# **Kingbright**

# 3.2x1.6mm SMD CHIP LED LAMP

Part Number: APTR3216ZGC/E

Green



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

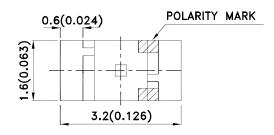
## **Features**

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

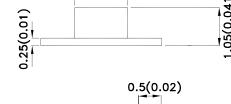
# **Descriptions**

- The Green source color devices are made with InGaN Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

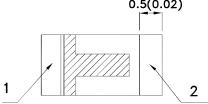
# **Package Dimensions**

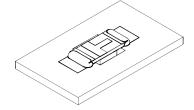






1.4(0.055)







- 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.

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 CHECKED: Allen Liu
 DRAWN: F.T.Liu
 ERP: 1203010106



# **Selection Guide**

Part No.	Dice Lens Type		Iv (mcd) [2] Lens Type @ 20mA		Viewing Angle [1]
		2.	Min.	Тур.	201/2
APTR3216ZGC/E	Green (InGaN)	Water Clear	400	650	120°

- 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	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	IF=20mA
lr	Reverse Current	Green		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.
   Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

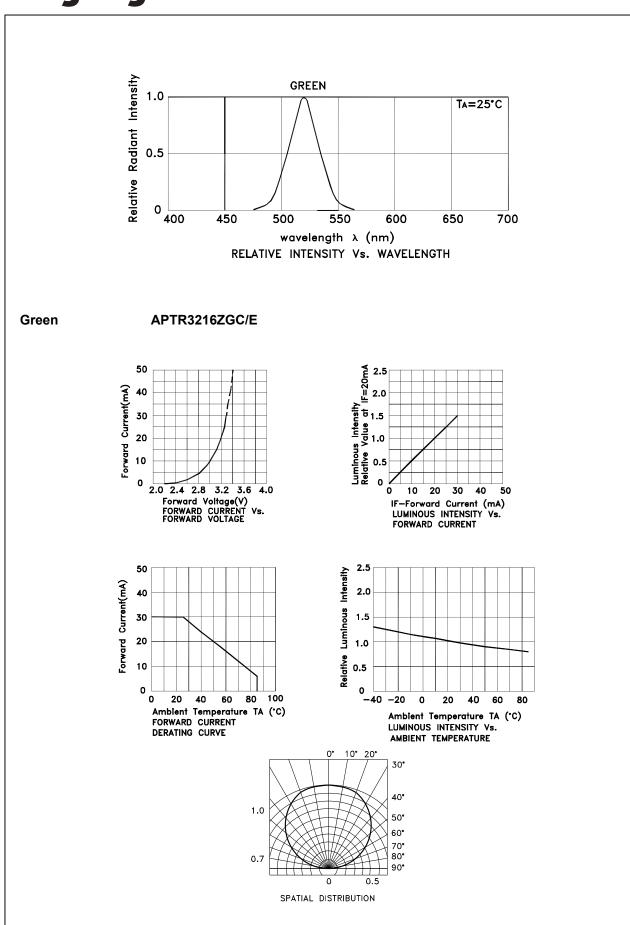
# Absolute Maximum Ratings at TA=25°C

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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.

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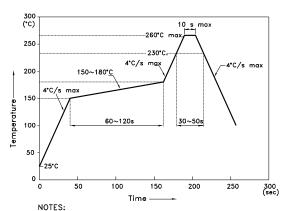
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# APTR3216ZGC/E

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.

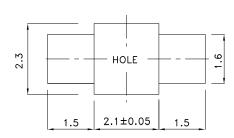
Reflow Soldering Profile For Lead-free SMT Process.



- NOTES: 1.We recommend the reflow temperature 245°C( $\pm$ /-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.

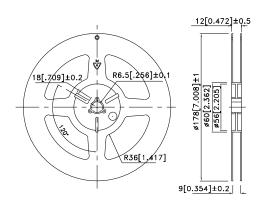
  3.Number of reflow process shall be 2 times or less.

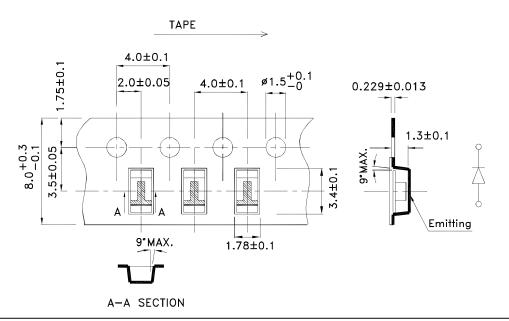
# **Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)



# **Tape Dimensions** (Units: mm)

# **Reel Dimension**





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# PACKING & LABEL SPECIFICATIONS APTR3216ZGC/E USER DIRECTION OF FEED LABEL 2,000pcs / Reel 1 Reel / Bag OUTSIDE LABEL Kingbright Kingbright



30K / 55# Box

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60K / 56# BOX

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