

#### 3.2x1.6mm SMD CHIP LED LAMP

Part Number: APTR3216ZGC/E



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

#### **Features**

- 3.2mmx1.6mm SMT LED,1.05mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Vavrious colors and lens types available.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

#### Description

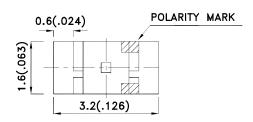
The Green source color devices are made with InGaN Light Emitting Diode.

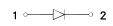
Static electricity and surge damage the LEDS.

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

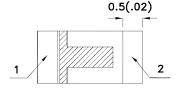
All devices, equipment and machinery must be electrically grounded.

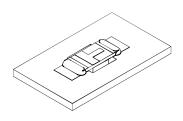
### **Package Dimensions**











- 1. All dimensions are in millimeters (inches)
- 2. Tolerance is ±0.2(0.008") 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: DSAK0184 APPROVED: WYNEC

**REV NO: V.2** CHECKED: Allen Liu DATE: DEC/30/2009 DRAWN: F.F.Zhou

PAGE: 1 OF 5 ERP: 1203010106

#### **Selection Guide**

Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
APTR3216ZGC/E	Green (InGaN)	WATER CLEAR	280	650	120°

- 1. 61/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value. 2. Luminous intensity/ luminous Flux: +/-15%.

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

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green	520		nm	IF=20mA
λD [1]	Dominant Wavelength	Green	525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Green	35		nm	IF=20mA
С	Capacitance	Green	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Green	3.2	4	V	I=20mA
lR	Reverse Current	Green		10	uA	V <sub>R</sub> =5V

#### Notes:

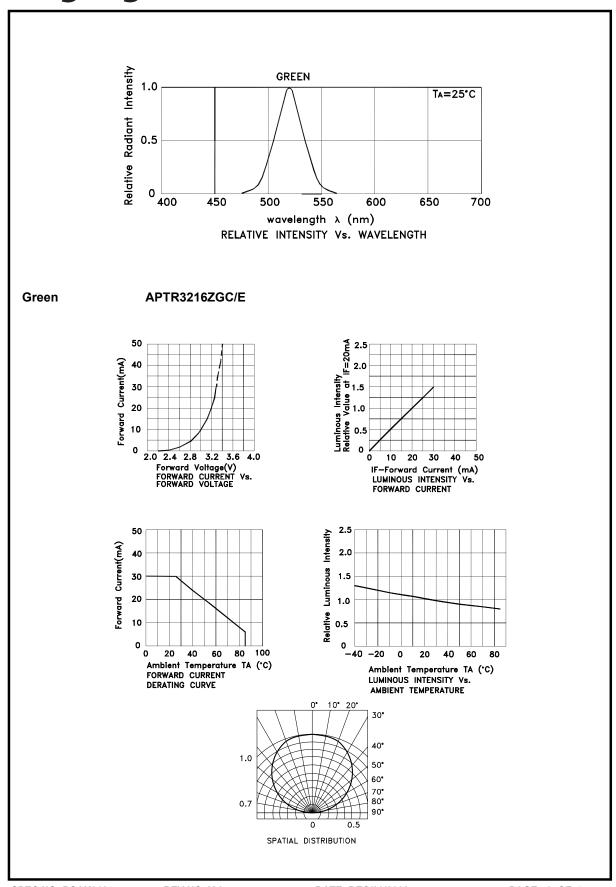
- 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.

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

Parameter	Green				
Power dissipation	120	mW			
DC Forward Current	30	mA			
Peak Forward Current [1]	100	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: DSAK0184 REV NO: V.2 DATE: DEC/30/2009 PAGE: 2 OF 5 APPROVED: WYNEC CHECKED: Allen Liu DRAWN: F.F.Zhou ERP: 1203010106



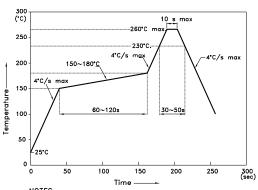
 SPEC NO: DSAK0184
 REV NO: V.2
 DATE: DEC/30/2009
 PAGE: 3 OF 5

 APPROVED: WYNEC
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 ERP: 1203010106

#### APTR3216ZGC/E

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.



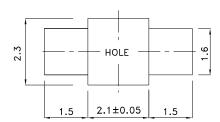
NOTES:

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

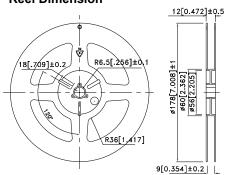
2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

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)

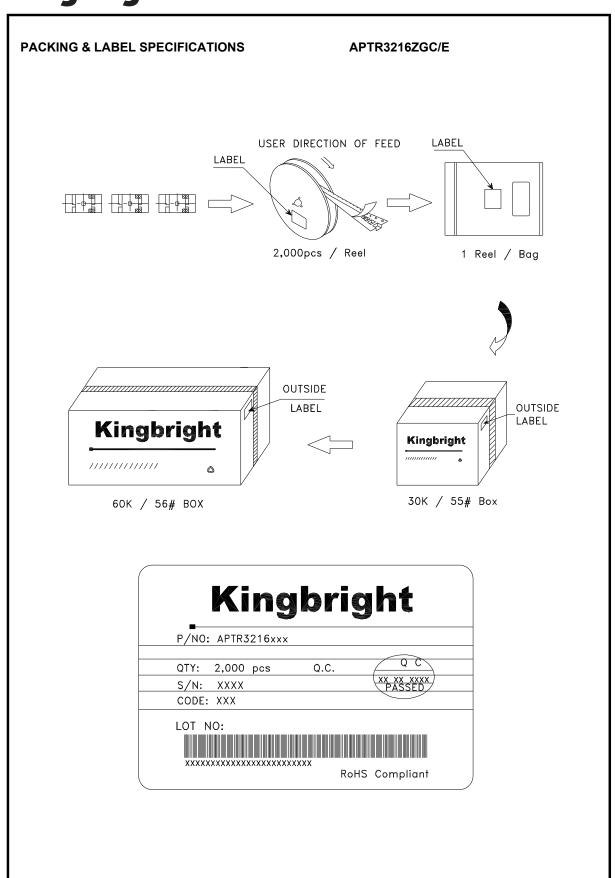
TAPE

4.0±0.1
2.0±0.05
4.0±0.1
91.5±0.1
0.229±0.013

YAMAX.
1.78±0.1

A-A SECTION

SPEC NO: DSAK0184 APPROVED: WYNEC REV NO: V.2 CHECKED: Allen Liu DATE: DEC/30/2009 DRAWN: F.F.Zhou PAGE: 4 OF 5 ERP: 1203010106



 SPEC NO: DSAK0184
 REV NO: V.2
 DATE: DEC/30/2009
 PAGE: 5 OF 5

 APPROVED: WYNEC
 CHECKED: Allen Liu
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