

PRELIMINARY SPEC

Part Number: KA-3020QWC-D

White



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- 3.0mm x 2.0mm, 1.4mm high, only minimum space required.
- Suitable for compact optoelectronic applications.
- Low power consumption.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

Description

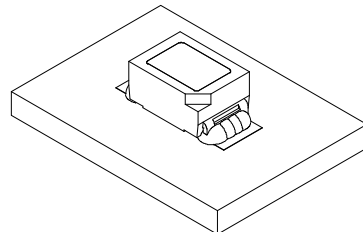
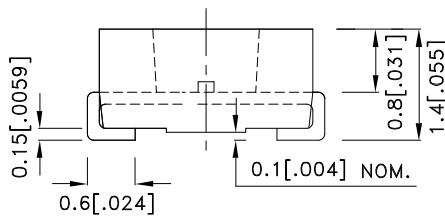
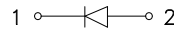
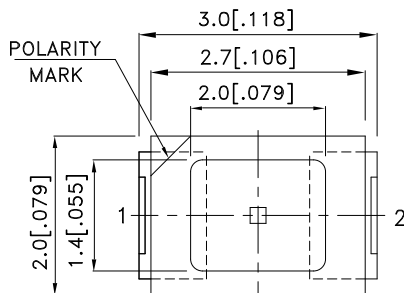
The source color devices are made with AlInGaN on Sapphire Light Emitting Diode.

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 $\pm 0.25(0.01)$ 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 |
| KA-3020QWC-D | White (AlInGaN) | WATER CLEAR | 180 | 500 | 90° |

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 |
|--------------------|--------------------------|--------|------|------|-------|---------------------------|
| V _F [1] | Forward Voltage | White | 3.3 | 4.0 | V | I _F =20mA |
| I _R | Reverse Current | White | | 10 | uA | V _R = 5V |
| X [2] | Chromaticity Coordinates | White | 0.31 | | | |
| Y [2] | | | 0.31 | | | |
| C | Capacitance | White | 100 | | pF | V _F =0V;f=1MHz |

Notes:

- 1.Forward Voltage: +/-0.1V.
- 2.Measurement tolerance of the chromaticity coordinates is ±0.01.

Absolute Maximum Ratings at TA=25°C

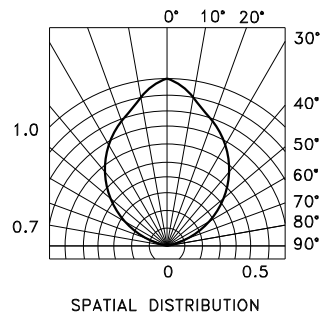
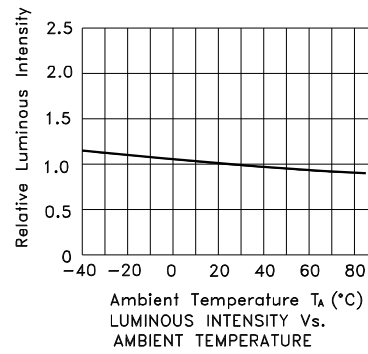
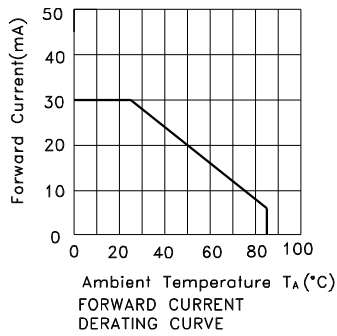
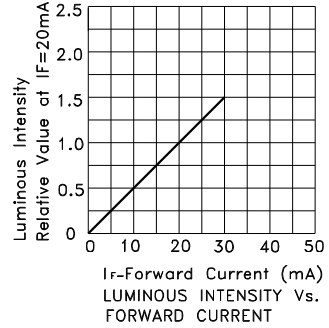
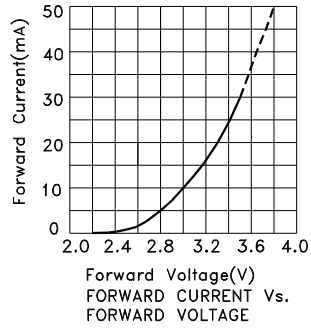
| Parameter | White | Units |
|--------------------------|----------------|-------|
| Power dissipation | 120 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 150 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

