



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

Part Number: KPFA-2507BRGC-11

Blue  
Hyper Red  
Green

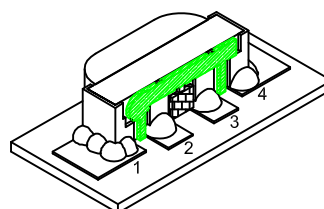
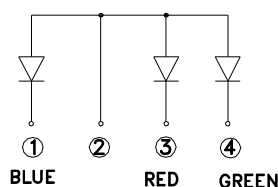
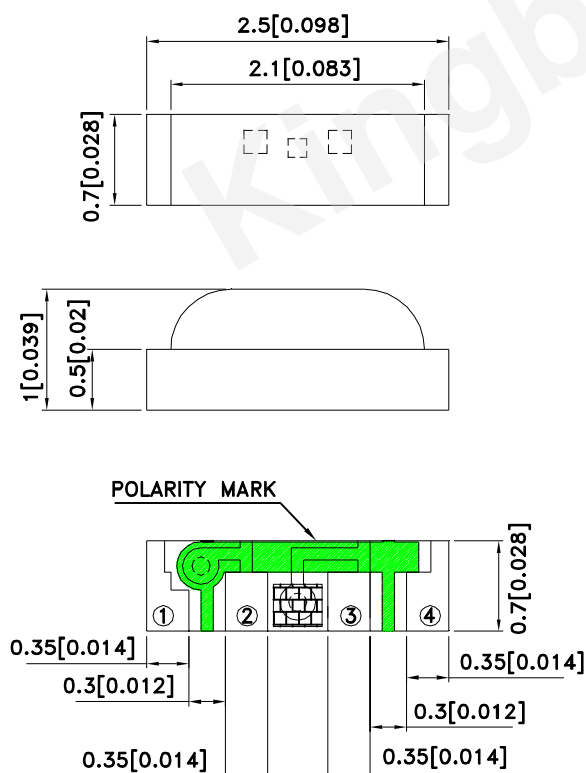
### Features

- 2.5x1.0x0.7mm right angle SMD LED, 0.7mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 3000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

### Descriptions

- The Blue source color devices are made with InGaN on Sapphire Light Emitting Diode.
- 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  $\pm 0.15(0.006")$  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
KPFA-2507BRGC-11	Blue (InGaN)	Water Clear	40	65	130°
	Hyper Red (AlGaInP)		80	110	
	Green (InGaN)		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%.
3. 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	Blue Hyper Red Green	460 630 515		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue Hyper Red Green	465 621 525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue Hyper Red Green	25 20 35		nm	IF=20mA
C	Capacitance	Blue Hyper Red Green	100 25 45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue Hyper Red Green	3.3 2 3.3	4 2.5 4.1	V	IF=20mA
IR	Reverse Current	Blue Hyper Red Green		50 10 50	uA	VR=5V

### Notes:

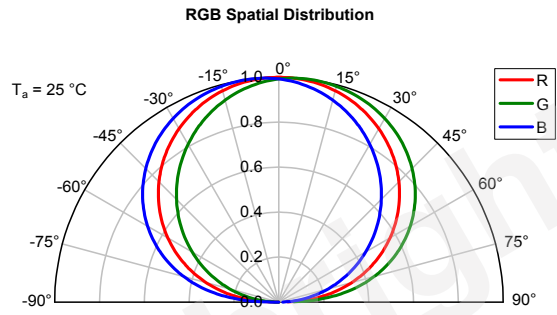
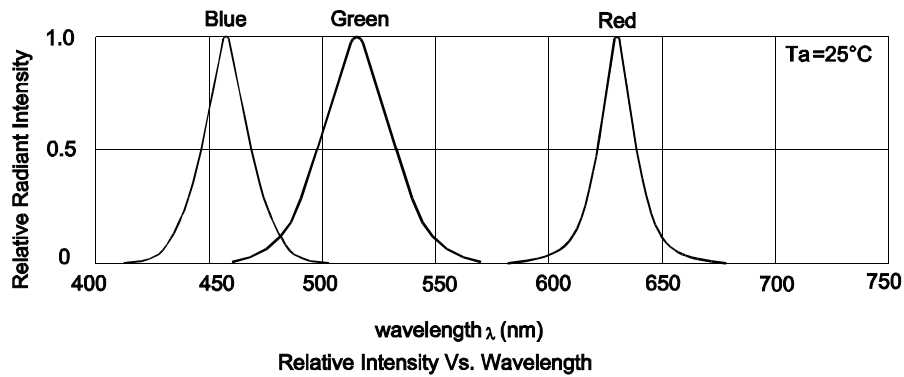
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

