



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

Part Number: KPTBD-3216SEJ3ZGGC

Hyper Red  
Green

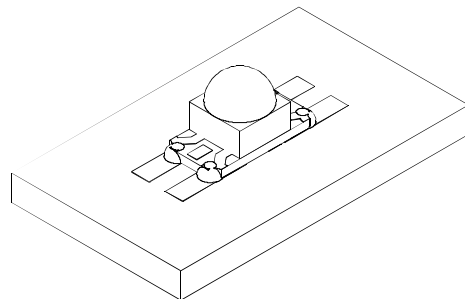
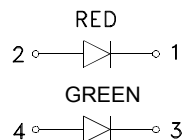
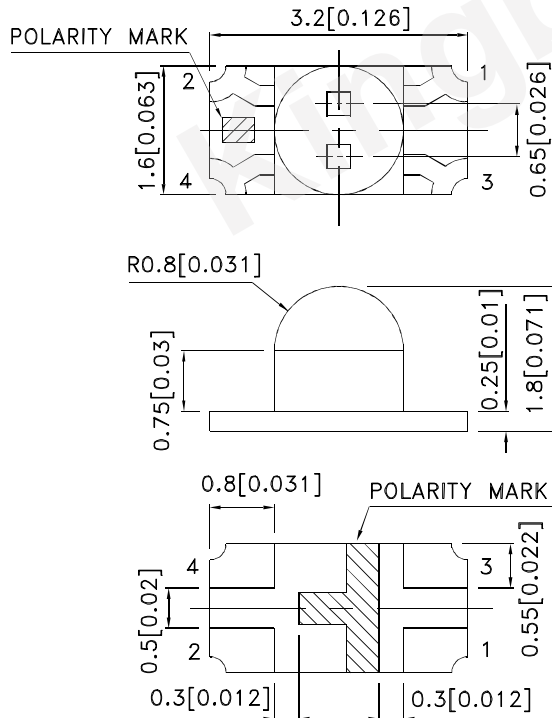
### Features

- 3.2mmx1.6mm SMD LED, 1.8mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Descriptions

- The Hyper Red device is based on light emitting diode chip made from AlGaInP.
- The Green source color devices are made with InGaN 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  $\pm 0.2$  (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
KPTBD-3216SEJ3ZGGC	Hyper Red (AlGaInP)	Water Clear	3300	4500	30°
			*1000	*1500	
	Green (InGaN)		700	1300	
			*700	*1300	

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	Hyper Red Green	640 520		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Green	625 525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green	25 35		nm	IF=20mA
C	Capacitance	Hyper Red Green	27 100		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Hyper Red Green	2.2 3.2	2.8 4	V	IF=20mA
IR	Reverse Current	Hyper Red Green		10 50	uA	VR = 5V

Notes:

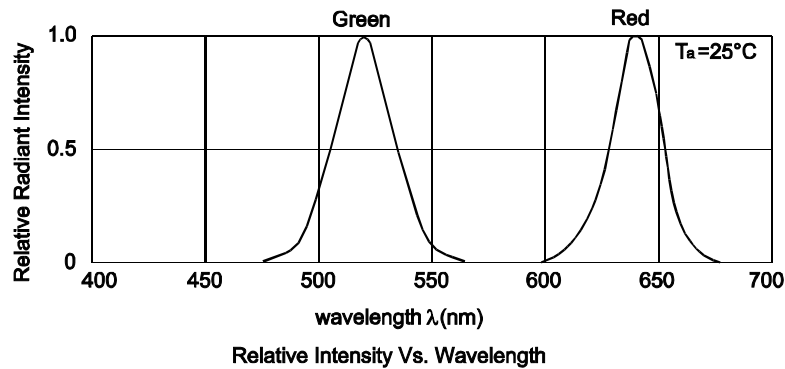
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