Note:

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

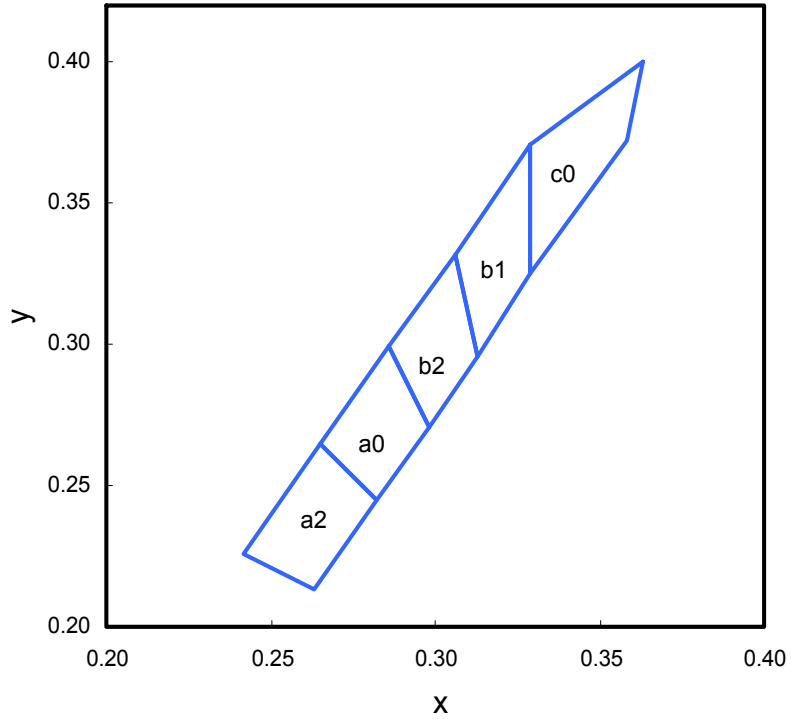
White

KA-3020QWC-D



KA-3020QWC-D

White CIE



| Rank a2 | | | | |
|---------|-------|-------|-------|-------|
| X | 0.263 | 0.282 | 0.265 | 0.242 |
| Y | 0.213 | 0.245 | 0.265 | 0.226 |

| Rank a0 | | | | |
|---------|-------|-------|-------|-------|
| X | 0.282 | 0.298 | 0.286 | 0.265 |
| Y | 0.245 | 0.271 | 0.299 | 0.265 |

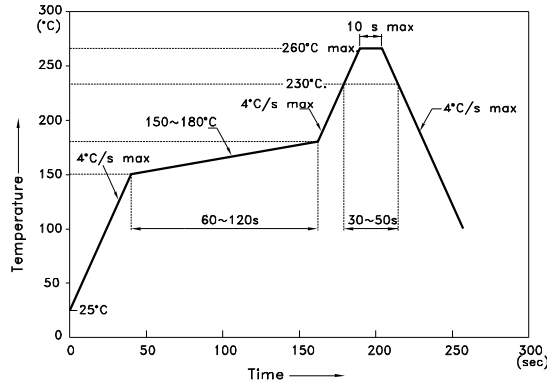
| Rank b2 | | | | |
|---------|-------|-------|-------|-------|
| X | 0.298 | 0.313 | 0.306 | 0.286 |
| Y | 0.271 | 0.296 | 0.332 | 0.299 |

| Rank b1 | | | | |
|---------|-------|-------|-------|-------|
| X | 0.313 | 0.329 | 0.329 | 0.306 |
| Y | 0.296 | 0.325 | 0.371 | 0.332 |

| Rank c0 | | | | |
|---------|-------|-------|-------|-------|
| X | 0.329 | 0.358 | 0.363 | 0.329 |
| Y | 0.325 | 0.372 | 0.400 | 0.371 |

KA-3020QWC-D

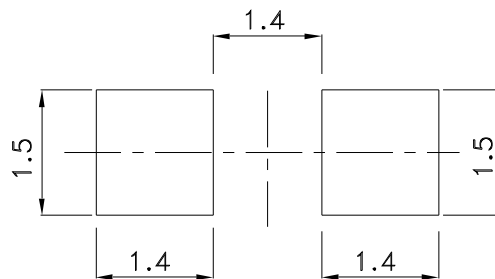
Reflow Soldering Profile For Lead-free SMT Process.



