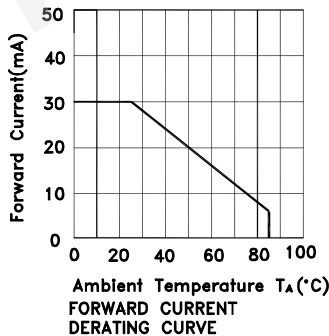
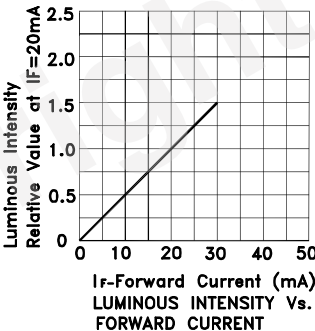
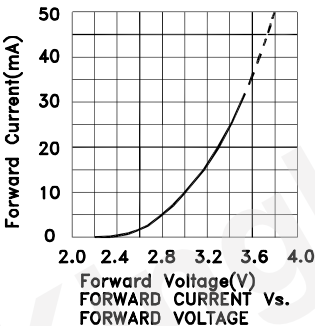
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



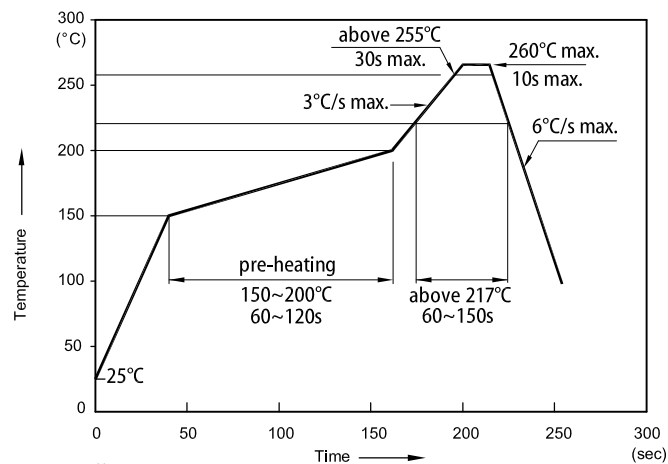
Blue

KPA-1606VBC-D



KPA-1606VBC-D

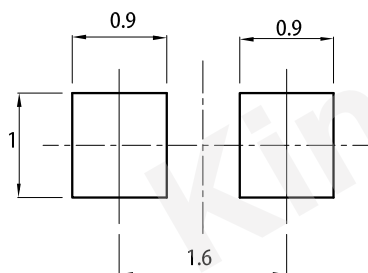
Reflow Soldering Profile for Lead-free SMD Process



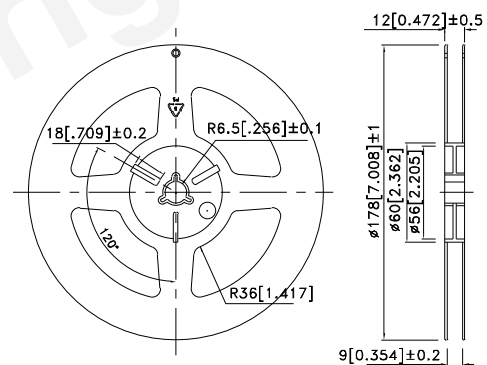
Notes:

1. Don't cause stress to the LEDs while it is exposed to high temperature.
2. The maximum number of reflow soldering passes is 2 times.
3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

