

Part Number: APTB1612SGNC-F01

Super Bright Green  
Pure Orange

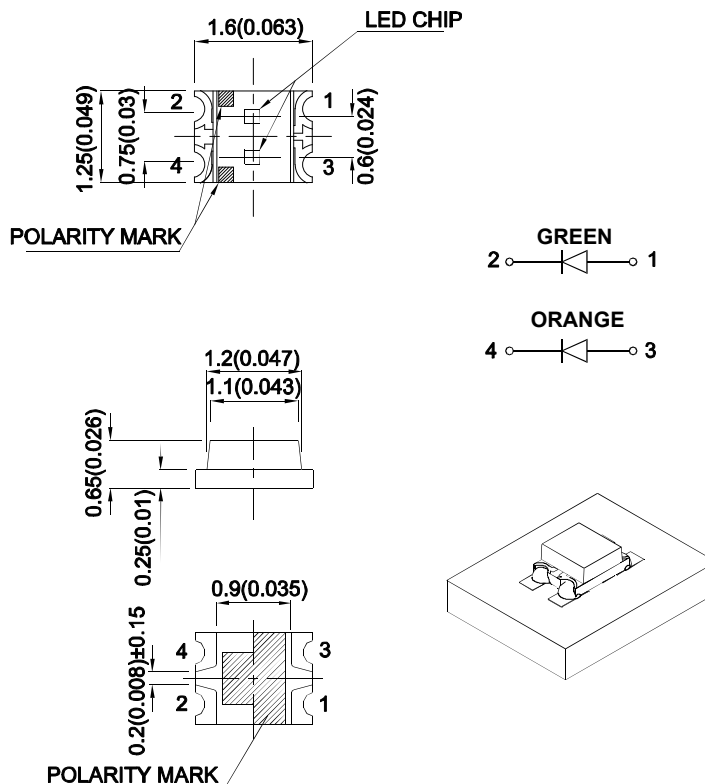
## Features

- 1.6mmx1.25mm SMD LED, 0.65mm thickness.
- Bi-color, low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

## Descriptions

- The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
- The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Pure Orange Light Emitting Diode.

## Package Dimensions



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008)$  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.



## Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APT B1612SGNC-F01	Super Bright Green (GaP)	Water Clear	5	12	150°
	Pure Orange (GaAsP/GaP)		*5	*12	
			8	15	
			*3	*8	

**Notes:**

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity / luminous Flux: +/-15%.
- \* Luminous intensity value is traceable to CIE127-2007 standards.

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

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Green Pure Orange	565 607		nm	IF=20mA
λD [1]	Dominant Wavelength	Super Bright Green Pure Orange	568 602		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Green Pure Orange	30 35		nm	IF=20mA
C	Capacitance	Super Bright Green Pure Orange	15 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Super Bright Green Pure Orange	2.2 2.05	2.5 2.5	V	IF=20mA
IR	Reverse Current	Super Bright Green Pure Orange		10 10	uA	VR = 5V

**Notes:**

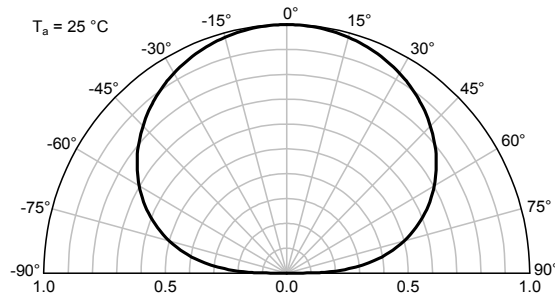
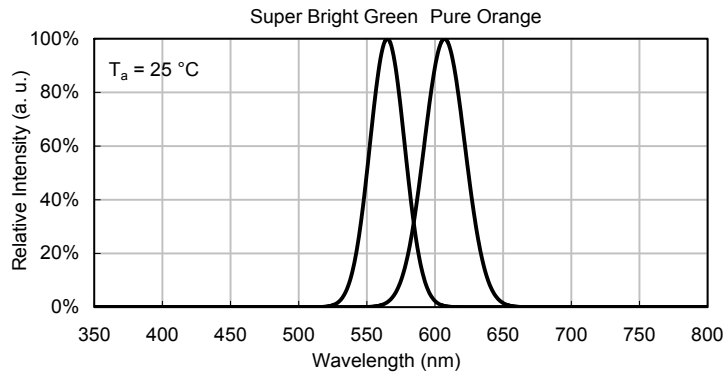
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

