

### PRELIMINARY SPEC



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

Part Number: APF3236SURKVGAPBA

Hyper Red  
Green  
Blue

### Features

- LOW POWER CONSUMPTION.
- 3.2mmx3.6mm SMT LED, 1.1mm THICKNESS.
- ONE RED, ONE GREEN AND ONE BLUE CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- PACKAGE : 1000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT

### Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Green source color devices are made with InGaN on G-SiC Light Emitting Diode.

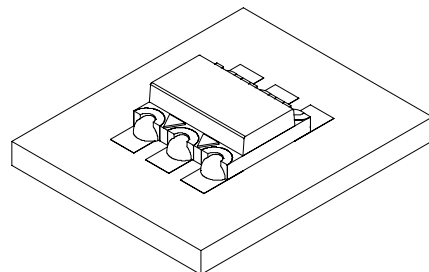
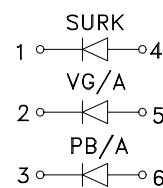
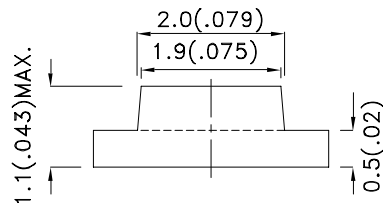
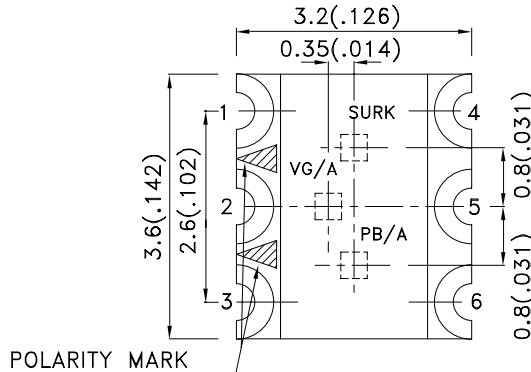
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery 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. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APF3236SURKVGAPBA	Hyper Red (InGaAlP)	WATER CLEAR	70	150	120°
	Green (InGaN)		50	150	
	Blue (InGaN)		18	60	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green Blue	650 520 468		nm	I <sub>F</sub> =20mA
λD [1]	Dominant Wavelength	Hyper Red Green Blue	635 525 470		nm	I <sub>F</sub> =20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green Blue	28 35 21		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red Green Blue	35 100 100		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red Green Blue	1.95 3.2 3.2	2.5 4 4	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Red Green Blue		10 10 10	uA	V <sub>R</sub> =5V

Notes:

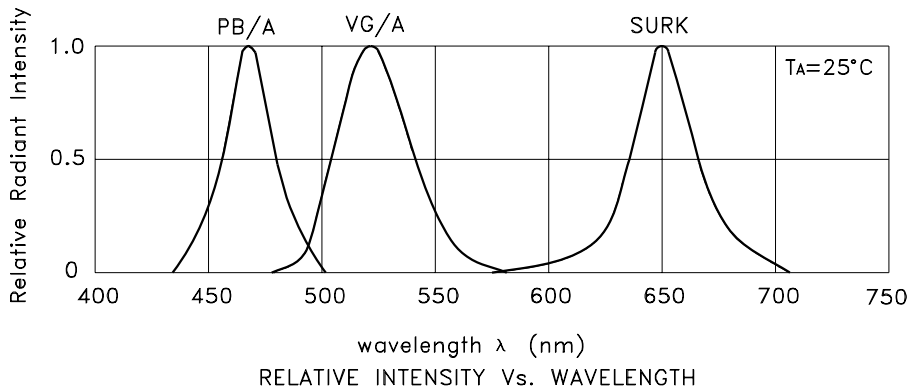
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

