



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

Part Number: KPA-2106QBC-G

Blue

### Features

- 2.1mmX0.6mm right angle SMT LED, 1.0mm thickness.
- 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.
- Tinned pads for improved solderability.
- RoHS compliant.

### Description

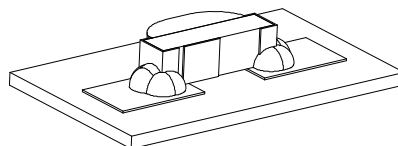
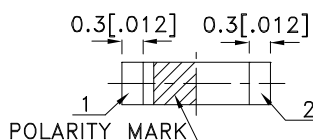
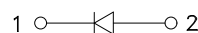
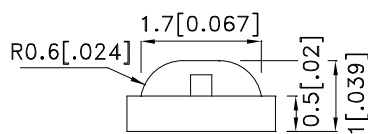
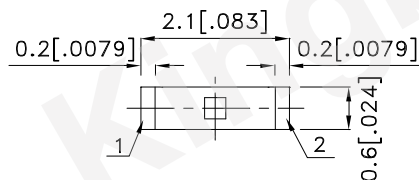
The Blue source color devices are made with InGaN Light Emitting Diode.

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  $\pm 0.1$  (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.      | Dice         | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|---------------|--------------|-------------|------------------------|------|----------------------|
|               |              |             | Min.                   | Typ. | 2θ1/2                |
| KPA-2106QBC-G | Blue (InGaN) | Water Clear | 80                     | 150  | 120°                 |

Notes:

1.  $\theta_{1/2}$  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 the CIE127-2007 compliant national standards.

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

| Symbol                | Parameter                | Device | Typ. | Max. | Units | Test Conditions            |
|-----------------------|--------------------------|--------|------|------|-------|----------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Blue   | 461  |      | nm    | I <sub>F</sub> =20mA       |
| $\lambda_D$ [1]       | Dominant Wavelength      | Blue   | 465  |      | nm    | I <sub>F</sub> =20mA       |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Blue   | 25   |      | nm    | I <sub>F</sub> =20mA       |
| C                     | Capacitance              | Blue   | 100  |      | pF    | V <sub>F</sub> =0V; f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Blue   | 3.3  | 4    | V     | I <sub>F</sub> =20mA       |
| I <sub>R</sub>        | Reverse Current          | Blue   |      | 50   | uA    | V <sub>R</sub> =5V         |

Notes:

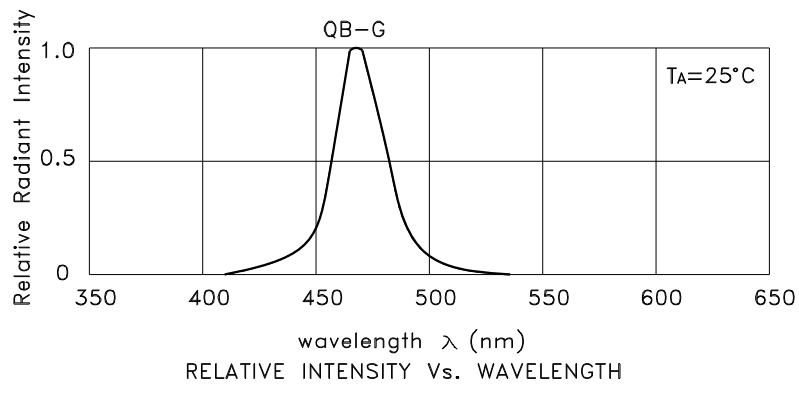
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

