# 3.2x1.6mm SMD CHIP LED LAMP

Part Number: APTL3216QBC/D Blue



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

#### **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.
- RoHS compliant.

### Description

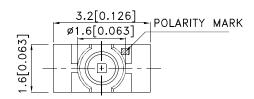
The Blue source color devices are made with InGaN Light Emitting Diode.

Static electricity and surge damage the LEDS.

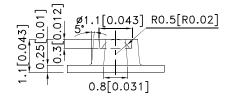
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

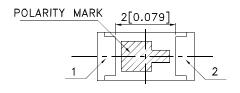
All devices, equipment and machinery must be electrically grounded.

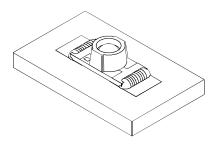
# **Package Dimensions**











- 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.

SPEC NO: DSAH3796 **REV NO: V.8B** DATE: MAR/18/2013 PAGE: 1 OF 5 APPROVED: WYNEC CHECKED: Allen Liu DRAWN: F.Cui ERP: 1203006397

### **Selection Guide**

Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
		2.	Min.	Тур.	201/2
APTL3216QBC/D	PTL3216QBC/D Blue (InGaN)		80	250	70°

#### Notes:

- 1. 01/2 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	Тур.	Max.	Units	Test Conditions			
λpeak	Peak Wavelength	Blue	460		nm	IF=20mA			
λD [1]	Dominant Wavelength	Blue	465		nm	IF=20mA			
Δλ1/2	Spectral Line Half-width	Blue	25		nm	IF=20mA			
С	Capacitance	Blue	100		pF	VF=0V;f=1MHz			
VF [2]	Forward Voltage	Blue	3.3	4	V	IF=20mA			
lr	Reverse Current	Blue		50	uA	VR=5V			

# Notes:

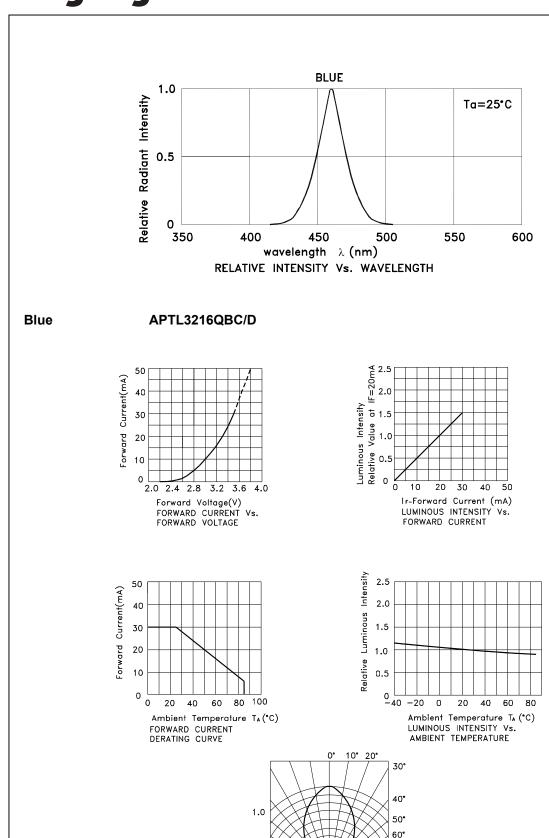
- 1.Wavelength: +/-1nm.
- 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

# 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.

SPEC NO: DSAH3796 **REV NO: V.8B** DATE: MAR/18/2013 PAGE: 2 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: F.Cui ERP: 1203006397



 SPEC NO: DSAH3796
 REV NO: V.8B
 DATE: MAR/18/2013
 PAGE: 3 OF 5

 APPROVED: WYNEC
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SPATIAL DISTRIBUTION

0.7

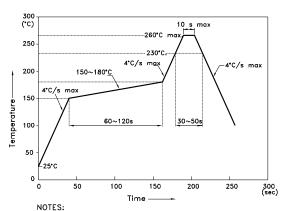
70° 80°

90°

### APTL3216QBC/D

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.



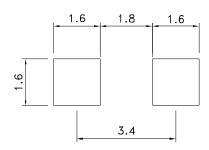
- NOTES:

  1.We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.

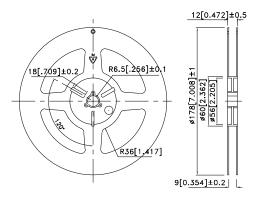
  2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

  3.Number of reflow process shall be 2 times or less.

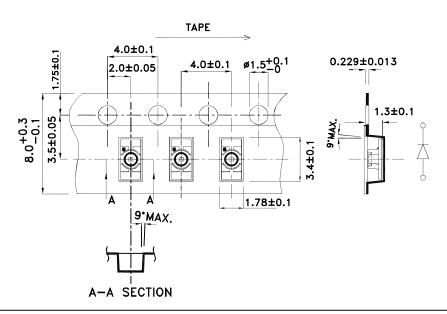
# **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)



# **Reel Dimension**



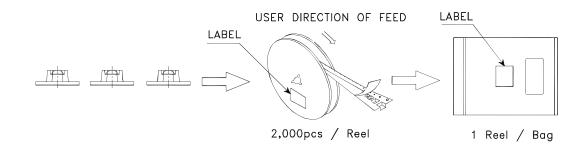
**Tape Dimensions** (Units: mm)

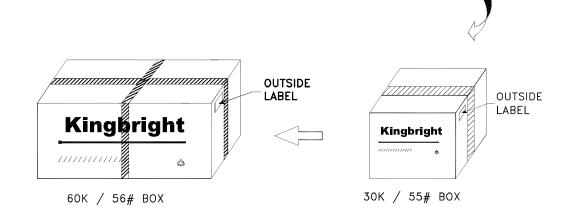


SPEC NO: DSAH3796 **REV NO: V.8B DATE: MAR/18/2013** PAGE: 4 OF 5 **APPROVED: WYNEC CHECKED: Allen Liu** DRAWN: F.Cui ERP: 1203006397

# **PACKING & LABEL SPECIFICATIONS**

### APTL3216QBC/D







All design applications should refer to Kingbright application notes available at <a href="http://www.KingbrightUSA.com/ApplicationNotes">http://www.KingbrightUSA.com/ApplicationNotes</a>

SPEC NO: DSAH3796 APPROVED: WYNEC REV NO: V.8B CHECKED: Allen Liu DATE: MAR/18/2013 DRAWN: F.Cui PAGE: 5 OF 5 ERP: 1203006397