

Kingbright

3x2.4mm SMD CHIP LED LAMP

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: AP23QBC/D/F-F01

Blue

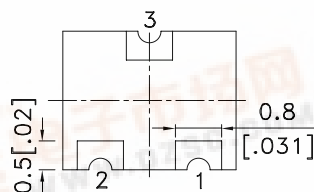
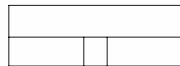
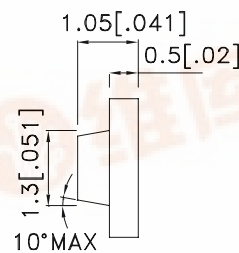
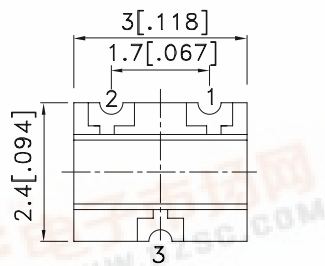
Features

- 3mmx2.4mm SMT LED, 1.05mm 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.
- RoHS COMPLIANT.

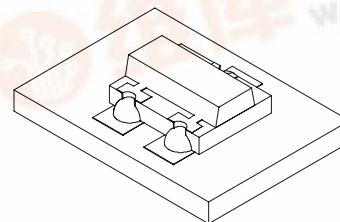
Description

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



1. ANODE
2. N.C
3. CATHODE



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ 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
AP23QBC/D/F-F01	Blue (AlInGaN)	WATER CLEAR	50	100	120°

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:

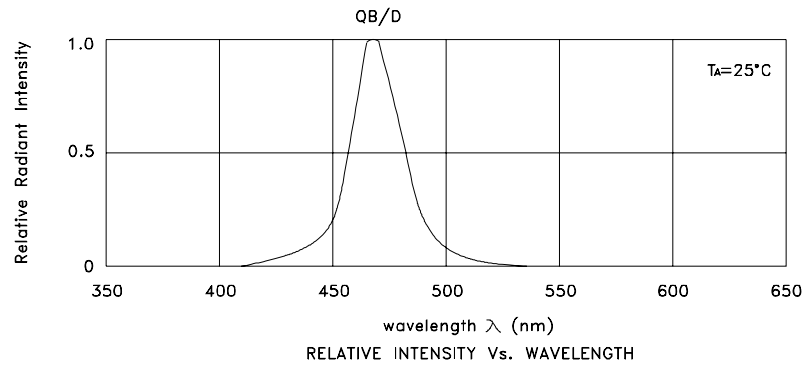
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

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

AP23QBC/D/F-F01

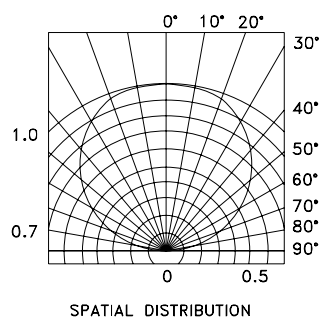
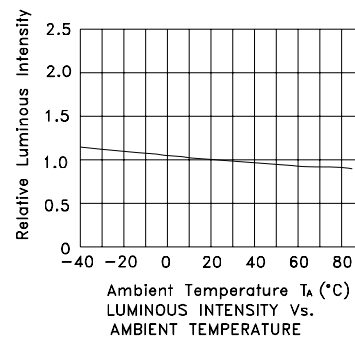
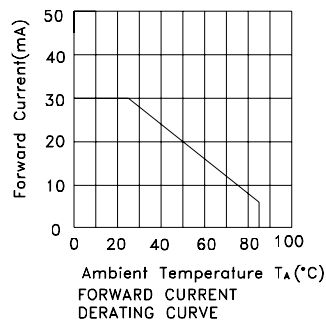
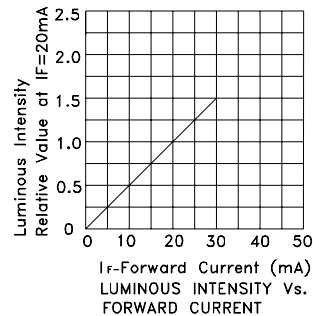
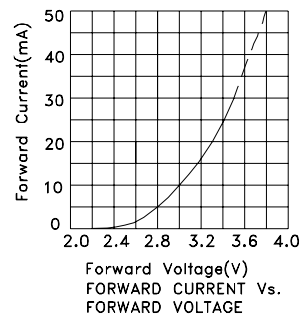


Figure 1 is a line graph showing the temperature profile of the furnace during the heat treatment of the samples. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 300. The X-axis represents Time in seconds (sec), ranging from 0 to 300. The profile starts at 25°C at 0 seconds. It rises at a rate of 4°C/s to 150°C at 40 seconds. From 150°C, it rises at a rate of 1°C/s to 180°C at 120 seconds. From 180°C, it rises at a rate of 4°C/s to 260°C at 160 seconds. It then holds at 260°C for 10 seconds (170s). Finally, it cools at a rate of 4°C/s to 100°C at 250 seconds. Key points and rates are labeled: 25°C, 4°C/s max, 150~180°C, 1°C/s max, 260°C max, 10 s max, 4°C/s max, and 30~50s.

