

#### 3.2x2.4mm SMD CHIP LED LAMP

Part Number: KPBD-3224SURKCGKC

Hyper Red Green

#### **Features**

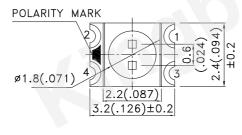
- 3.2x2.4mm SMT LED, 2.4mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package: 1500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

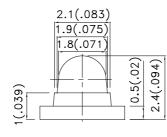
### **Description**

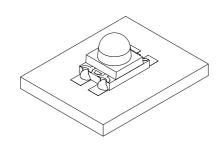
The Hyper Red source color devices are made with Al-GaInP on GaAs substrate Light Emitting Diode.

The Green source color devices are made with AlGalnP on GaAs substrate Light Emitting Diode.

## **Package Dimensions**







- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.1(0.004") unless otherwise noted.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
   The device has a single mounting surface. The device must be mounted according to the specifications.

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ERP: 1203000875

#### **Selection Guide**

	Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
				Min.	Тур.	201/2
	KPBD-3224SURKCGKC	Hyper Red (AlGaInP)	Water Clear	700	1300	20°
				*120	*400	
		Green (AlGalnP)		80	280	
				*80	*280	

- Notes:
  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%.

  \* 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	Hyper Red Green	645 574		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green	28 20		nm	IF=20mA
С	Capacitance	Hyper Red Green	35 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Green	1.95 2.1	2.5 2.5	V	IF=20mA
lr	Reverse Current	Hyper Red Green		10 10	uA	VR = 5V

#### Notes:

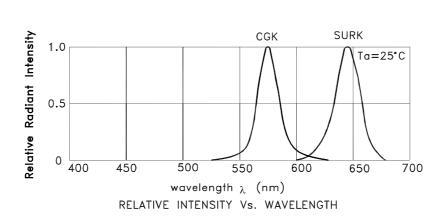
- 1.Wavelength: +/-1nm.
- Some and Voltage: +/-0.1V.
   Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

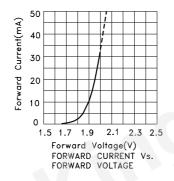
Parameter	Hyper Red	Green	Units	
Power dissipation	75	75	mW	
DC Forward Current	30	30	mA	
Peak Forward Current [1]	185	150	mA	
Reverse Voltage		V		
Operating Temperature	ng Temperature -40°C To +85°C			
Storage Temperature	perature -40°C To +85°C			

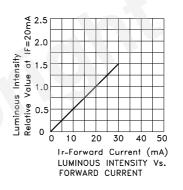
Note: 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

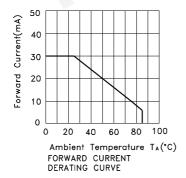
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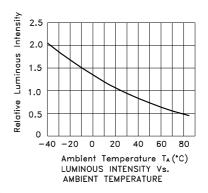


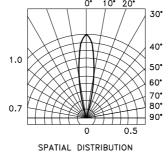
## KPBD-3224SURKCGKC Hyper Red







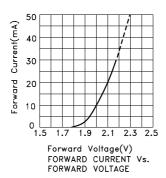


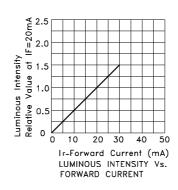


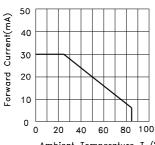
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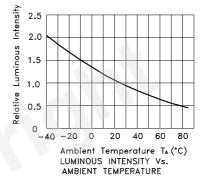
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### Green

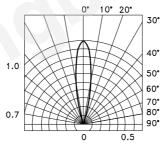












SPATIAL DISTRIBUTION

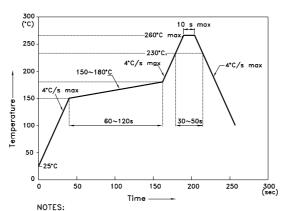
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#### **KPBD-3224SURKCGKC**

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.



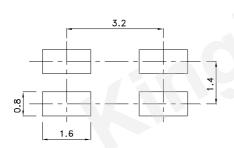
- NOTES:

  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.

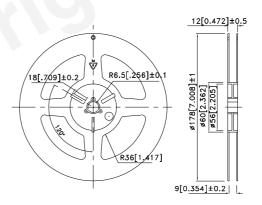
  3.Number of reflow process shall be 2 times or less.

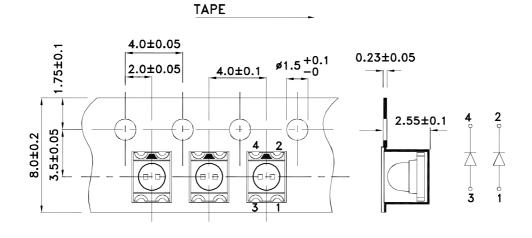
**Recommended Soldering Pattern** (Units: mm; Tolerance: ± 0.1)



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

### **Reel Dimension**

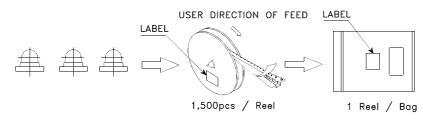


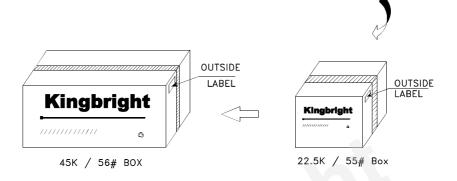


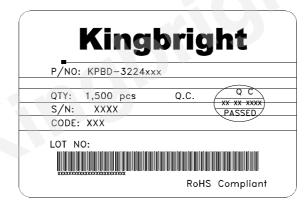
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## **PACKING & LABEL SPECIFICATIONS**

#### **KPBD-3224SURKCGKC**







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