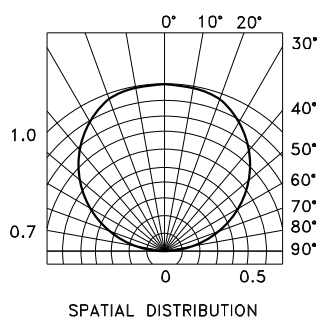
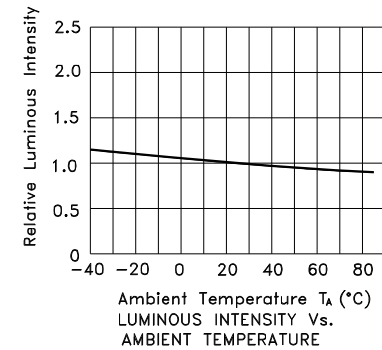
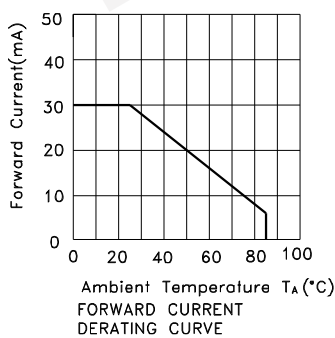
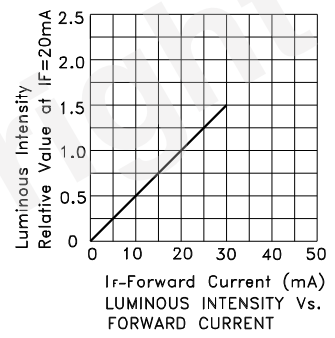
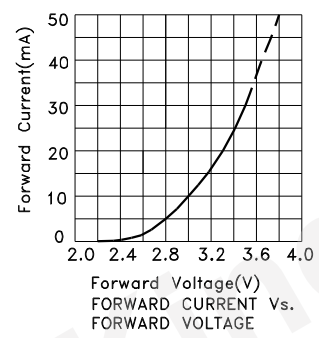
| Parameter                | Blue           | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 120            | mW    |
| DC Forward Current       | 30             | mA    |
| Peak Forward Current [1] | 150            | mA    |
| Reverse Voltage          | 5              | 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.



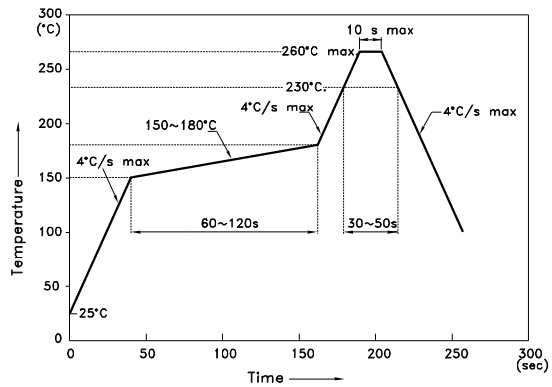
Blue KPA-2106QBC-G



## KPA-2106QBC-G

Reflow soldering is recommended and the soldering profile is shown below.  
Other soldering methods are not recommended as they might cause damage to the product.

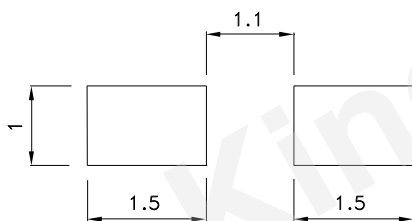
Reflow Soldering Profile For Lead-free SMT Process.



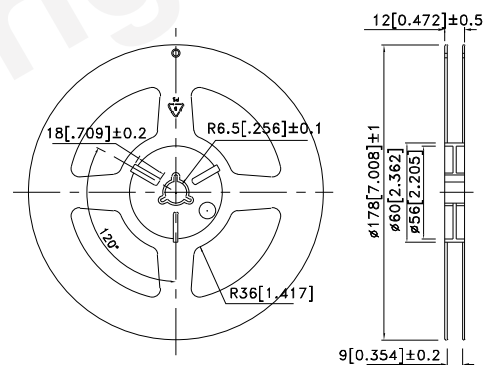
### NOTES:

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.