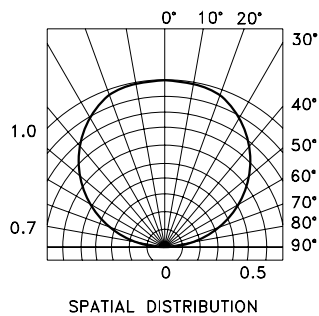
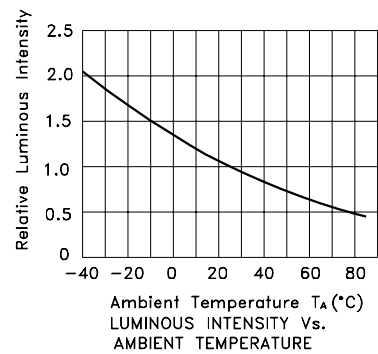
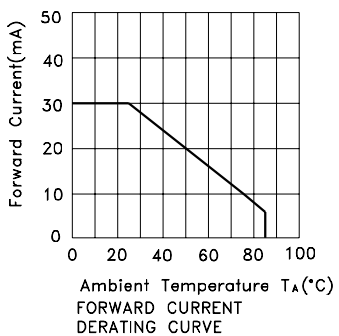
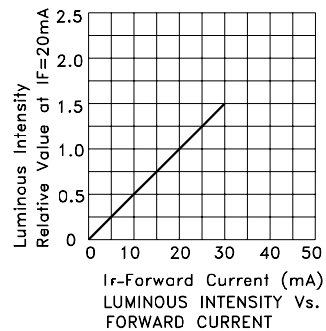
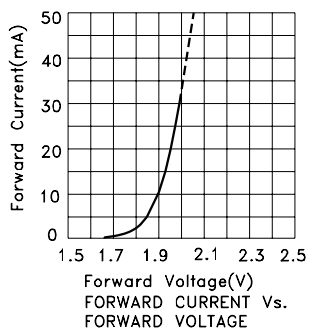
Parameter	Hyper Red	Green	Blue	Units
Power dissipation	75	120	120	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	185	100	100	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Notes:

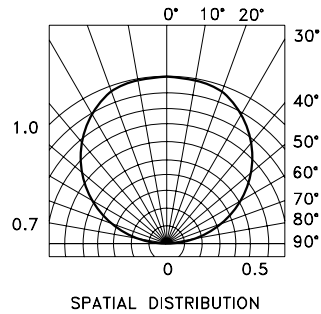
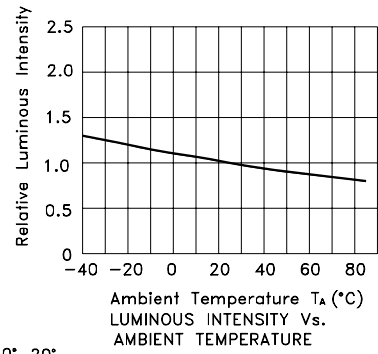
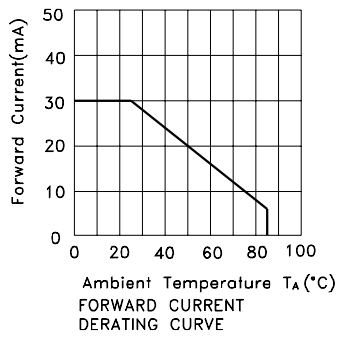
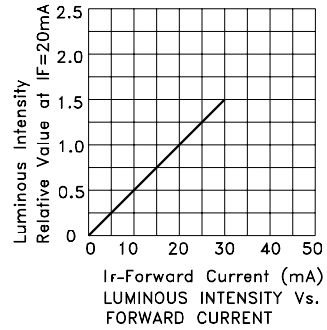
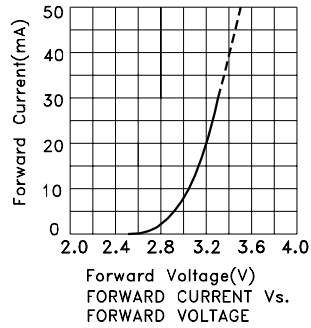
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



