



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

Part Number: KPTL-3216QBC-D-01 Blue

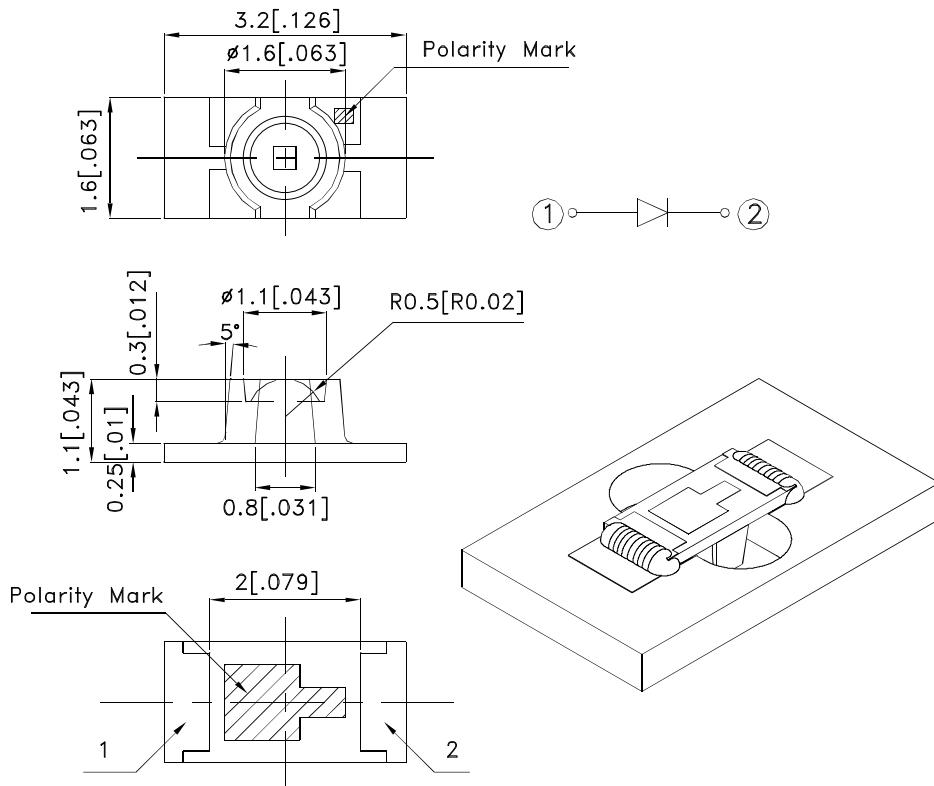
### Features

- 3.2mmx1.6mm SMT LED, 1.1mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Reverse mount.
- RoHS compliant.

### Description

The Blue 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  $\pm 0.1(0.004")$  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.



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## Selection Guide

Part No.	Dice	Lens Type	I <sub>v</sub> (mcd) [2] @ 20mA		Viewing Angle [1] θ <sub>1/2</sub>
			Min.	Typ.	
KPTL-3216QBC-D-01	Blue (InGaN)	Water Clear	80	250	70°

Notes:

1. θ<sub>1/2</sub> is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.
3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

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

Symbol	Parameter	Device	Typ.		Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Blue	468	*460		nm	I <sub>f</sub> =20mA
λD [1]	Dominant Wavelength	Blue	470	*465		nm	I <sub>f</sub> =20mA
Δλ1/2	Spectral Line Half-width	Blue	25			nm	I <sub>f</sub> =20mA
C	Capacitance	Blue	100			pF	V <sub>f</sub> =0V;f=1MHz
V <sub>f</sub> [2]	Forward Voltage	Blue	3.3		4	V	I <sub>f</sub> =20mA
I <sub>R</sub>	Reverse Current	Blue			50	uA	V <sub>R</sub> =5V

Notes:

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

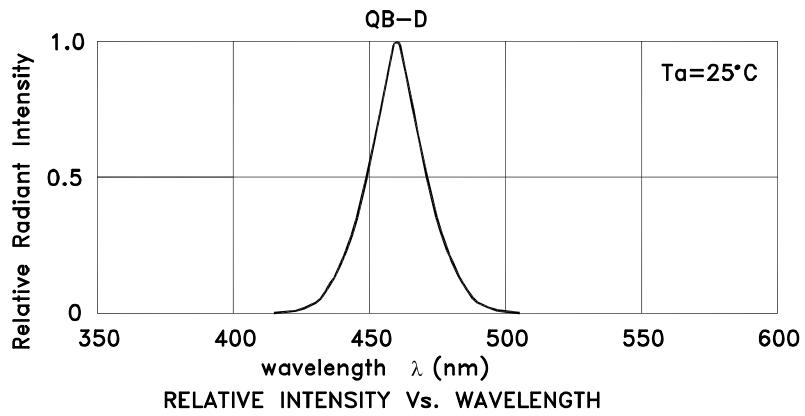
\* Wavelength value is traceable to the CIE127-2007 compliant national standards.