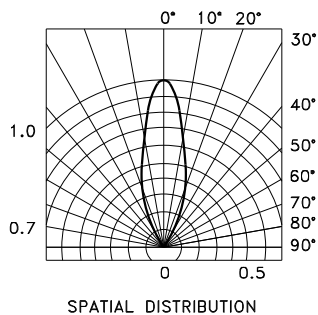
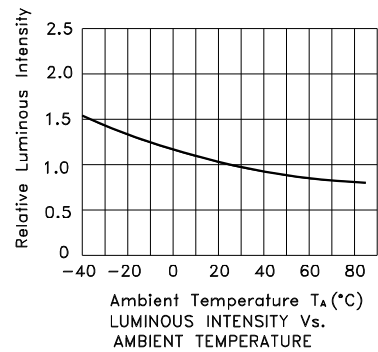
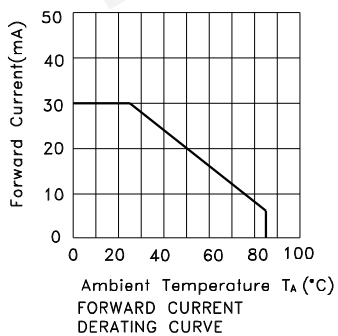
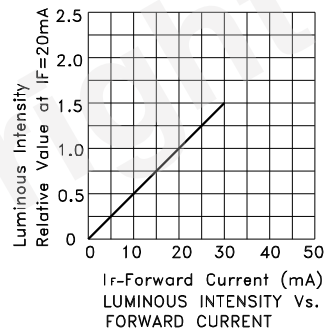
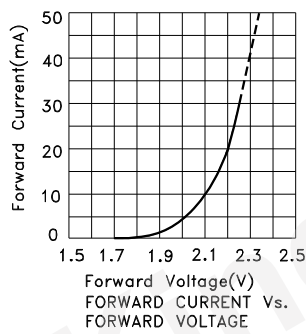
Parameter	Hyper Red	Green	Units
Power dissipation	84	120	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	150	100	mA
Electrostatic Discharge Threshold (HBM)	3000	450	V
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Notes:

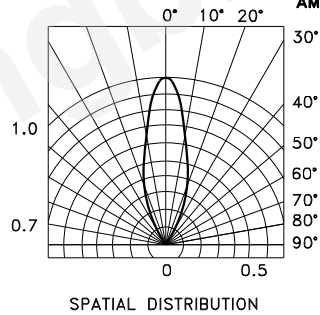
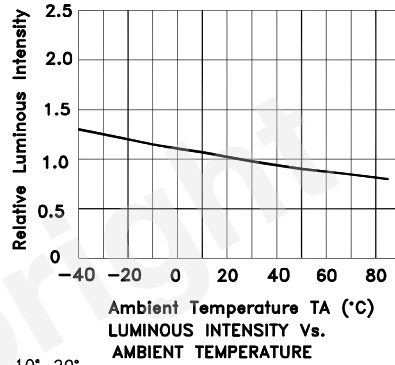
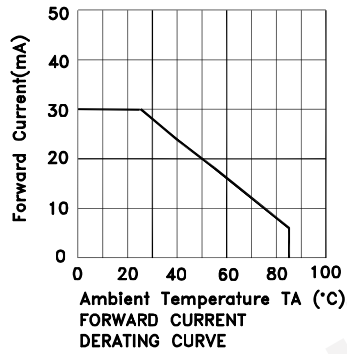
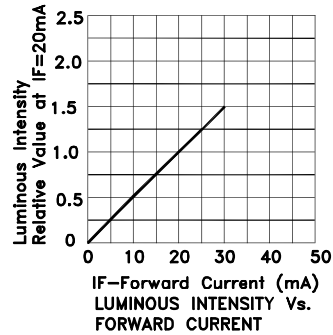
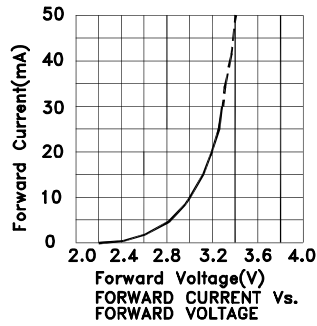
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



## KPTBD-3216SEJ3ZGGC Hyper Red



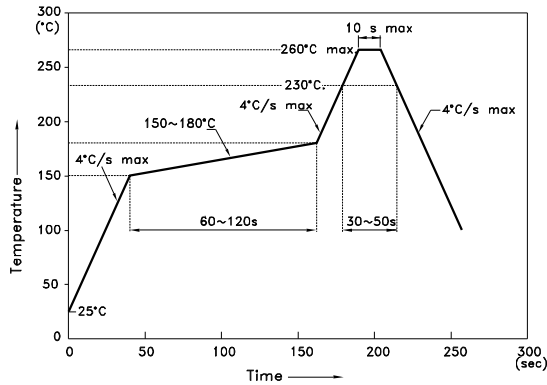
## Green



## KPTBD-3216SEJ3ZGGC

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.

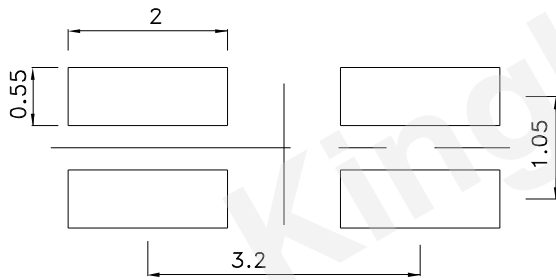
Reflow Soldering Profile For Lead-free SMT Process.



