



## APBL3025NSGC-F01

3.0 x 2.5 mm Surface Mount LED Lamp

### DESCRIPTIONS

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

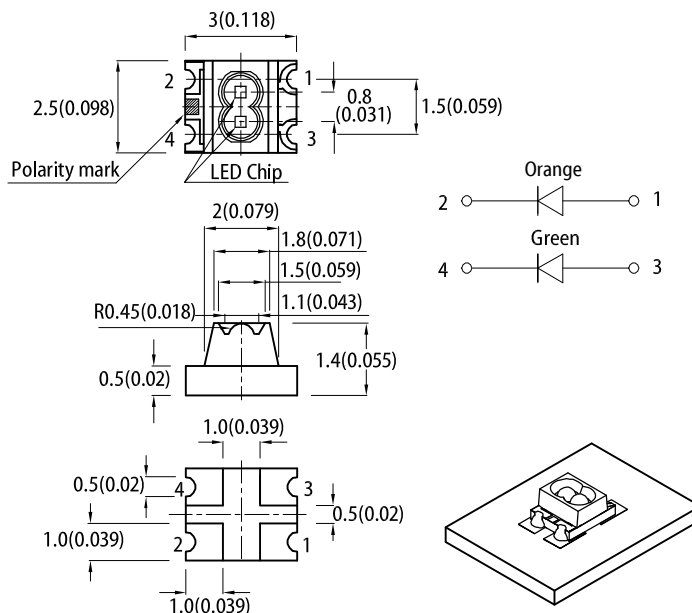
### FEATURES

- 3.0 mm x 2.5 mm SMD LED, 1.4 mm thickness
- Low power consumption
- Wide viewing angle
- Ideal for backlight and indicator
- Inner lens type
- Package: 2000 pcs / reel
- Moisture sensitivity level: 3
- RoHS compliant

### APPLICATIONS

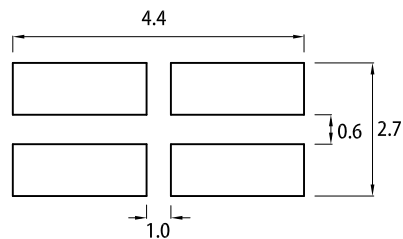
- Backlight
- Status indicator
- Home and smart appliances
- Wearable and portable devices
- Healthcare applications

### PACKAGE DIMENSIONS



### RECOMMENDED SOLDERING PATTERN

(units : mm; tolerance : ± 0.1)



#### Notes:

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.

### SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 20mA <sup>[2]</sup>		Viewing Angle <sup>[1]</sup>
			Min.	Typ.	2θ1/2
APBL3025NSGC-F01	<span style="color: orange;">■</span> Pure Orange (GaAsP/GaP)	Water Clear	12	20	70°
			*5	*12	
	<span style="color: green;">■</span> Super Bright Green (GaP)		12	20	
			*12	*20	

#### 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 T<sub>A</sub>=25°C**

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I <sub>F</sub> = 20mA	$\lambda_{\text{peak}}$	Pure Orange Super Bright Green	607 565	-	nm
Dominant Wavelength I <sub>F</sub> = 20mA	$\lambda_{\text{dom}}$ <sup>[1]</sup>	Pure Orange Super Bright Green	602 568	-	nm
Spectral Bandwidth at 50% $\Phi$ REL MAX I <sub>F</sub> = 20mA	$\Delta\lambda$	Pure Orange Super Bright Green	35 30	-	nm
Capacitance	C	Pure Orange Super Bright Green	15 15	-	pF
Forward Voltage I <sub>F</sub> = 20mA	V <sub>F</sub> <sup>[2]</sup>	Pure Orange Super Bright Green	2.05 2.2	2.5 2.5	V
Reverse Current (V <sub>R</sub> = 5V)	I <sub>R</sub>	Pure Orange Super Bright Green	-	10 10	$\mu$ A

## Notes:

1. The dominant wavelength ( $\lambda_d$ ) above is the setup value of the sorting machine. (Tolerance  $\lambda_d$  :  $\pm 1\text{nm}$ .)
2. Forward voltage:  $\pm 0.1\text{V}$ .
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 T<sub>A</sub>=25°C**