## 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	

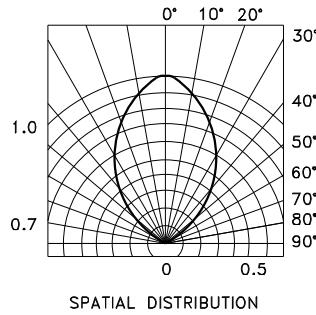
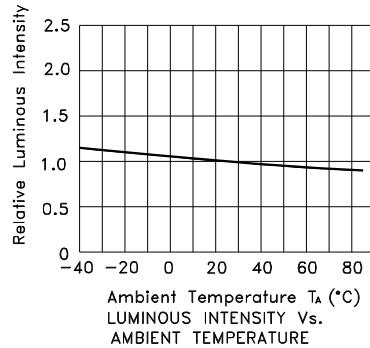
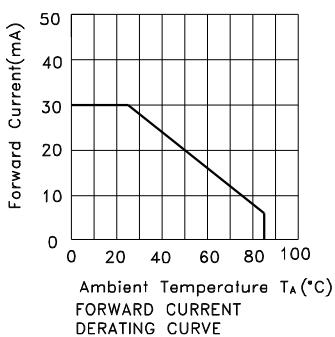
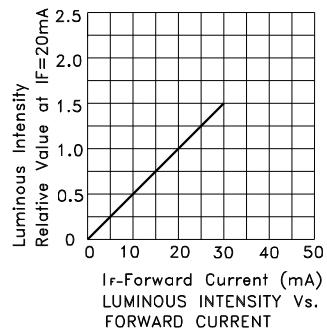
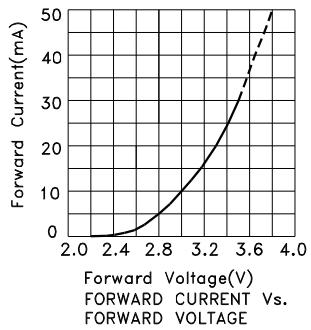
Note:

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



Blue

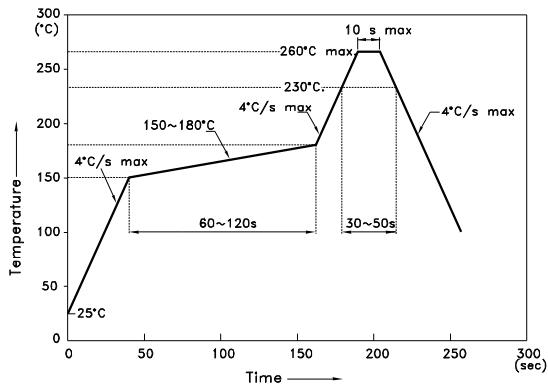
**KPTL-3216QBC-D-01**



## KPTL-3216QBC-D-01

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.

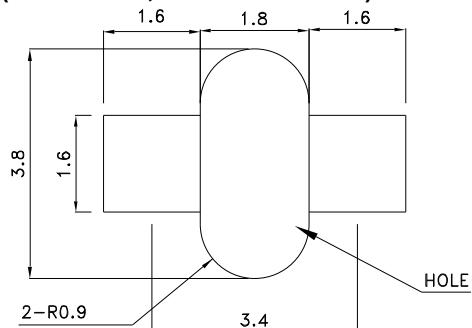
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

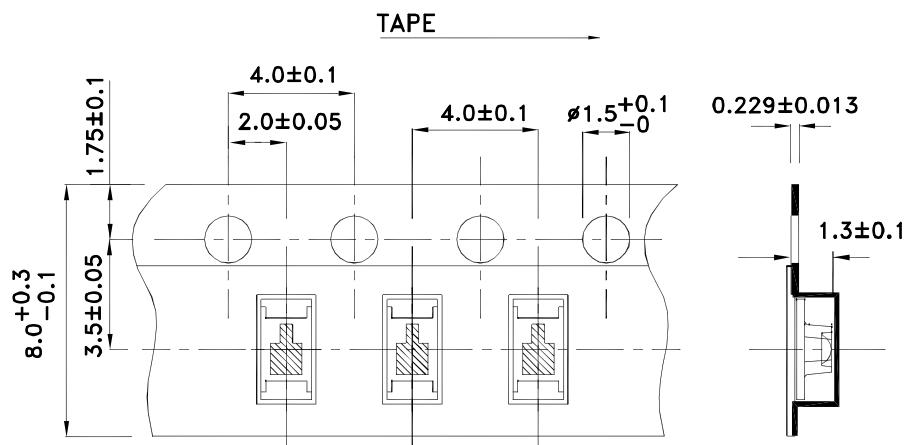
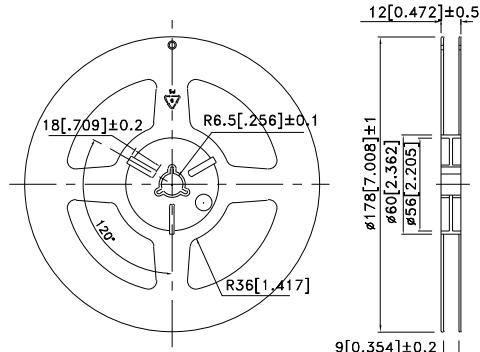
1. We recommend the reflow temperature 245°C (+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Tape Dimensions (Units : mm)