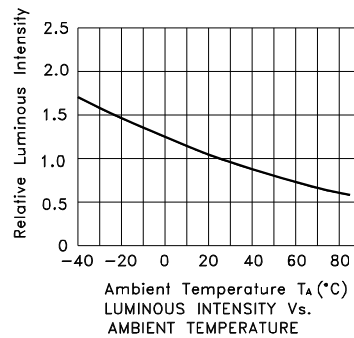
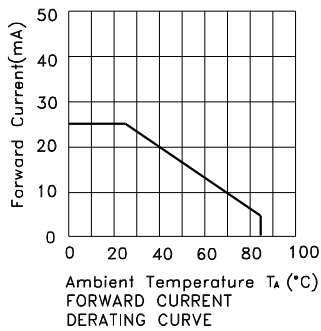
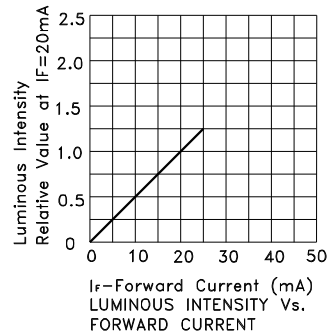
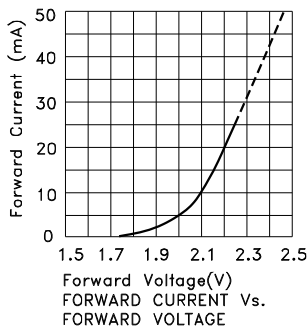
Parameter	Super Bright Green	Pure Orange	Units
Power dissipation	62.5	62.5	mW
DC Forward Current	25	25	mA
Peak Forward Current [1]	140	145	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

**Notes:**

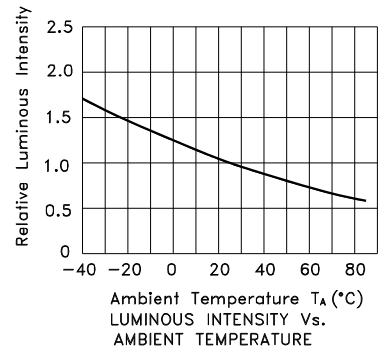
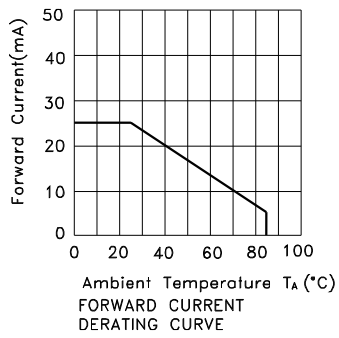
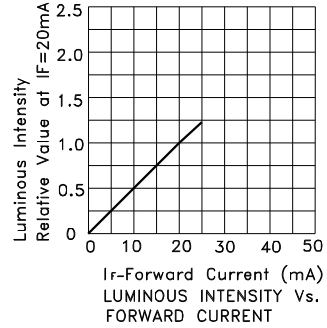
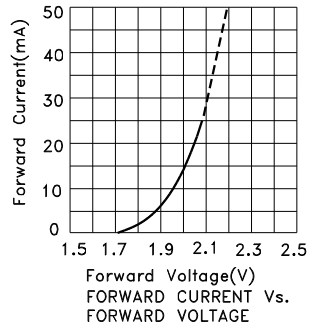
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



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**Super Bright Green**



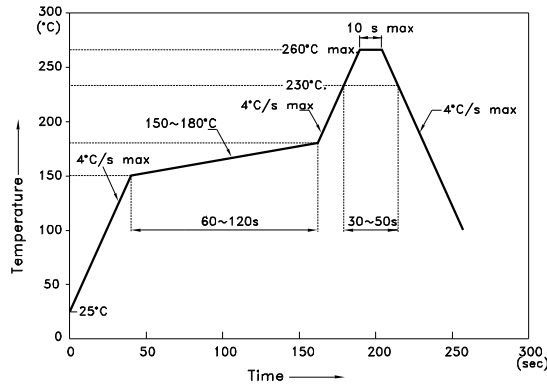
## Pure Orange



## APTB1612SGNC-F01

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.

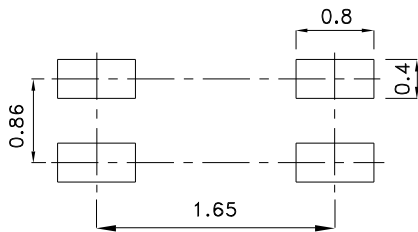
Reflow Soldering Profile For Lead-free SMT Process.



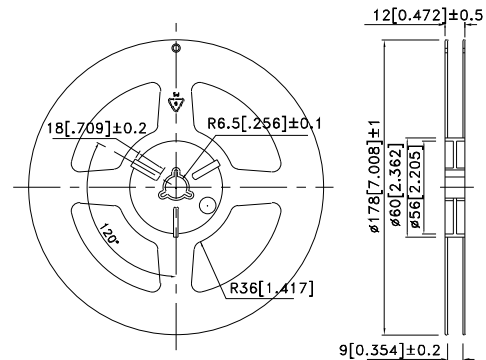
NOTES:

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.

