



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APBD3224LSURKZGKC

Hyper Red
Green

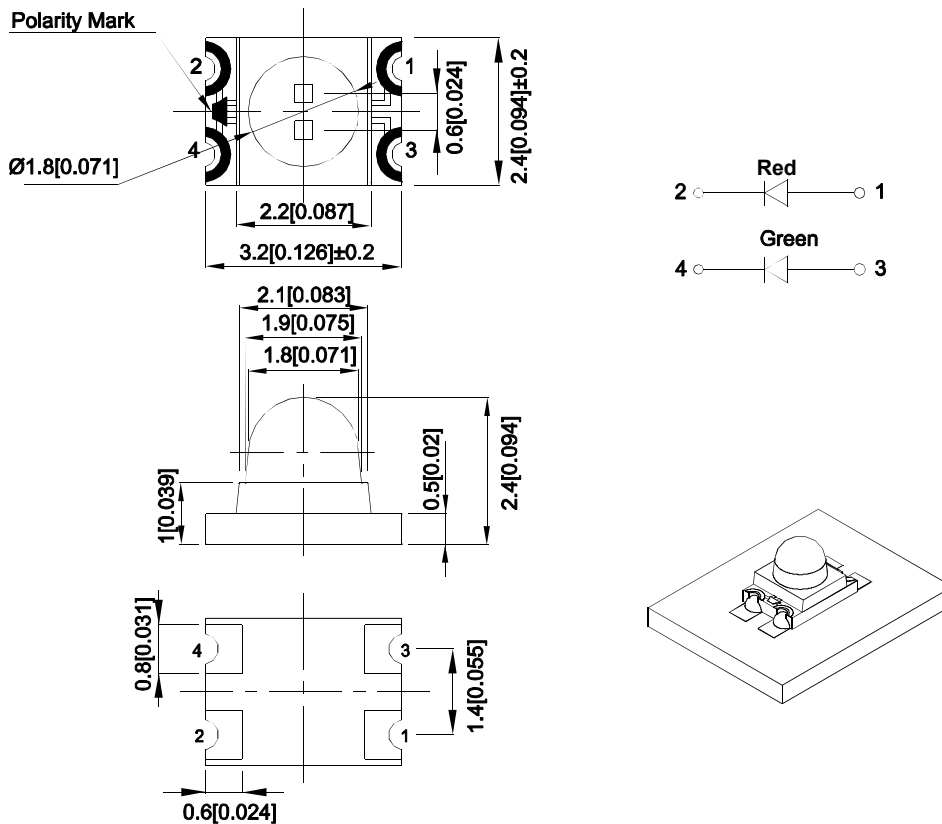
Features

- 3.2x2.4mm SMD LED, 2.4mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Package : 1500pcs / reel.
- Moisture sensitivity level : level 3.
- Low current $I_F=2\text{mA}$ operating.
- 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 ± 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] @ 2mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APBD3224LSURKZGKC	Hyper Red (AlGaInP)	Water Clear	20	50	20°
			*10	*30	
	Green (InGaN)		120	250	
			*120	*250	

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 the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Min.	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Hyper Red Green		645 515		nm	I _F =2mA
λ_D [1]	Dominant Wavelength	Hyper Red Green		630 525		nm	I _F =2mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red Green		28 35		nm	I _F =2mA
C	Capacitance	Hyper Red Green		35 45		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Hyper Red Green	1.5 2.2	1.75 2.65	2.1 3.1	V	I _F =2mA
I _R	Reverse Current	Hyper Red Green			10 50	uA	V _R = 5V

Notes:

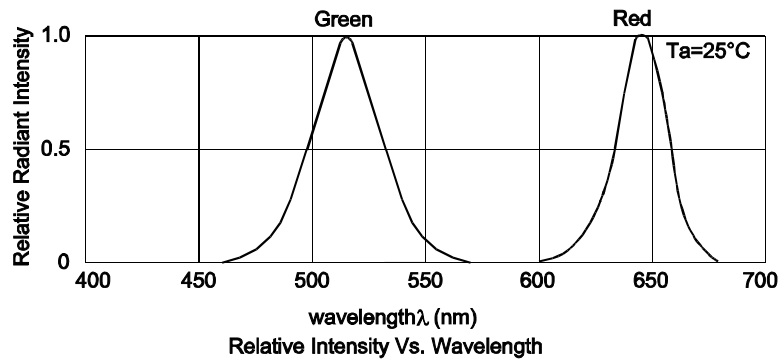
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
2. Luminous intensity/ luminous Flux: +/-15%. *Luminous intensity with asterisk is measured at 20mA.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

