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# 承 认 书

## Specification for approval

客户名称:

CUSTOMER NAME: \_\_\_\_\_

经办者:

职称:

DIRECTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_

客户料号:

CUSTOMER PART NO.: \_\_\_\_\_

品名:

版本:

PART NUMBER: LS-3216-02UBC REVISION: 新

发件日期:

回文日期:

ISSUE DATE: 2012/12/26 RETURN DATE:  / /

**BLUE**

PRELIMINARY SPEC



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

**Features**

- \_ 3.2mmX1.6mm SMT LED, 0.90mm THICKNESS.
- \_ LOW POWER CONSUMPTION.
- \_ WIDE VIEWING ANGLE.
- \_ IDEAL FOR BACKLIGHT AND INDICATOR.
- \_ VARIOUS COLORS AND LENS TYPES AVAILABLE.
- \_ PACKAGE: 3000PCS / REEL.
- \_ RoHS COMPLIANT.

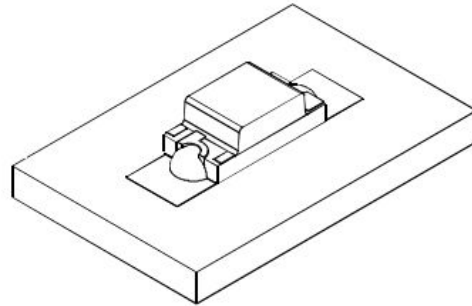
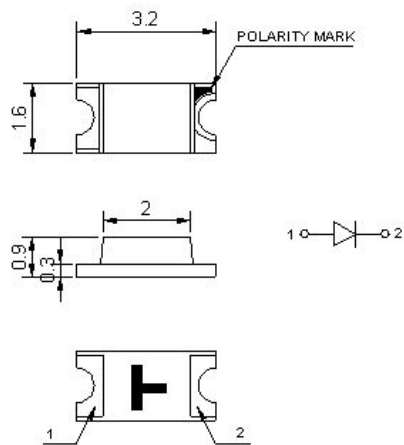
**Description**

The Blue source color devices are made with GaN 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  $\pm 0.1$  (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

### Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 5 mA		Viewing Angle
			Min.	Typ.	2 θ 1/2
LS-3216-02UBC	BLUE (GaN)	WATER CLEAR	20	50	120

#### Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

### Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Blue	462	470	nm	IF=5 mA
$\lambda_D$	Dominant Wavelength	Blue			nm	IF=5 mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue	25		nm	IF=5 mA
C	Capacitance	Blue			pF	VF=0V;f=1MHz
VF	Forward Voltage	Blue	2.8	3.1	V	IF=5 mA
IR	Reverse Current	Blue		2	uA	VR = 7V

#### Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

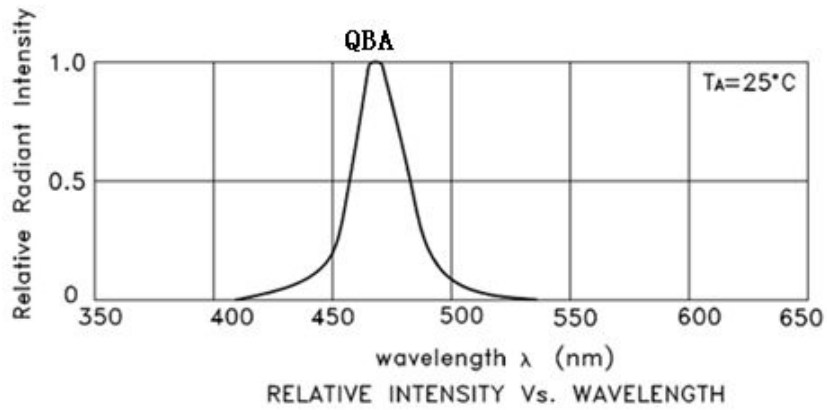
Note: Accuracy may depend on the sorting parameters

