

Kingbright

3.0x2.0mm SURFACE MOUNT LED LAMP



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: AA3020AQBC/D

Blue

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

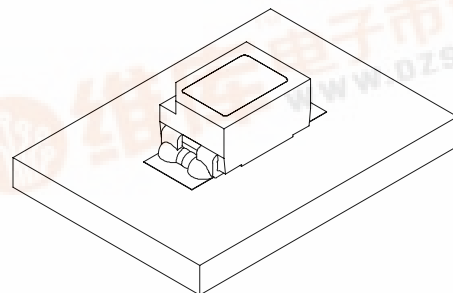
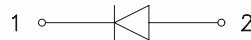
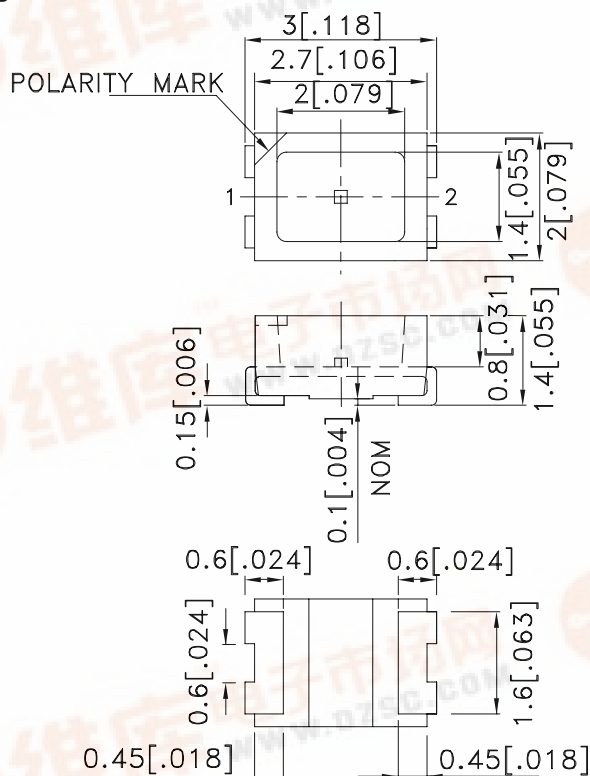
The Blue source color devices are made with AlInGaN on Sapphire Light Emitting Diode.

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 ± 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
AA3020AQBC/D	Blue (AlInGaN)	WATER CLEAR	70	160	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
λpeak	Peak Wavelength	Blue	468		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue	470		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue	25		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		10	uA	VR=5V

Notes:

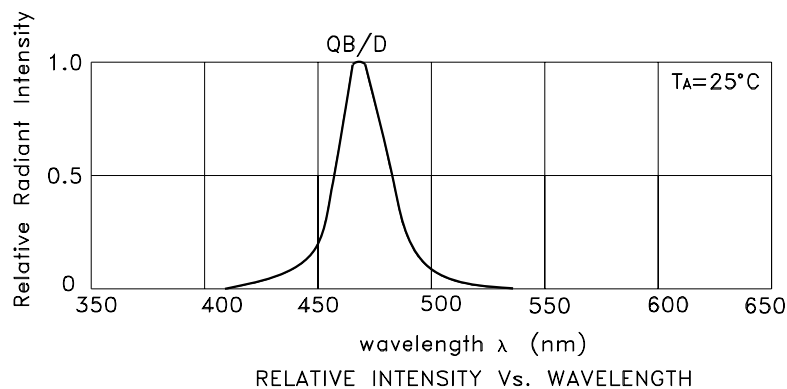
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

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

AA3020AQBC/D

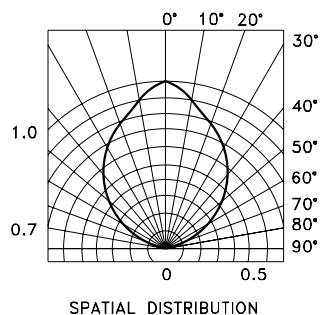
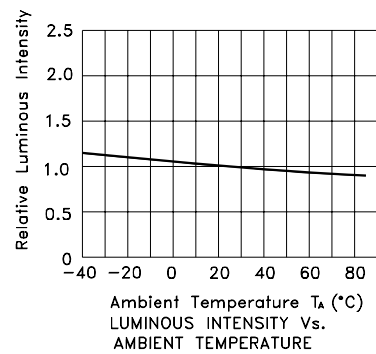
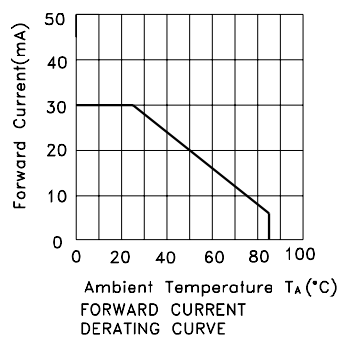
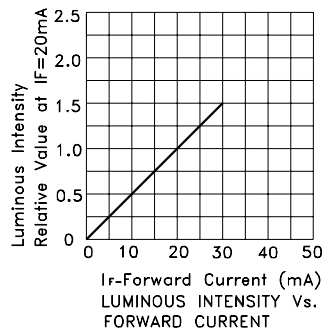
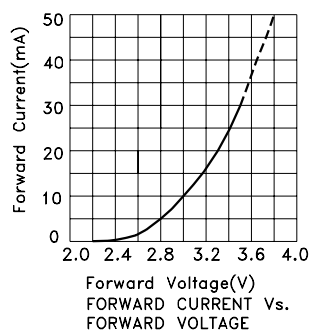