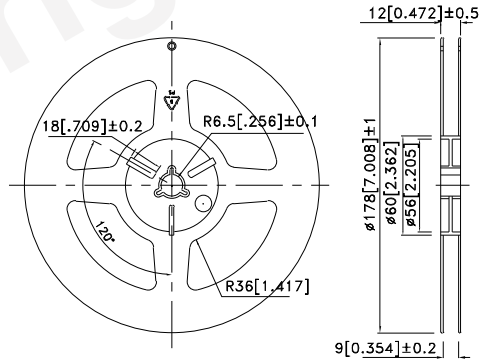
NOTES:

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.

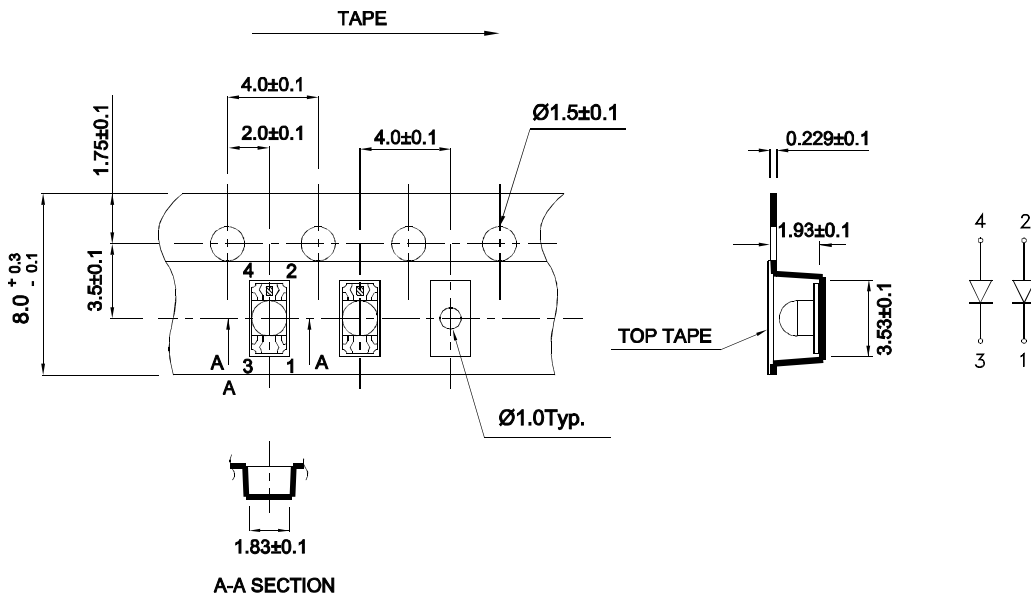
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

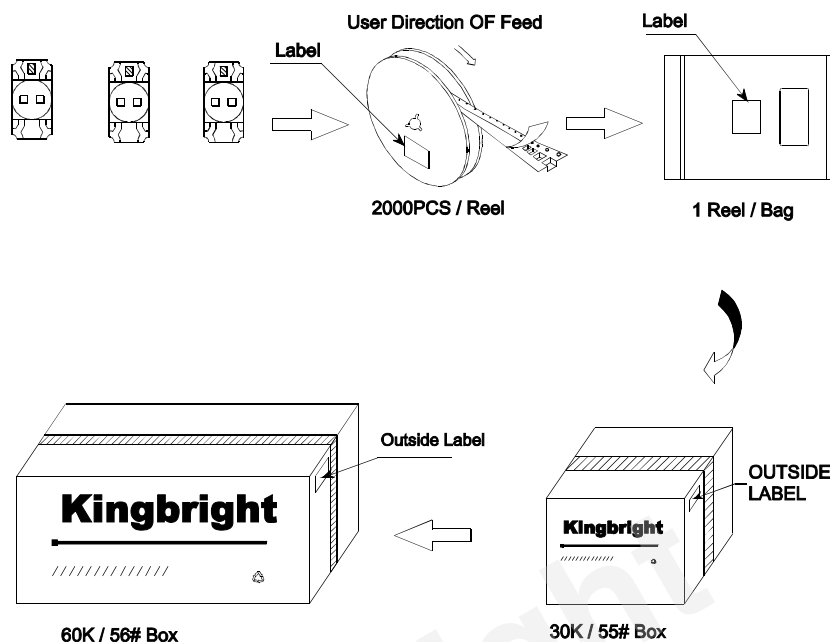


### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

KPTBD-3216SEJ3ZGGC



<b>Kingbright</b>					
P/NO: KPTBD-3216xxx					
QTY: 2000 pcs	Q.C.	<table border="1"> <tr> <td>QC</td> </tr> <tr> <td>xxxx:xxxx</td> </tr> <tr> <td>PASSED</td> </tr> </table>	QC	xxxx:xxxx	PASSED
QC					
xxxx:xxxx					
PASSED					
S/N: XXXX					
CODE: XXX					
LOT NO:					
RoHS Compliant					

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