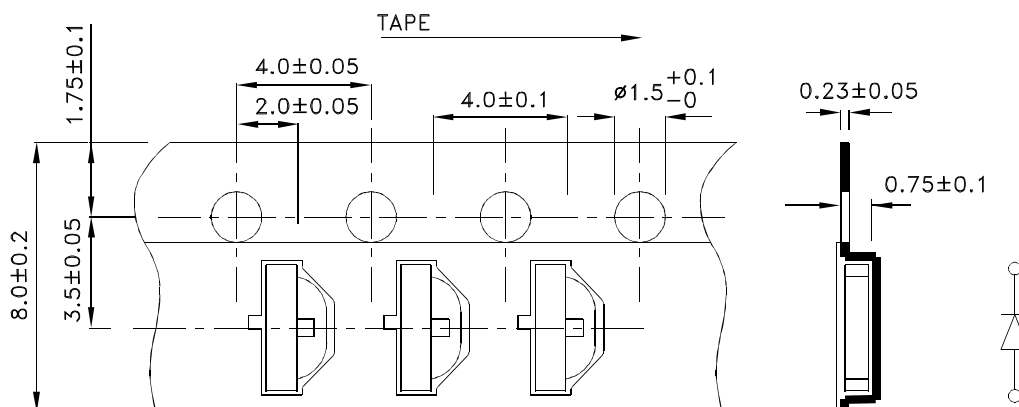
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension

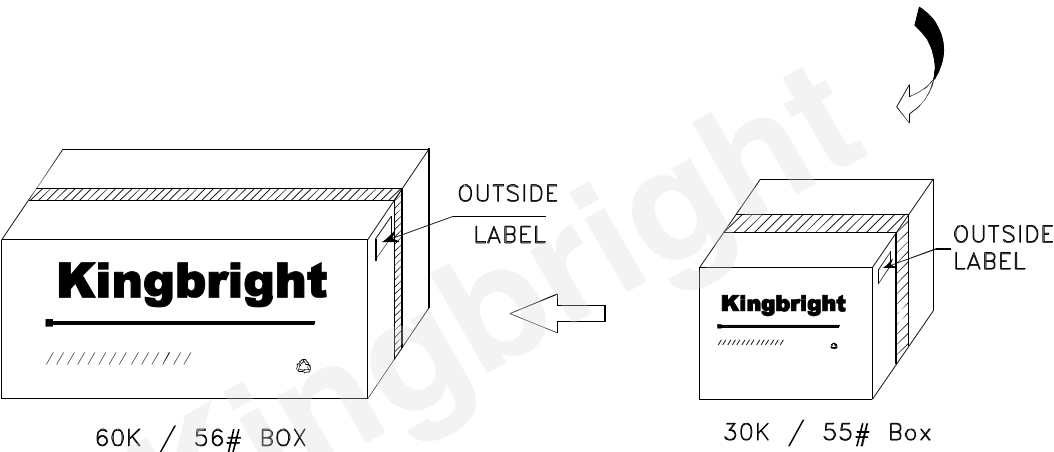
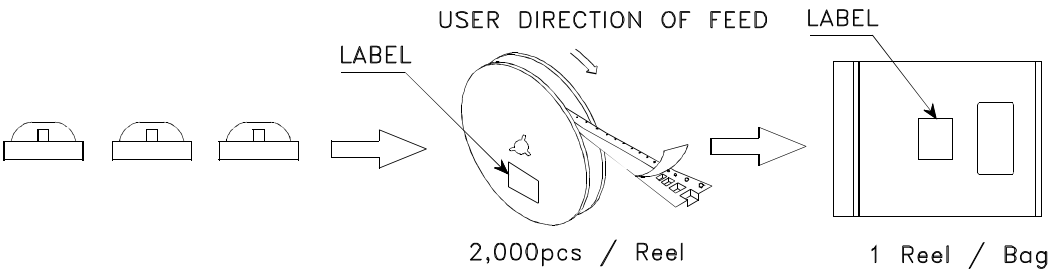


### Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPA-2106QBC-G



|                                                                                      |                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Kingbright</b>                                                                    |                                               |
| P/NO: KPA-2106XXX                                                                    |                                               |
| QTY: 2,000 pcs                                                                       | Q.C. <div>Q C<br/>XX XX XXXX<br/>PASSED</div> |
| S/N: XXXX                                                                            |                                               |
| CODE: XXX                                                                            |                                               |
| LOT NO:                                                                              |                                               |
|  |                                               |
| RoHS Compliant                                                                       |                                               |

Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)