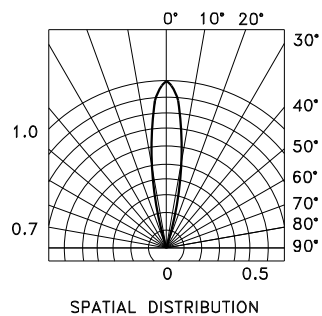
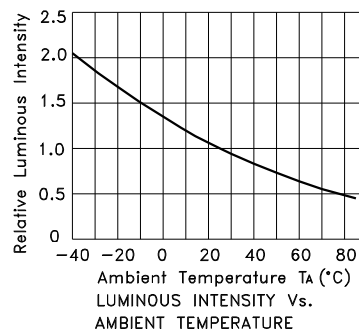
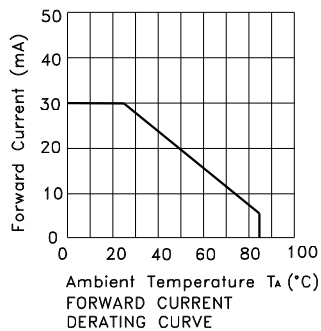
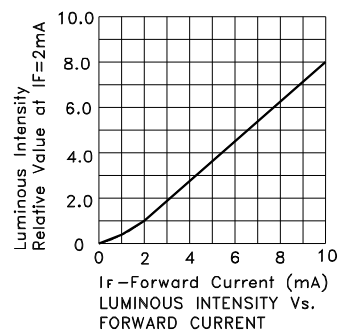
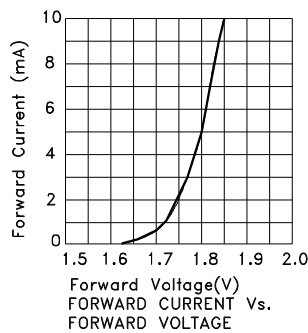
Parameter	Hyper Red	Green	Units
Power dissipation	63	77.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	185	150	mA
Electrostatic Discharge Threshold (HBM)	3000	450	V
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

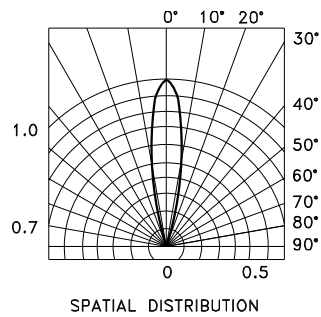
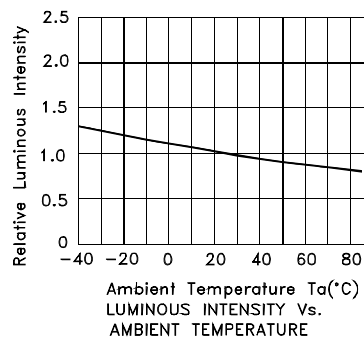
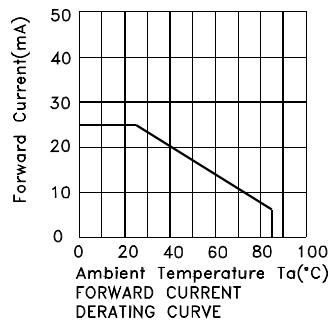
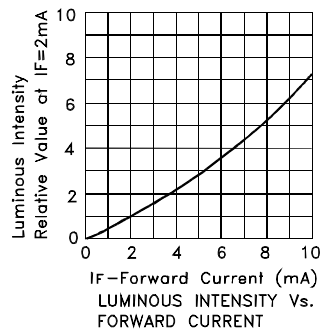
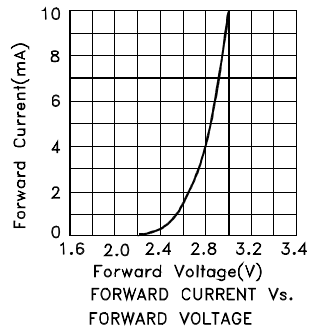
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



APBD3224LSURKZGKC Hyper Red



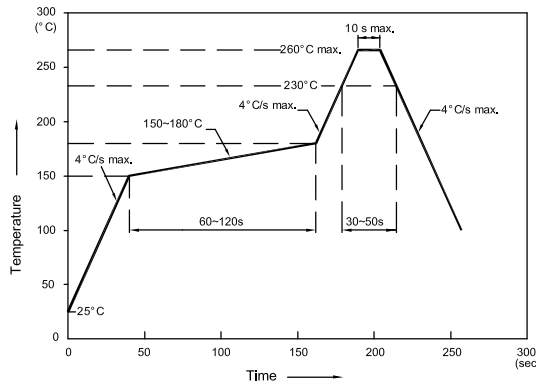
Green



APBD3224LSURKZGKC

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.