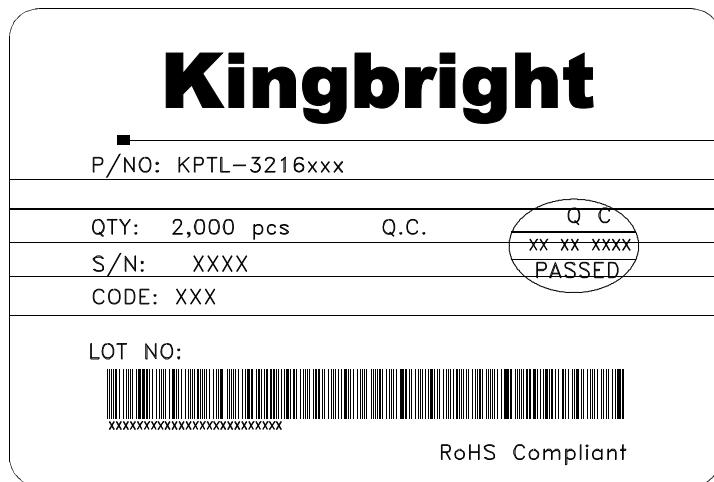
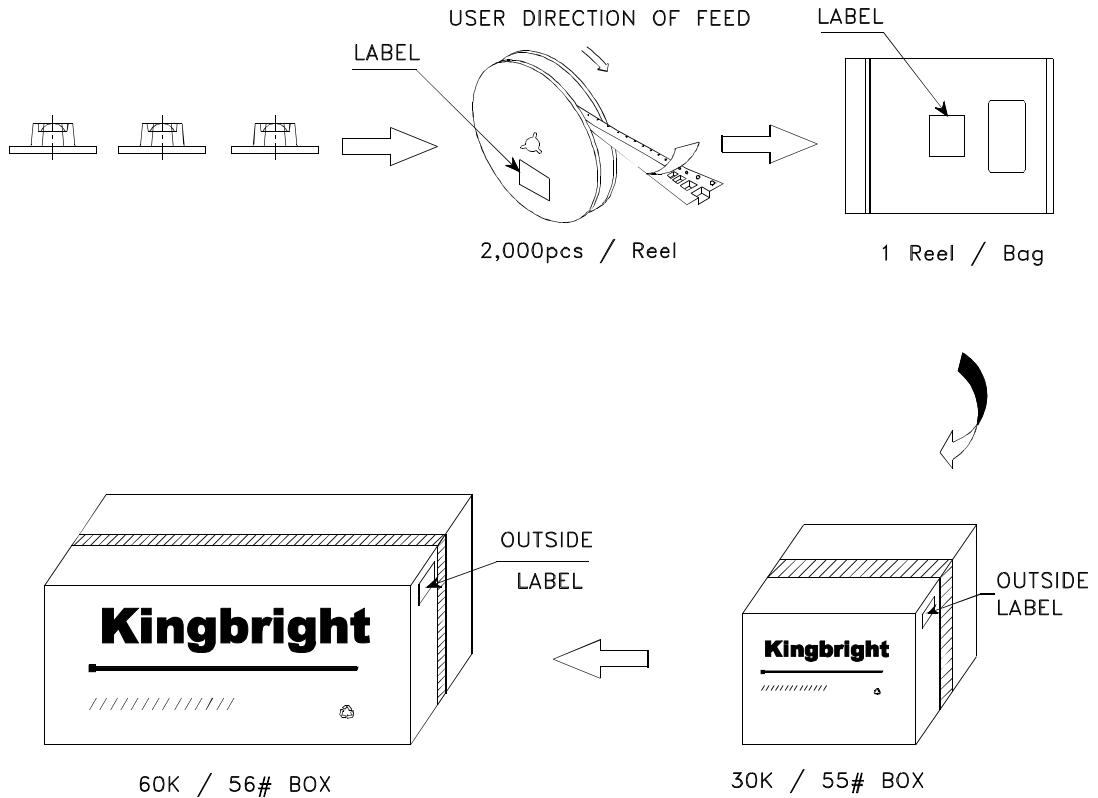
### Reel Dimension



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## PACKING & LABEL SPECIFICATIONS

KPTL-3216QBC-D-01



Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)