

Part Number: APA3010QWF/D-GX

White



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- 3.0mmx1.0mm right angle SMT LED, 2.0mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for back light and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Description

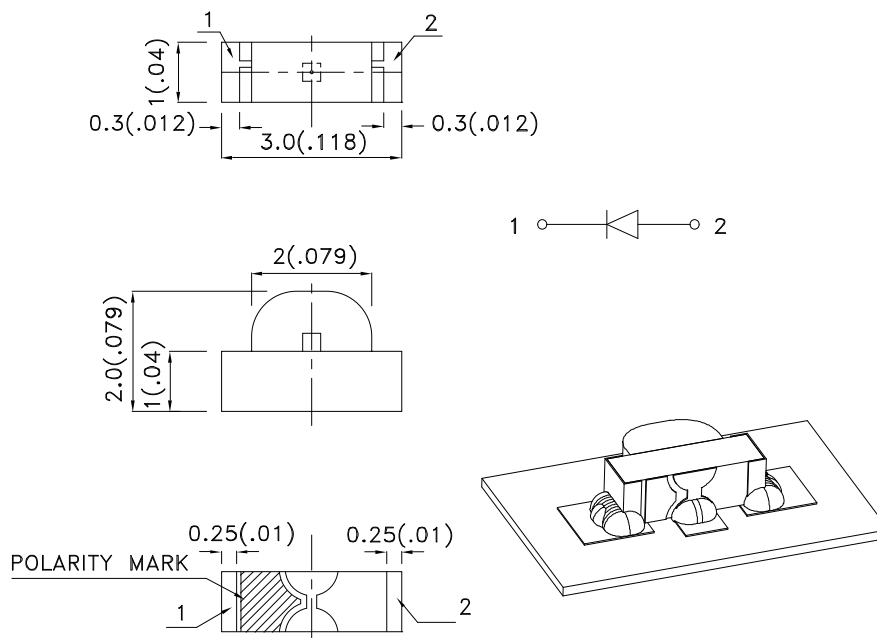
The source color devices are made with InGaN Light Emitting Diode.

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 $\pm 0.15(0.006)$ 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] @ 20mA | | Viewing Angle [1] |
|-----------------|---------------|--------------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| APA3010QWF/D-GX | White (InGaN) | Yellow Fluorescent | 110 | 180 | 120° |

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%.

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 | | 50 | 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

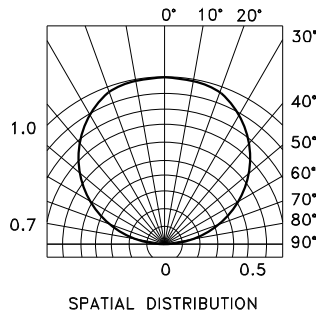
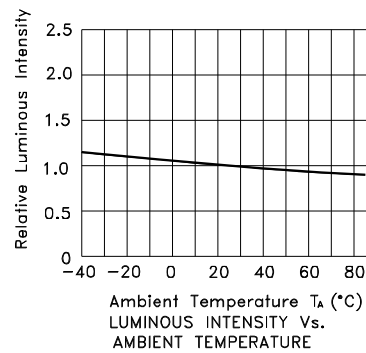
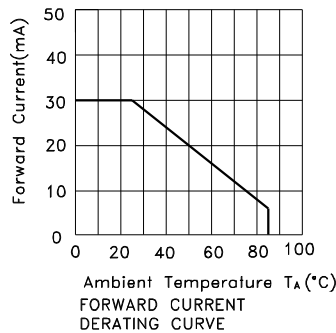
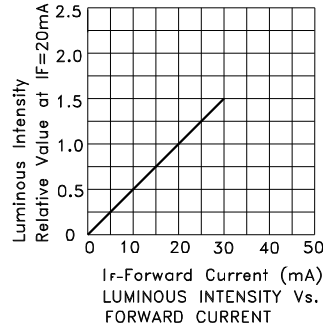
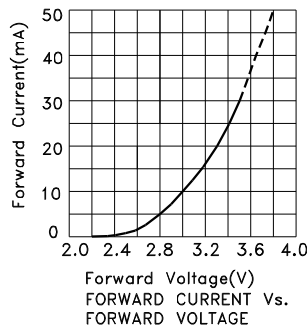
| Parameter | White | Units |
|--------------------------|----------------|-------|
| Power dissipation | 120 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 150 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C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

Note:

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

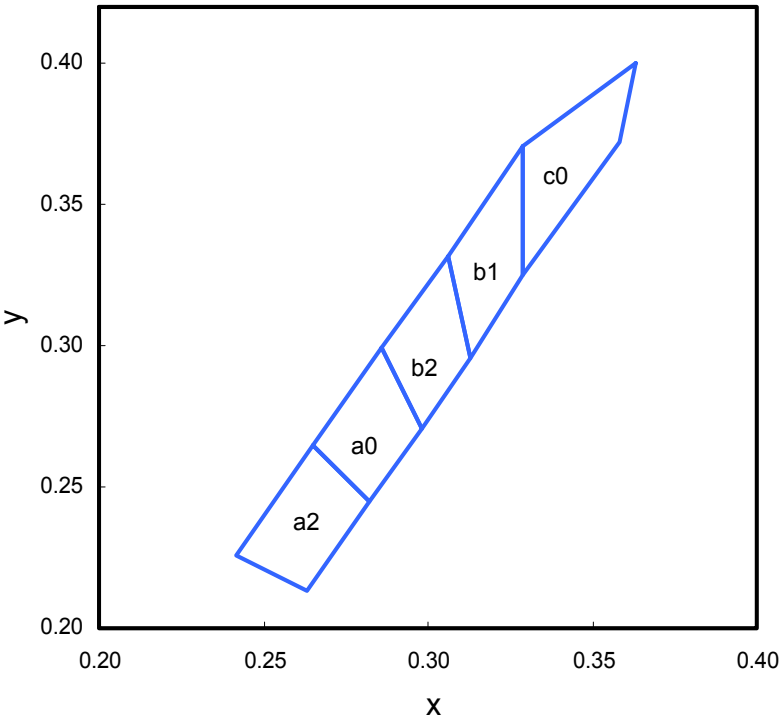
White

APA3010QWF/D-GX



APA3010QWF/D-GX

White CIE



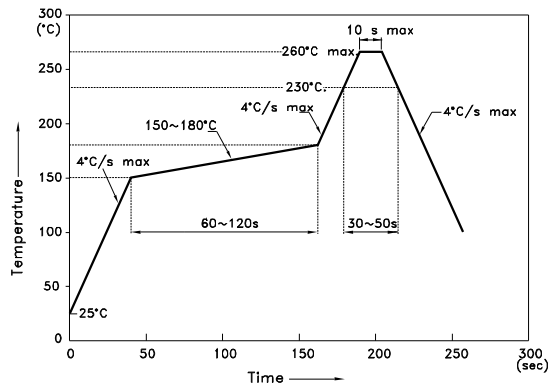
| x y | | | x y | | | x y | | |
|-----|-------|-------|-----|-------|-------|-----|-------|-------|
| a2 | 0.263 | 0.213 | a0 | 0.282 | 0.245 | b2 | 0.298 | 0.271 |
| | 0.282 | 0.245 | | 0.298 | 0.271 | | 0.313 | 0.296 |
| | 0.265 | 0.265 | | 0.286 | 0.299 | | 0.306 | 0.332 |
| | 0.242 | 0.226 | | 0.265 | 0.265 | | 0.286 | 0.299 |
| b1 | 0.313 | 0.296 | c0 | 0.329 | 0.325 | | | |
| | 0.329 | 0.325 | | 0.358 | 0.372 | | | |
| | 0.329 | 0.371 | | 0.363 | 0.400 | | | |
| | 0.306 | 0.332 | | 0.329 | 0.371 | | | |

Notes:
Shipment may contain more than one chromaticity regions.
Orders for single chromaticity region are generally not accepted.
Measurement tolerance of the chromaticity coordinates is ±0.01.

APA3010QWF/D-GX

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.

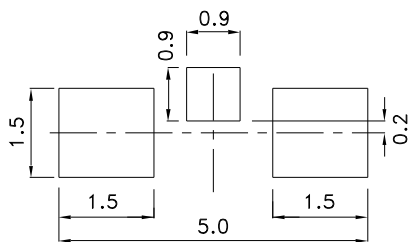
Reflow Soldering Profile For Lead-free SMT Process.



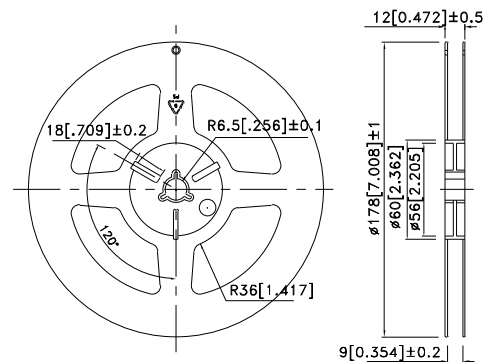
NOTES:

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.