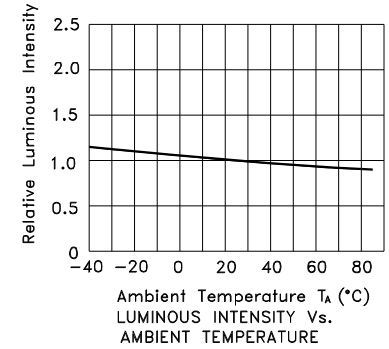
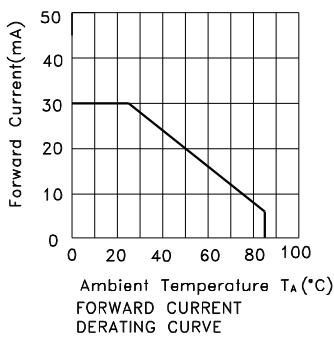
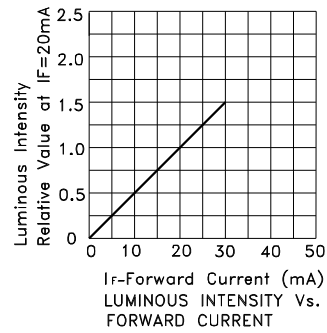
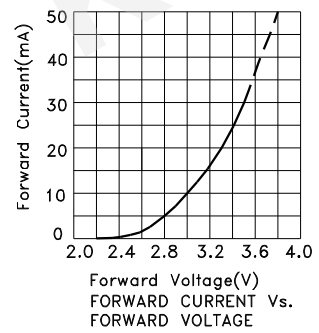
Parameter	Blue	Hyper Red	Green	Units
Power dissipation	120	75	102.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	150	195	150	mA
Electrostatic Discharge Threshold (HBM)	250	3000	450	V
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

### Notes:

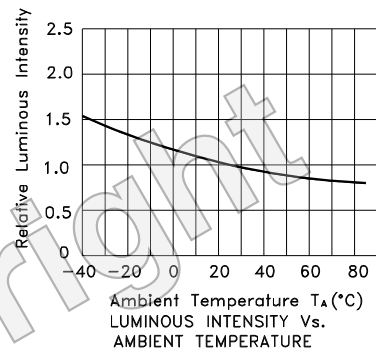
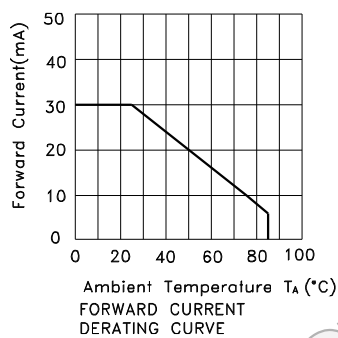
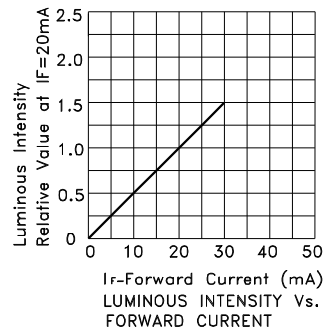
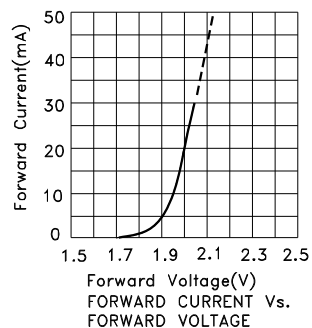
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



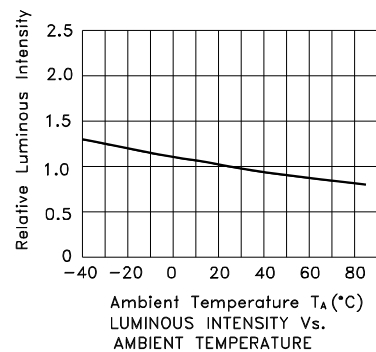
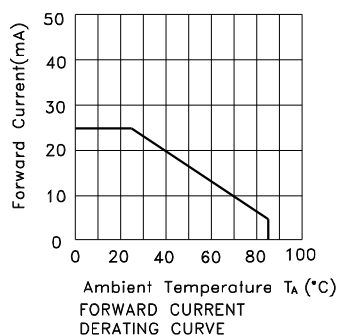
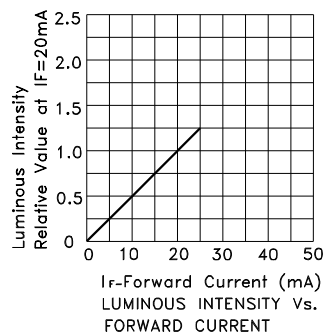
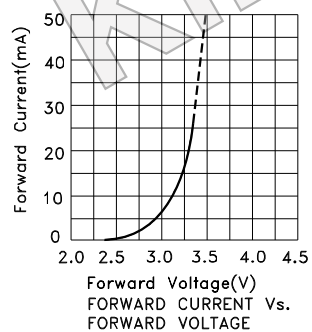
KPFA-2507BRGC-11  
Blue