Figure 1 is a line graph showing the temperature profile of the furnace during the heat treatment of the specimen. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 300. The X-axis represents Time in seconds (sec), ranging from 0 to 300. The profile starts at 25°C, rises at a rate of 4°C/s to 150°C (at 40s), then continues to rise at 4°C/s to 180°C (at 60s). A horizontal segment is indicated between 150°C and 180°C for a duration of 60~120s. The temperature then rises at 4°C/s to 230°C (at 150s), then to 260°C (at 200s). A horizontal segment is indicated at 260°C for a duration of 10 s max. Finally, the temperature cools at a rate of 4°C/s. Key points and durations are marked: 25°C, 4°C/s max, 150~180°C, 60~120s, 4°C/s max, 230°C, 30~50s, 260°C max, 10 s max, 4°C/s max.

A diagram of a 2D rectangular domain with a total width of 1.4 and a height of 1.5. The domain is divided into two subdomains by a vertical line at the center. The left subdomain has a width of 0.7 and the right subdomain has a width of 0.7. The height of both subdomains is 1.5.

Technical drawing of a tape reel showing top, side, and cross-sectional views with dimensions in millimeters.

Top View Dimensions:

- Overall width: 8.0 ± 0.3
- Distance from top edge to center line: 3.5 ± 0.05
- Distance from center line to bottom edge: 1.75 ± 0.1
- Distance between center lines of adjacent reels: 4.0 ± 0.1
- Distance from center line to the start of the reel body: 2.0 ± 0.05
- Distance between the start of adjacent reel bodies: 4.0 ± 0.1
- Distance from the start of the reel body to the center line: 1.55 ± 0.05
- Overall length: 3.3 ± 0.1
- Distance from the end of the reel body to the center line: 2.25 ± 0.1

Side View Dimensions:

- Overall height: 0.25 ± 0.1
- Distance from top edge to the start of the reel body: 5°MAX.
- Distance from the start of the reel body to the center line: 1.65 ± 0.1

Cross-Sectional View (A-A SECTION):

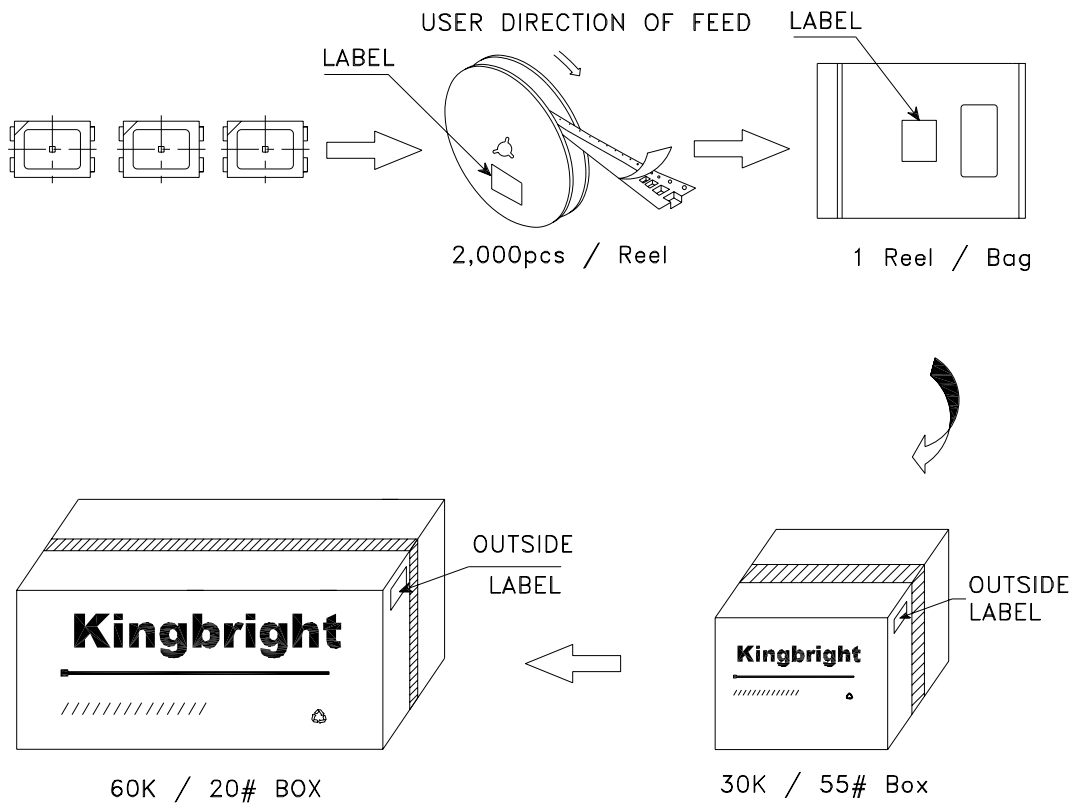
- Shows the profile of the reel body with a width of 5°MAX.

Other Features:

- A "TAPE" arrow indicates the direction of tape travel.
- Section lines "A-A" are shown at the bottom of the reel body.

PACKING & LABEL SPECIFICATIONS

AA3020AQB/C/D



Kingbright	
P/NO: AA3020Axxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	