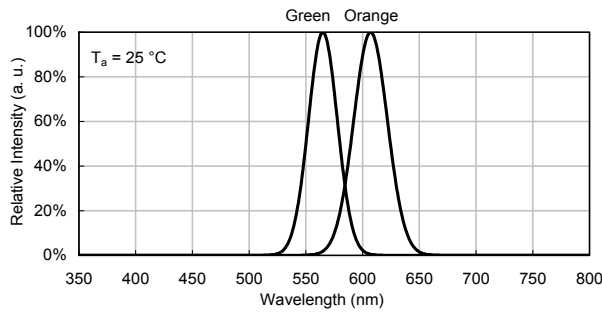
Parameter	Symbol	Value		Unit
		Pure Orange	Super Bright Green	
Power Dissipation	P <sub>D</sub>	62.5	62.5	mW
Reverse Voltage	V <sub>R</sub>	5	5	V
Junction Temperature	T <sub>J</sub>	125	110	°C
Operating Temperature	T <sub>op</sub>	-40 To +85		°C
Storage Temperature	T <sub>stg</sub>	-40 To +85		°C
DC Forward Current	I <sub>F</sub>	25	25	mA
Peak Forward Current	I <sub>FM</sub> <sup>[1]</sup>	145	140	mA
Electrostatic Discharge Threshold (HBM)	-	8000	8000	V

## Notes:

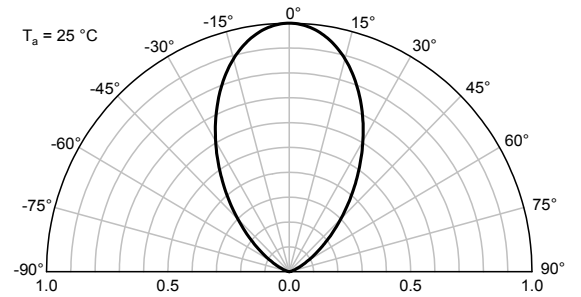
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