## Hyper Red



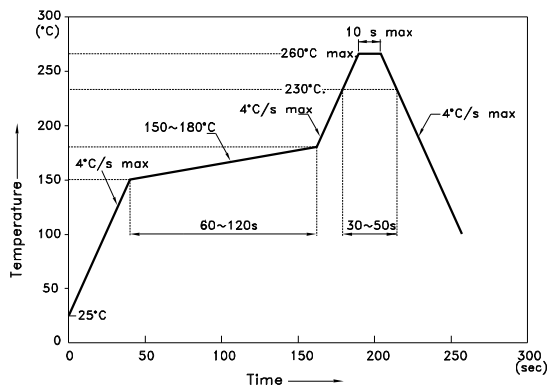
## Green



## KPFA-2507BRGC-11

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.

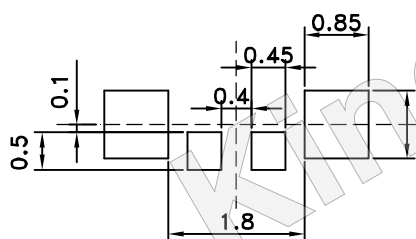
Reflow Soldering Profile For Lead-free SMT Process.



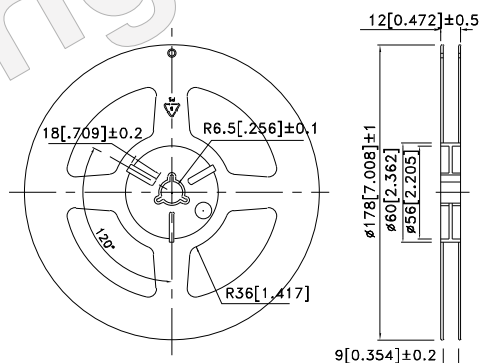
### NOTES:

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.

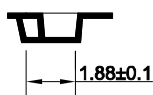
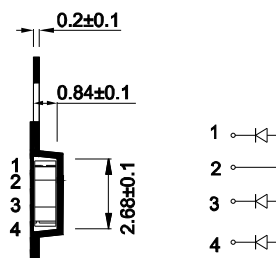
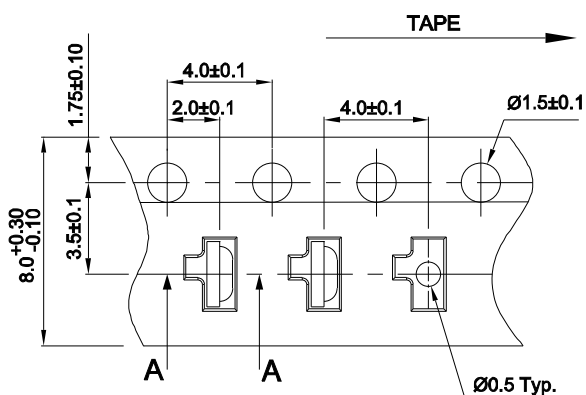
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension



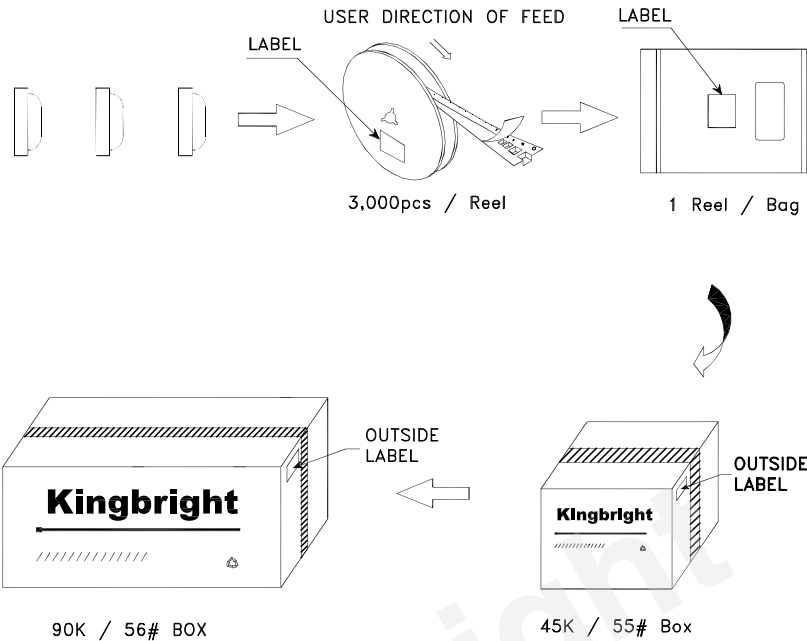
### Tape Dimensions (Units : mm)




A-A SECTION

## PACKING & LABEL SPECIFICATIONS

KPFA-2507BRGC-11



<b>Kingbright</b>	
P/NO: KPFA-2507xxx	
QTY: 3,000 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C XX-XX-XXXX PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

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