### Absolute Maximum Ratings at TA=25°C

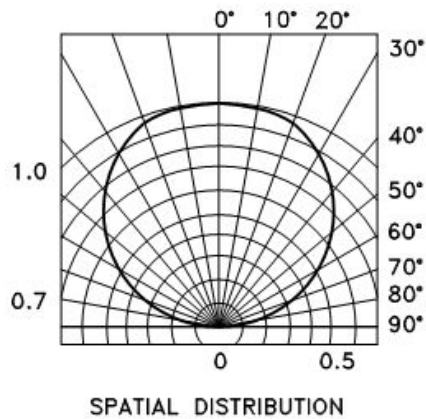
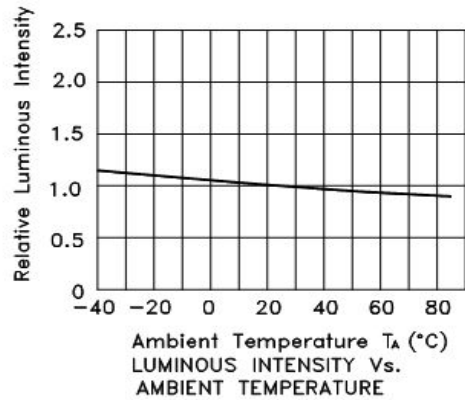
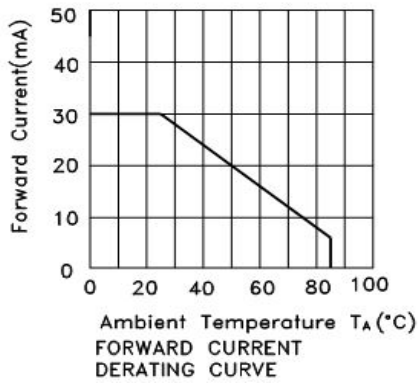
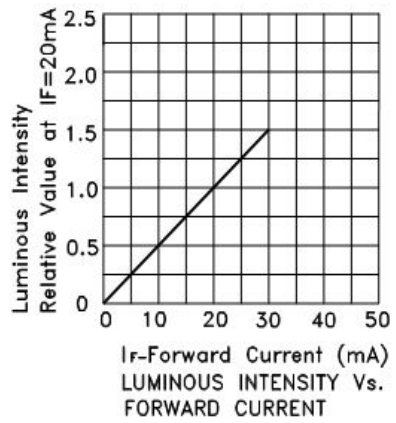
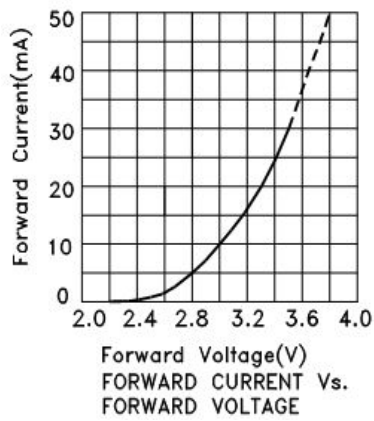
Parameter	Blue	Units
Power dissipation	135	mW
DC Forward Current	30	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

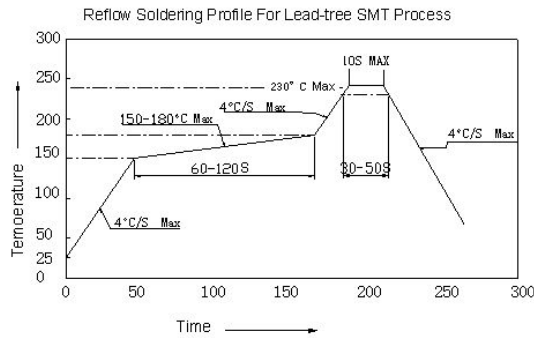
#### Note:

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



**Blue**

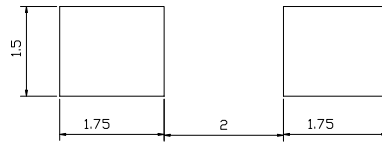




- NOTES:
1. We recommend the reflow temperature  $245^{\circ}\text{C}(\pm 5)$ . The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
  2. Don't cause stress too the epoxy resin while it is exposed to high temperature.
  3. Number of reflow process shall be 2 time or less.

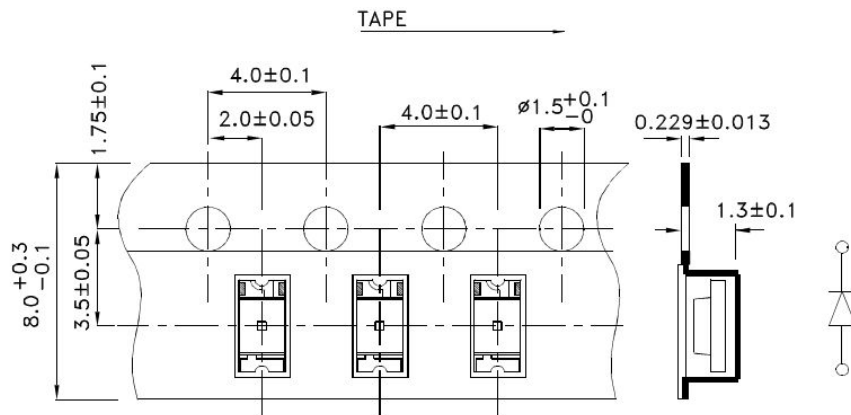
### Recommended Soldering Pattern

(Units : mm)



### Tape Specifications

(Units : mm)



#### Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous Intensity:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters