



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APB3227SURKZGC

Hyper Red
Green

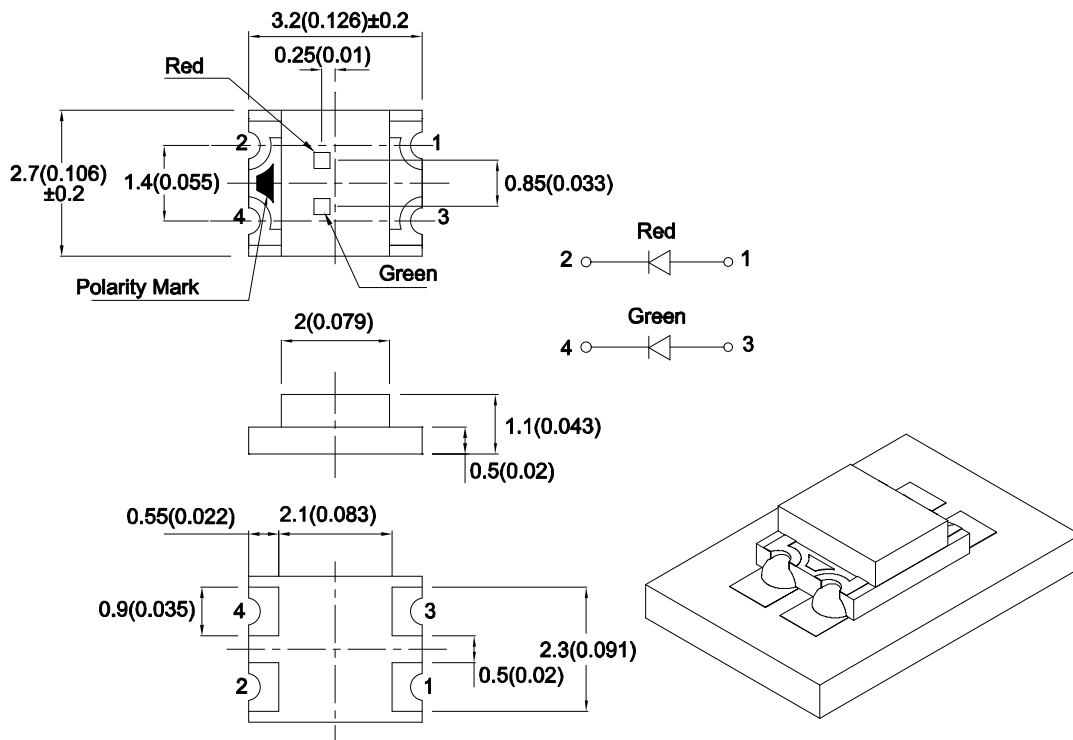
Features

- 3.2 mm x 2.7 mm SMD LED, 1.1 mm thickness
- Bi-color, low power consumption
- Wide viewing angle
- Ideal for backlight and indicator
- Package: 2000 pcs / reel
- Moisture sensitivity level: 3
- RoHS compliant

Descriptions

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

Package Dimensions



Notes:

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.



Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APB3227SURKZGC	Hyper Red (AlGaInP)	Water Clear	120	250	140°
			*40	*80	
	Green (InGaN)		200	400	
			*200	*400	

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
λ _{peak}	Peak Wavelength	Hyper Red Green	645 515		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Hyper Red Green	630 525		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Hyper Red Green	28 30		nm	I _F =20mA
C	Capacitance	Hyper Red Green	35 45		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Hyper Red Green	1.95 3.3	2.5 4.1	V	I _F =20mA
I _R	Reverse Current	Hyper Red Green		10 50	uA	V _R = 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.

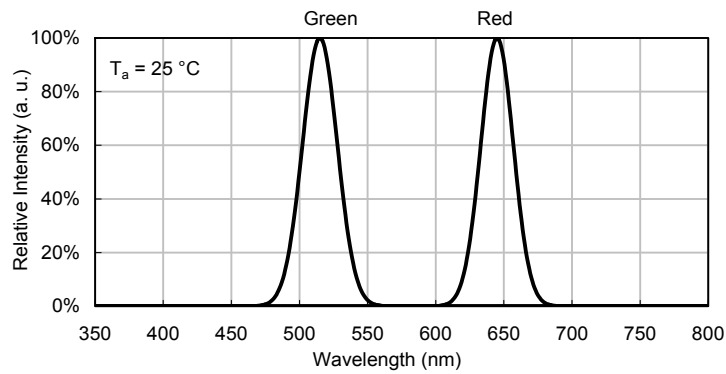
Absolute Maximum Ratings at TA=25°C

Parameter	Hyper Red	Green	Units
Power dissipation	75	102.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	185	150	mA
Electrostatic Discharge Threshold (HBM)	3000	450	V
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

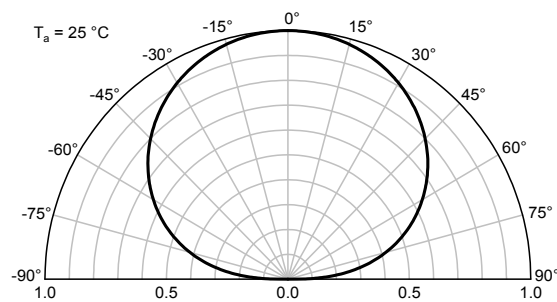
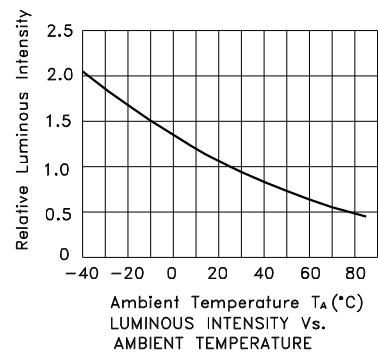
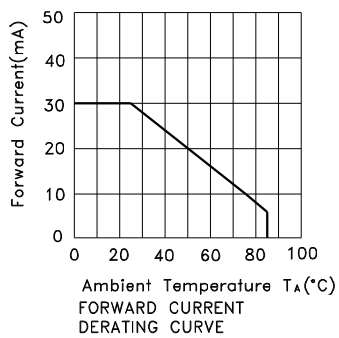
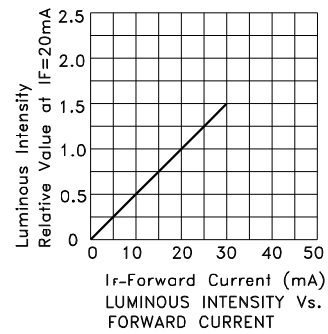
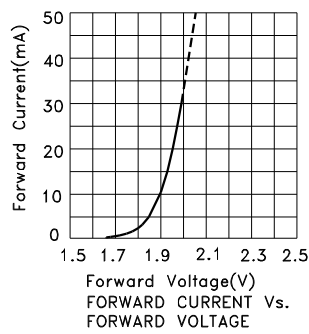
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.

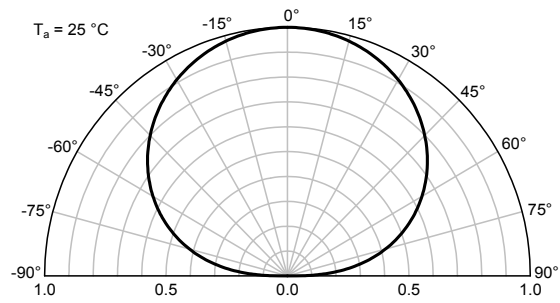
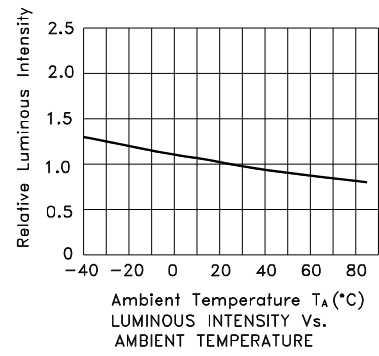
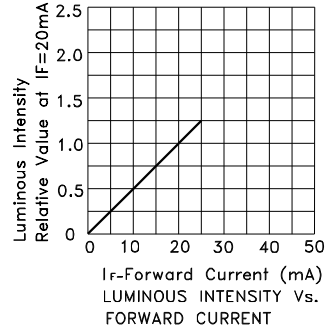
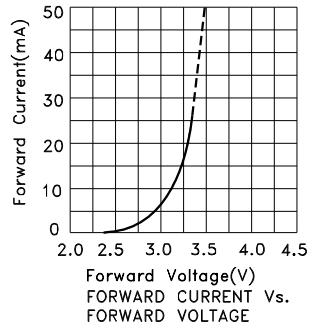
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



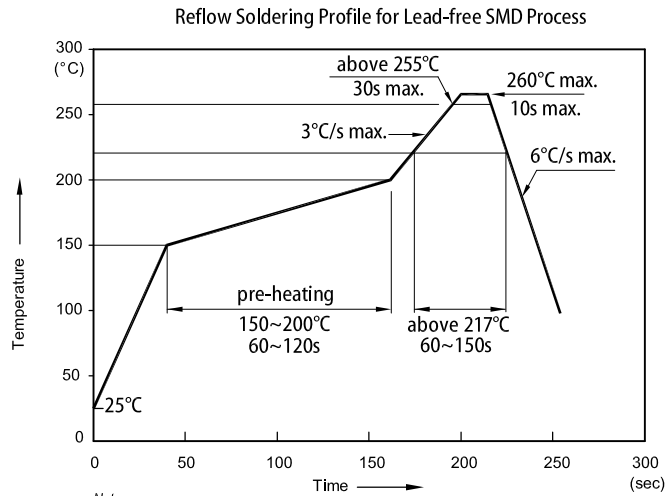
APB3227SURKZGC Hyper Red



Green



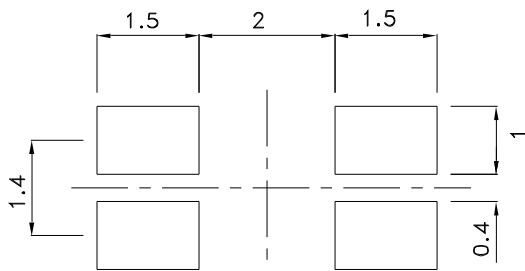
APB3227SURKZGC



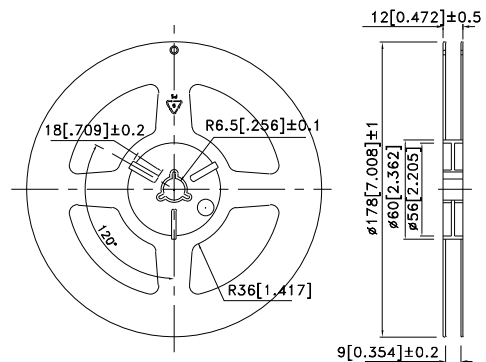
Notes:

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.

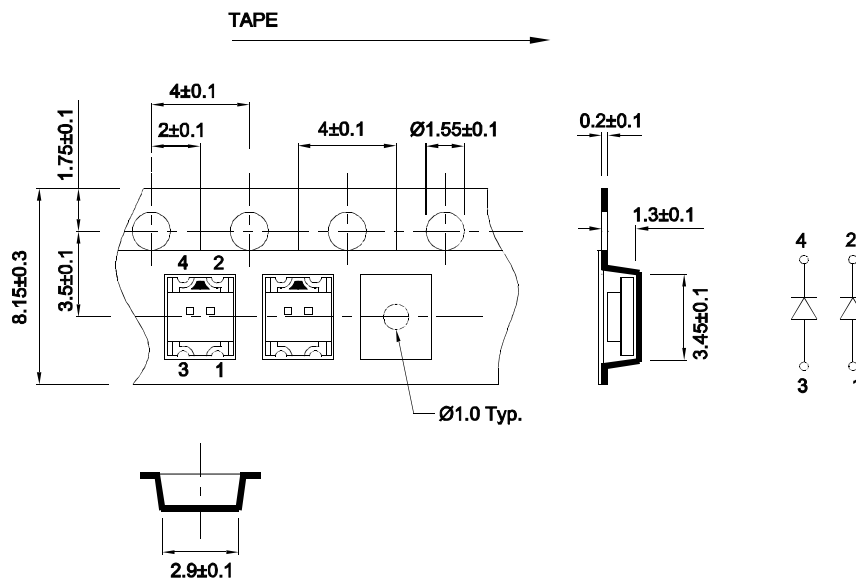
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

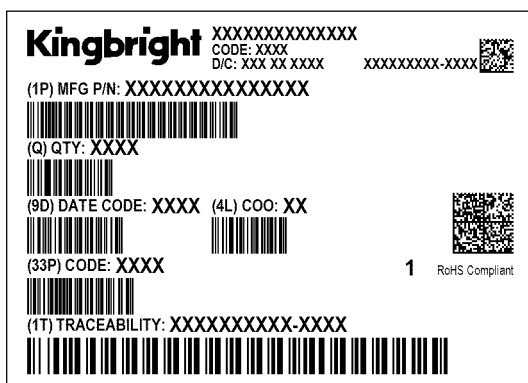
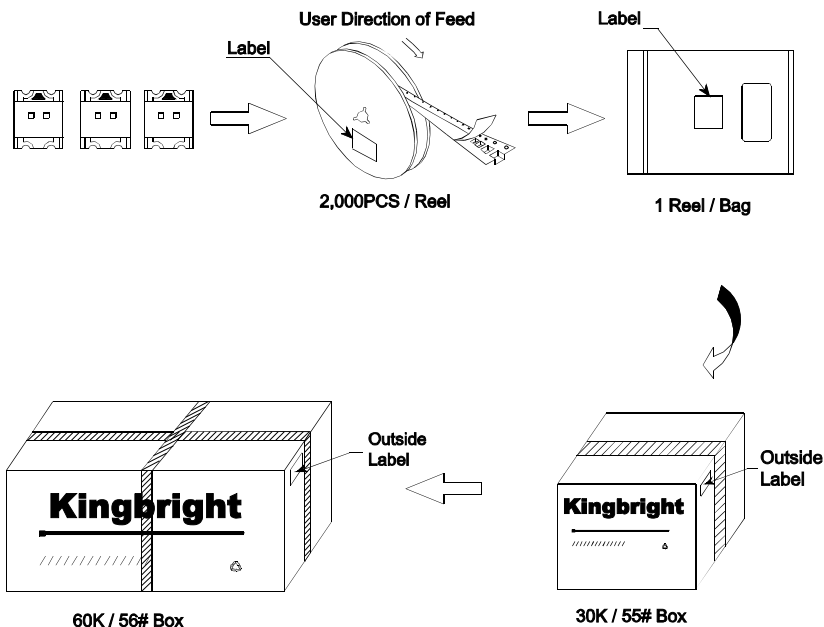


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APB3227SURKZGC



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