Technical drawing of a tape with dimensions and a cross-section A-A.

Dimensions:

- Overall width: 8.0 ± 0.3
- Top edge thickness: 1.75 ± 0.1
- Bottom edge thickness: 2.6 ± 0.1
- Distance from top edge to first hole: 3.5 ± 0.05
- Hole diameter: $\phi 1.55 \pm 0.05$
- Distance between holes: 4.0 ± 0.1
- Distance from last hole to bottom edge: 3.2 ± 0.1
- Distance from top edge to first hole (inner): 2.0 ± 0.05
- Distance between holes (inner): 4.0 ± 0.1
- Distance from last hole to bottom edge (inner): 3.2 ± 0.1
- Angle: 5°MAX.
- Section A-A: 1.25 ± 0.1
- Section A-A: 0.2 ± 0.1
- Section A-A: 5°MAX.

Section A-A:

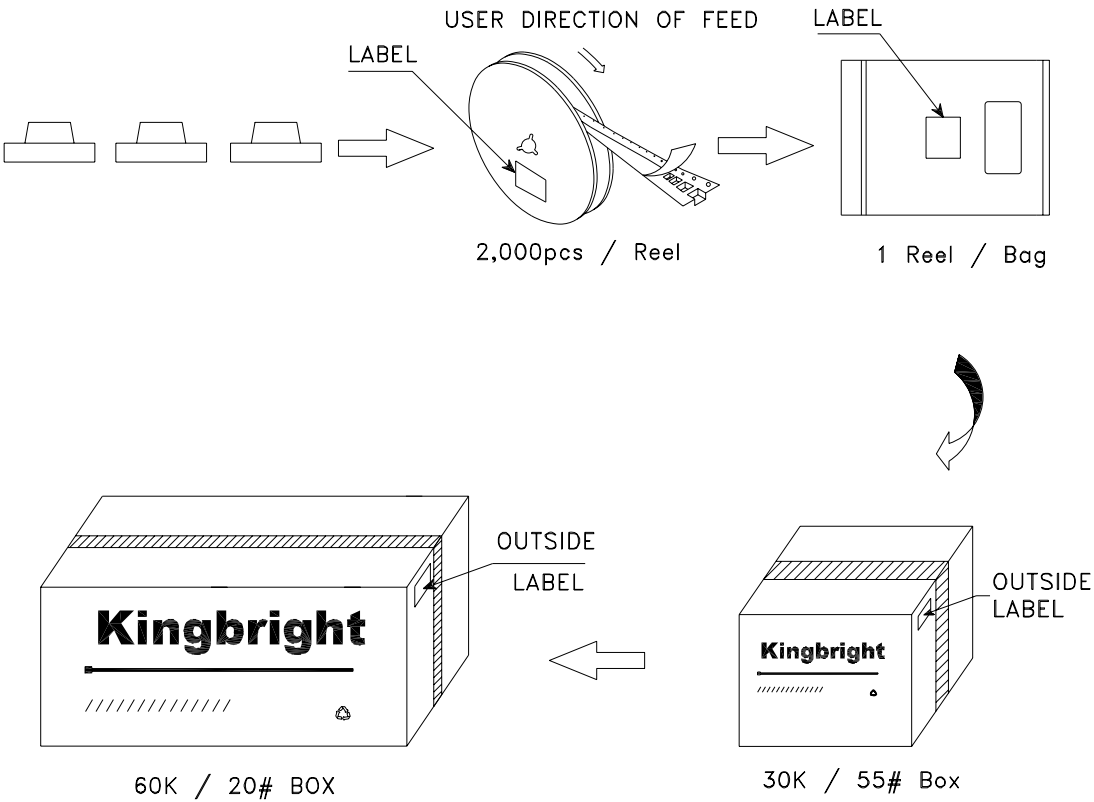
Section A-A shows the cross-section of the tape, indicating a thickness of 1.25 ± 0.1 and a width of 0.2 ± 0.1 . The angle is 5°MAX. .

Legend:

- 3: Hole
- 1: Tape

PACKING & LABEL SPECIFICATIONS

AP23QBC/D/F-F01



Kingbright	
P/NO: AP23xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
MADE IN CHINA	RoHS Compliant