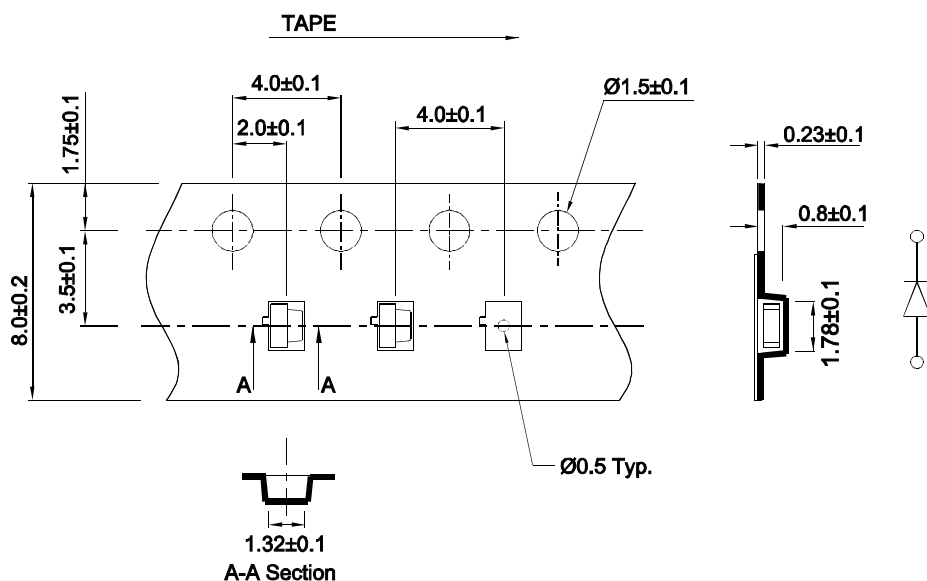
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

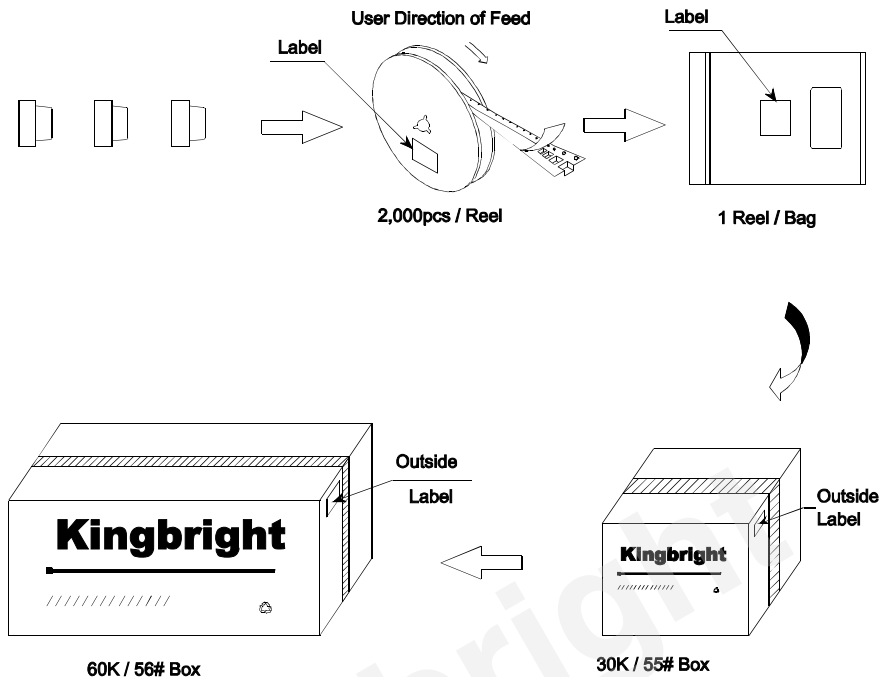


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPA-1606VBC-D



| | | | |
|-------------------|--|-----------------------------|----------------|
| Kingbright | | XXXXXXXX-XXXX | |
| P/NO: XXXXXXXX | | | |
| QTY: XXXXpcs | | | |
| S/N: XXXX | | | |
| CODE: XXX | | | |
| COUNTRY: CN | | QC DATE: XXX XX XXXX PASSED | |
| LOT NO: | | | |
| | | | |
| XXXXXXXX-XXXX | | | |
| | | 1 | RoHS Compliant |

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