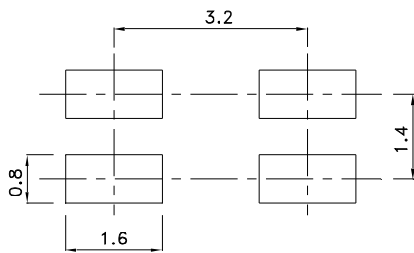
Reflow Soldering Profile For Lead-free SMT Process.



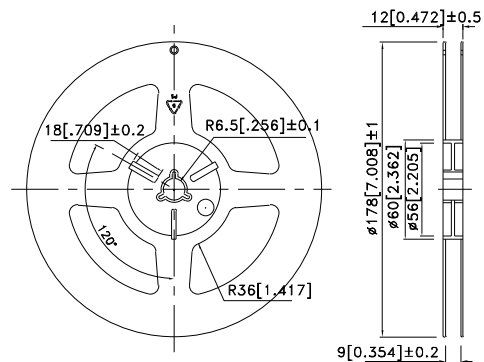
NOTES:

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.

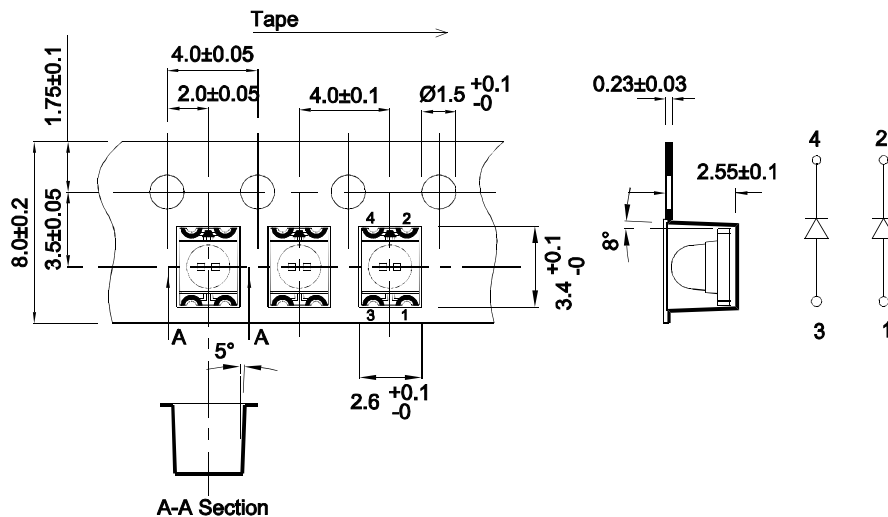
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

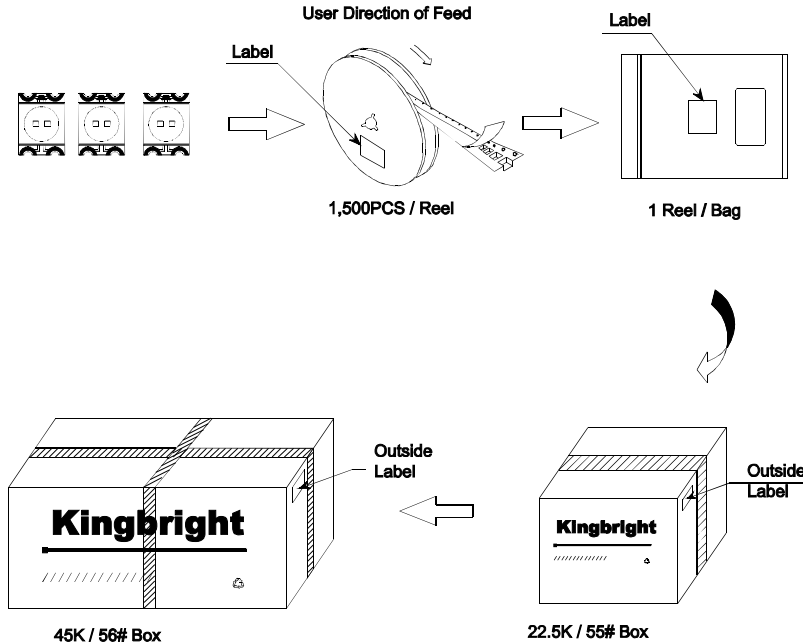



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APBD3224LSURKZGKC



Kingbright		
P/NO: APBD3224xxx		
QTY: 1,500 PCS	Q.C.	Q.C. xxxxxxx PASSED
S/N: XXXX		
CODE: XXX		
LOT NO:		
		
RoHS Compliant		

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