## TECHNICAL DATA

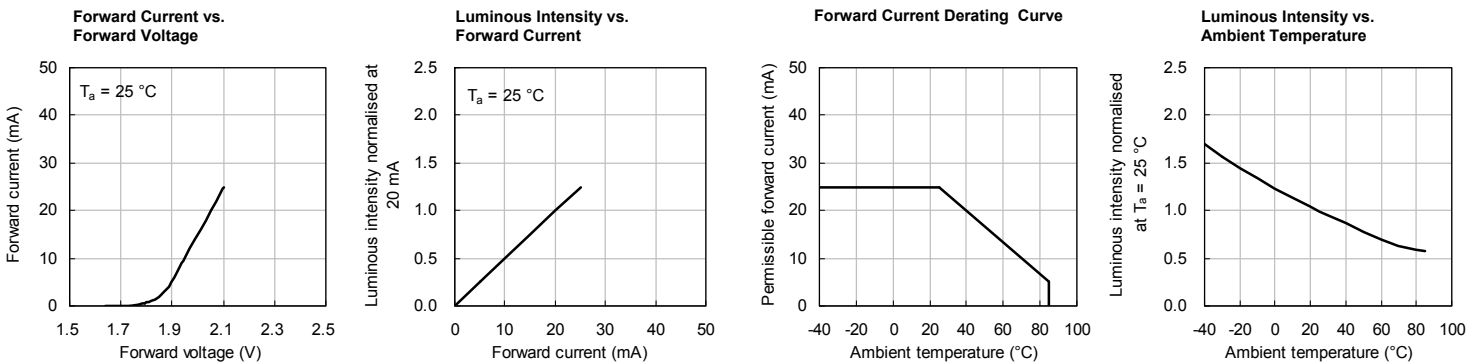
### RELATIVE INTENSITY vs. WAVELENGTH



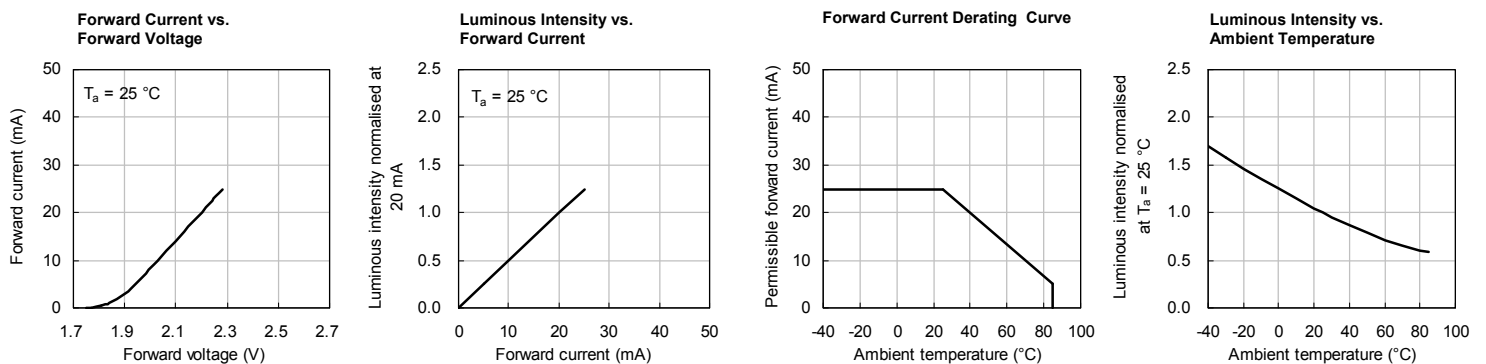
### SPATIAL DISTRIBUTION



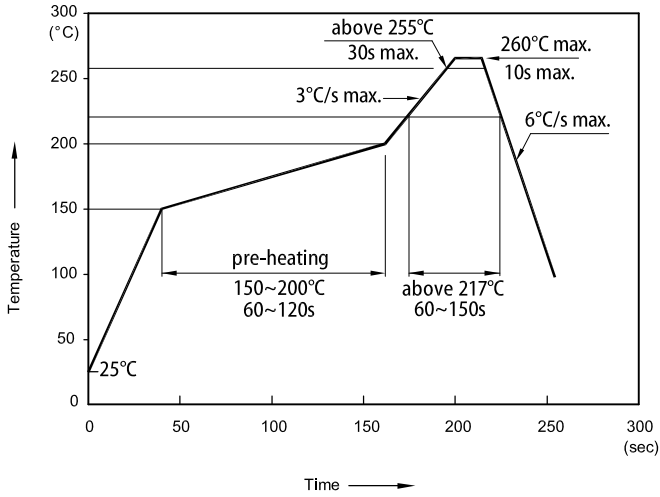
## PURE ORANGE



## SUPER BRIGHT GREEN

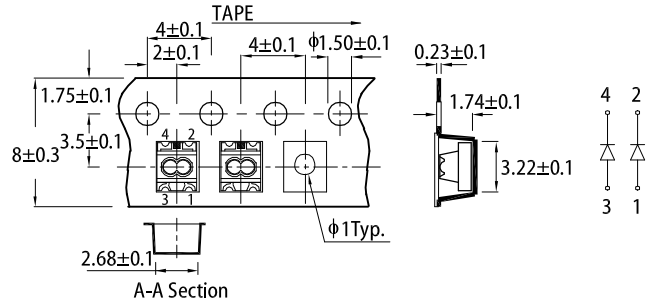


## REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS

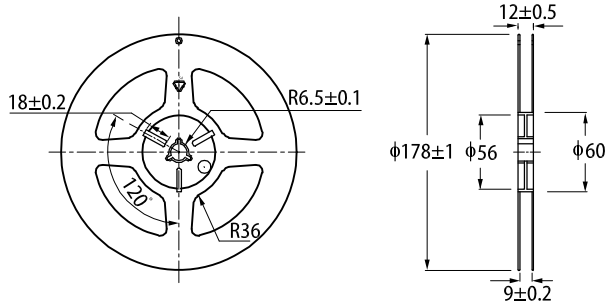


- Notes:
1. Don't cause stress to the LEDs while it is exposed to high temperature.
  2. The maximum number of reflow soldering passes is 2 times.
  3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

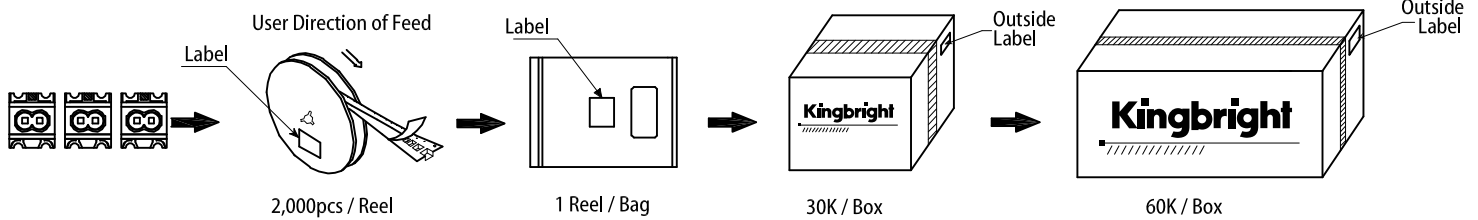
## TAPE SPECIFICATIONS (units : mm)



## REEL DIMENSION (units : mm)



## PACKING & LABEL SPECIFICATIONS



**Kingbright** XXXXXXXXXXXX  
 CODE: XXXX  
 D/C: XXX XX XXXX XXXXXXXXXXX-XXXX

(1P) MFG P/N: XXXXXXXXXXXXXXXX

(Q) QTY: XXXX

(9D) DATE CODE: XXXX (4L) COO: CN

(33P) CODE: XXXX

(1T) TRACEABILITY: XXXXXXXXXXX-XXXX

(SP)XXXXXXXXXX

1 RoHS Compliant

## PRECAUTIONARY NOTES

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
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