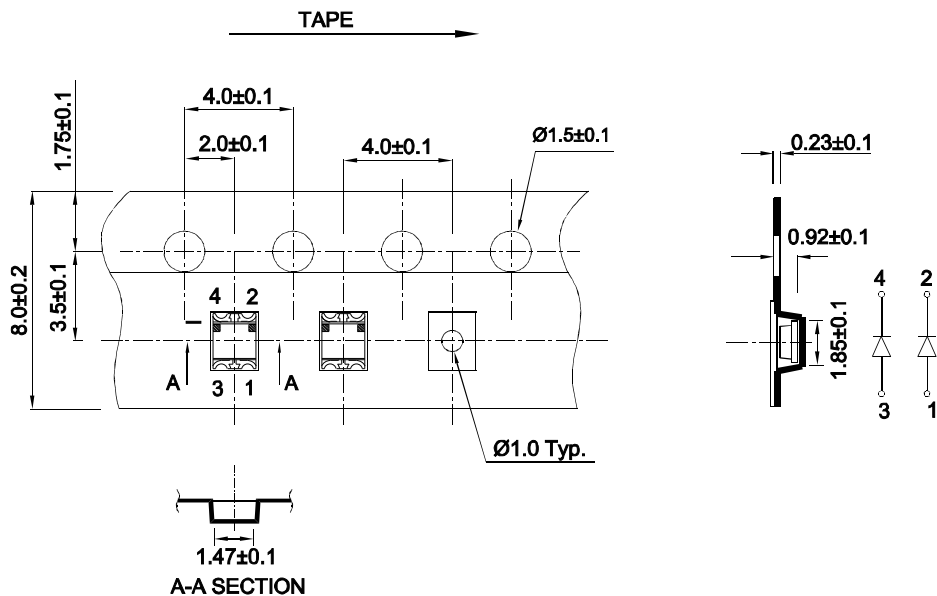
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)

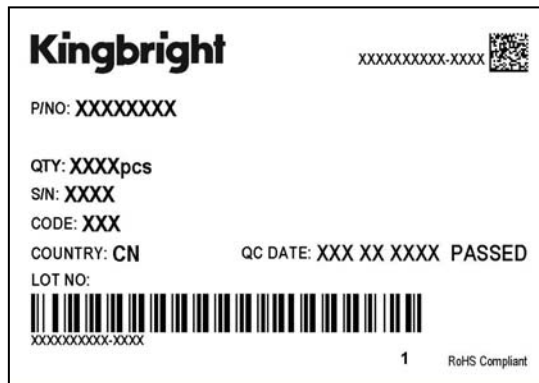
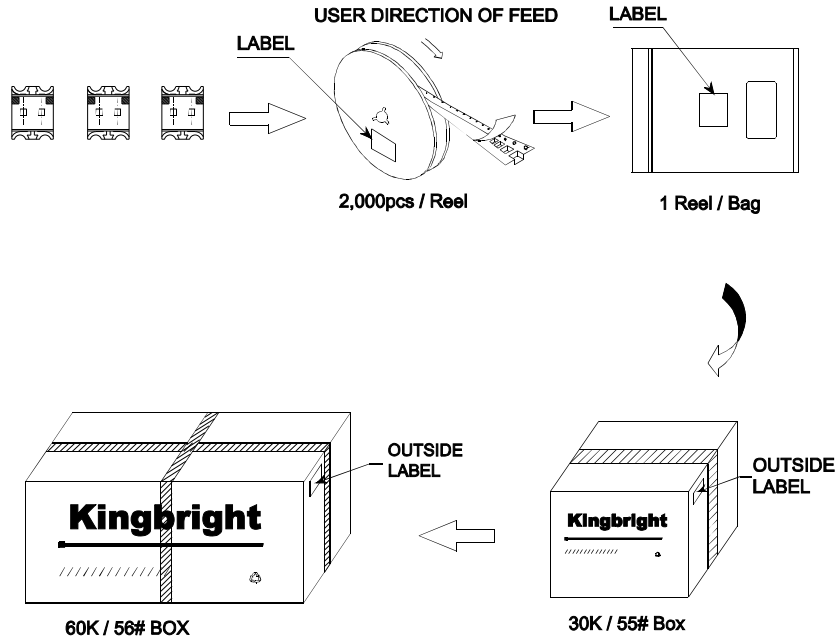


### Reel Dimension



### Tape Dimensions (Units : mm)





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