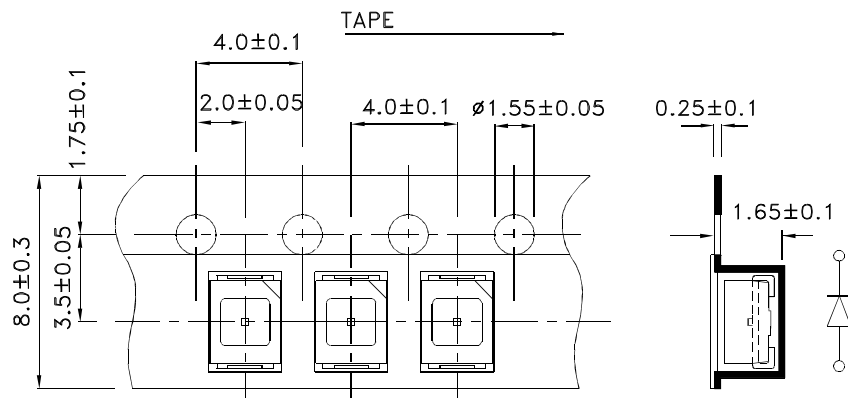
NOTES:

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)



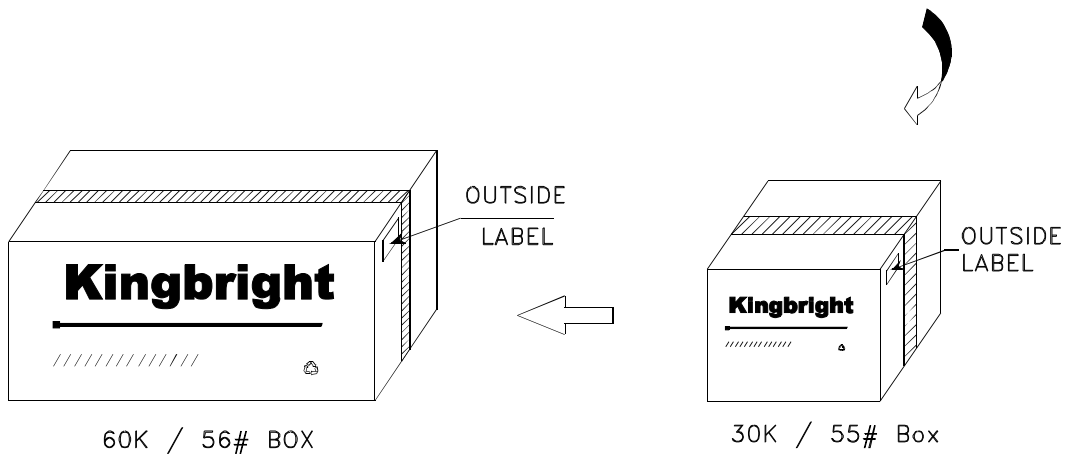
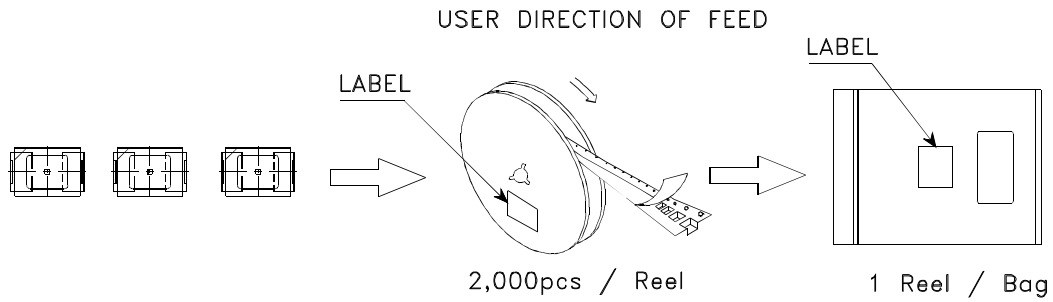
Tape Specifications (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

KA-3020QWC-D



| | |
|--|--|
| <h1>Kingbright</h1> | |
| P/NO: KA-3020xxx | |
| QTY: 2,000 pcs | Q.C. Q C XX XX XXXX PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  XXXXXXXXXXXXXXXXXXXXXXXXXXXX | |
| RoHS Compliant | |