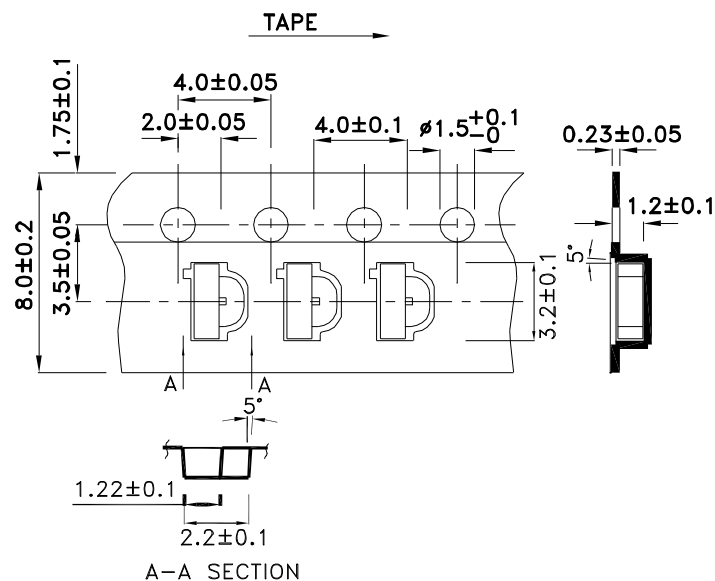
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

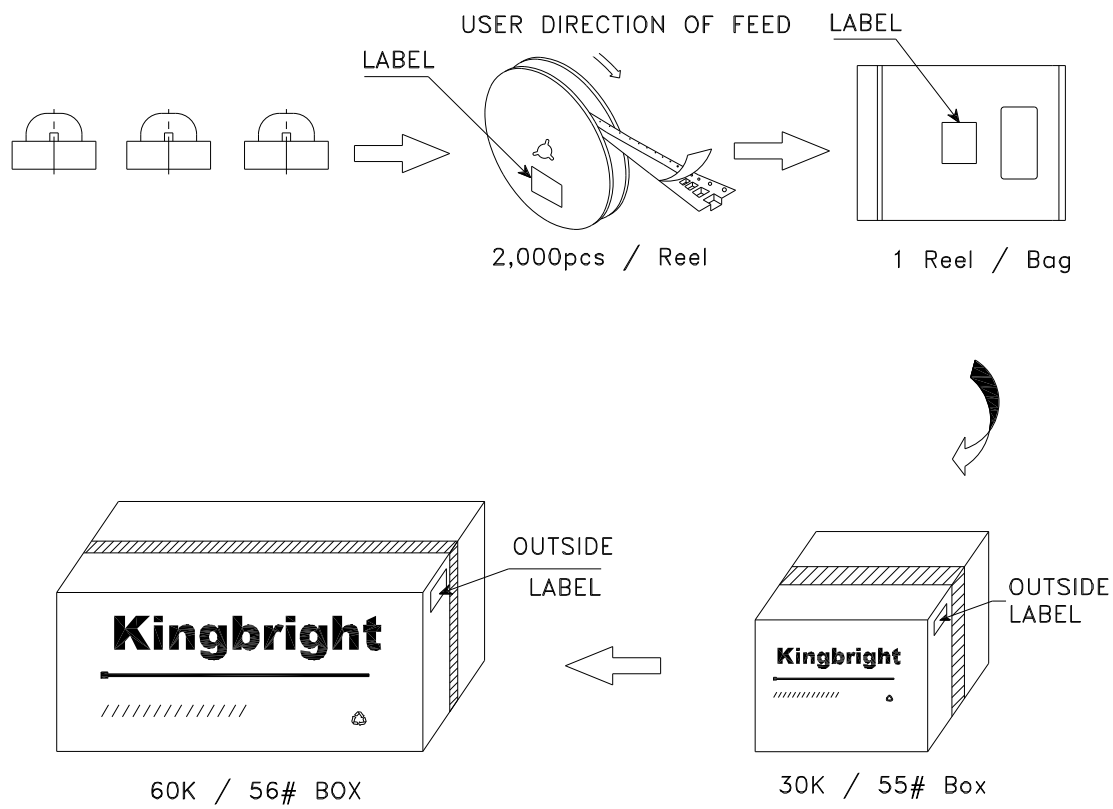


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APA3010QWF/D-GX



| | |
|---------------------------------|---|
| Kingbright | |
| P/NO: APA3010xxx | |
| QTY: 2,000 pcs | Q.C. <div>Q C xx xx xxxx PASSED</div> |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
| <div>XXXXXXXXXXXXXXXXXXXX</div> | |
| RoHS Compliant | |