

#### 3.0X2.0mm SMD CHIP LED LAMP

APK3020MBC BLUE

#### **Features**

- •3.0mmX2.0mmSMTLED, 1.3mmTHICKNESS.
- •LOW POWER CONSUMPTION.
- •WIDE VIEWING ANGLE.
- •IDEAL FOR BACKLIGHT AND INDICATOR.
- •VARIOUS COLORS AND LENSTYPES AVAILABLE.
- ●PACKAGE:2000PCS/REEL

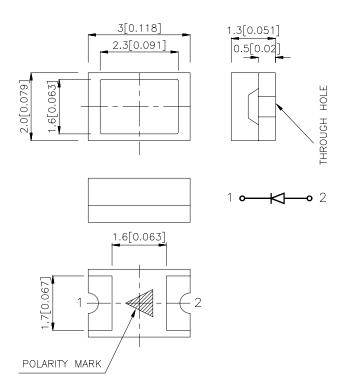
#### **Description**

The Blue source color devices are made with GaN on SiC 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  $\pm 0.2 (0.0079\mbox{"})$  unless otherwise noted.
- 3. Lead spacing is measured where the lead emerge package.
- 4. Specifications are subject to change without notice.



#### **Selection Guide**

| Part No.   | Dice       | Lens Type   | <b>lv (mcd)</b><br>@ 20 mA |      | <b>Viewing</b><br>Angle |
|------------|------------|-------------|----------------------------|------|-------------------------|
|            |            |             | Min.                       | Тур. | 201/2                   |
| APK3020MBC | BLUE (GaN) | WATER CLEAR | 3                          | 15   | 120°                    |

Note

#### Electrical / Optical Characteristics at T<sub>A</sub>=25°C

| Symbol         | Parameter               | Device | Тур. | Max. | Units | Test Conditions |
|----------------|-------------------------|--------|------|------|-------|-----------------|
| λpeak          | Peak Wavelength         | Blue   | 430  |      | nm    | IF=20mA         |
| λD             | Dominate Wavelength     | Blue   | 455  |      | nm    | IF=20mA         |
| Δλ1/2          | Spectral Line Halfwidth | Blue   | 60   |      | nm    | IF=20mA         |
| С              | Capacitance             | Blue   | 65   |      | pF    | VF=0V;f=1MHz    |
| V <sub>F</sub> | Forward Voltage         | Blue   | 4.0  | 4.5  | V     | IF=20mA         |
| l <sub>R</sub> | Reverse Current         | Blue   |      | 10   | uA    | VR = 5V         |

#### Absolute Maximum Ratings at T<sub>A</sub>=25°C

| Parameter                | Blue           | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 105            | mW    |
| DC Forward Current       | 30             | mA    |
| Peak Forward Current [1] | 150            | mA    |
| Reverse Voltage          | 5              | V     |
| Operation Temperature    | -40°C To +80°C |       |
| Storage Temperature      | -40°C To +85°C |       |

Note:

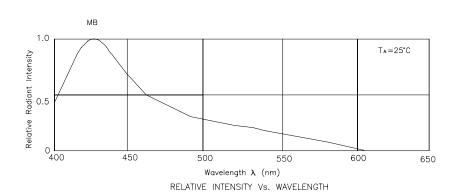
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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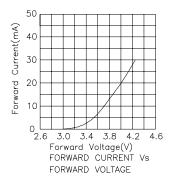
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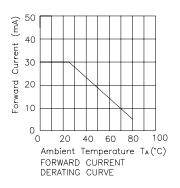
<sup>1.</sup>  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

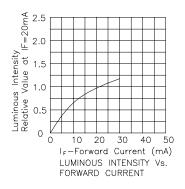


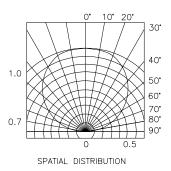


#### Blue APK3020MBC







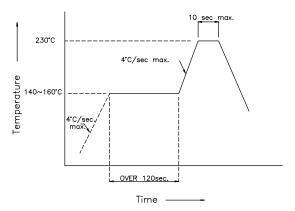


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# Kingbright

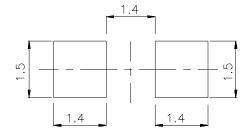
#### APK3020MBC SMT Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.

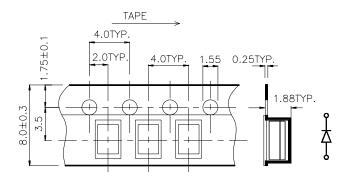


### Recommended Soldering Pattern

(Units:mm)



## Tape Specifications (Units:mm)



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