## APF3236SURKVGAPBA Hyper Red

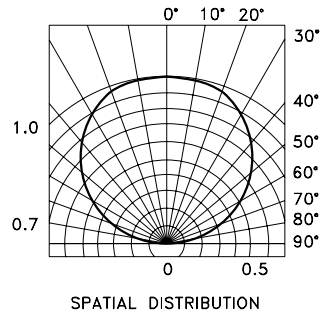
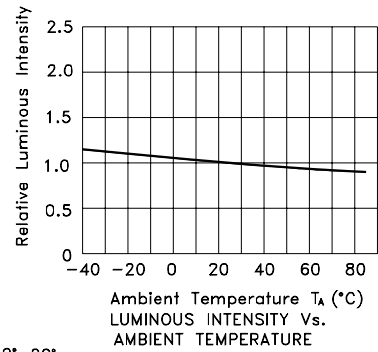
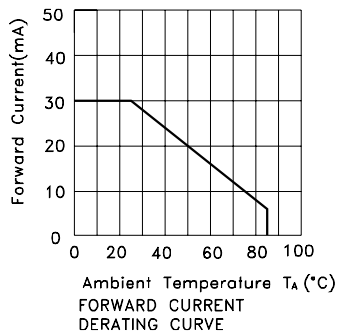
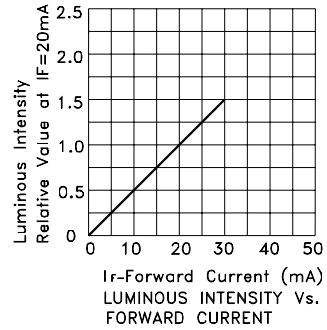
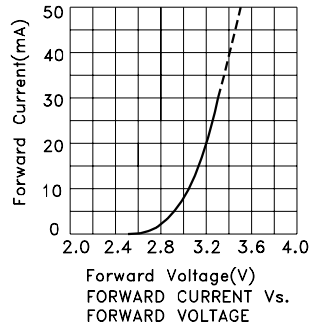


## Green



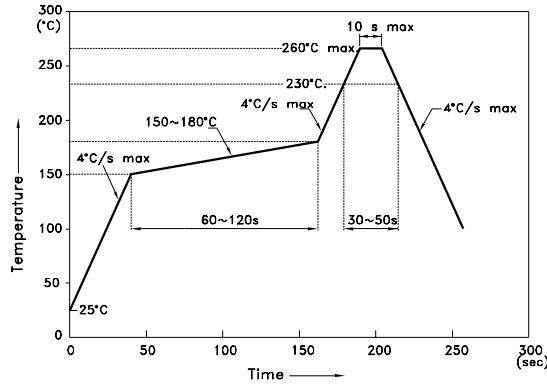
# Kingbright

## Blue



## APF3236SURKVGAPBA

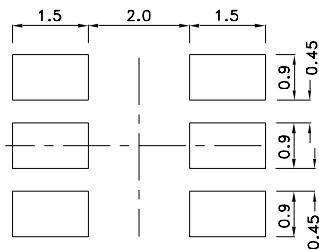
Reflow Soldering Profile For Lead-free SMT Process.



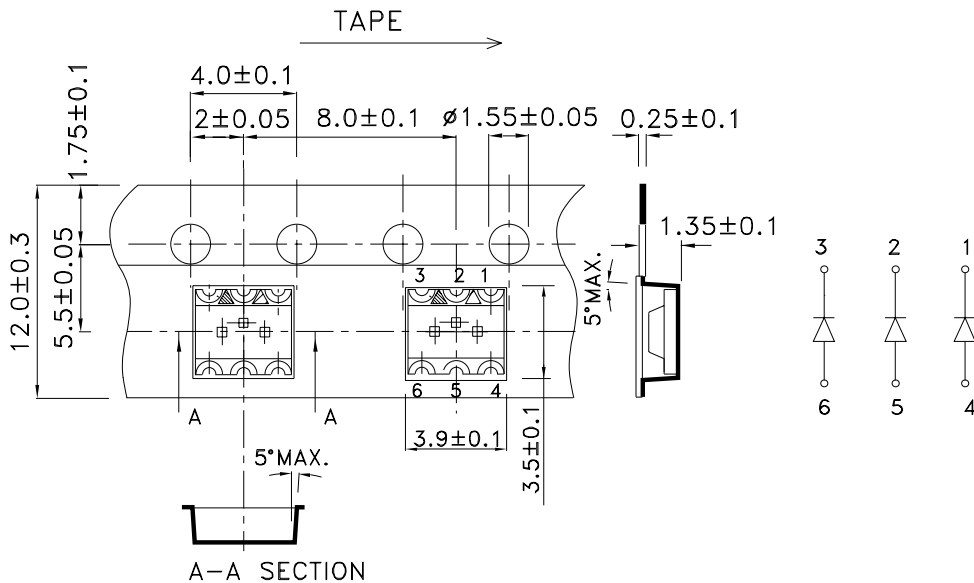
**NOTES:**

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)



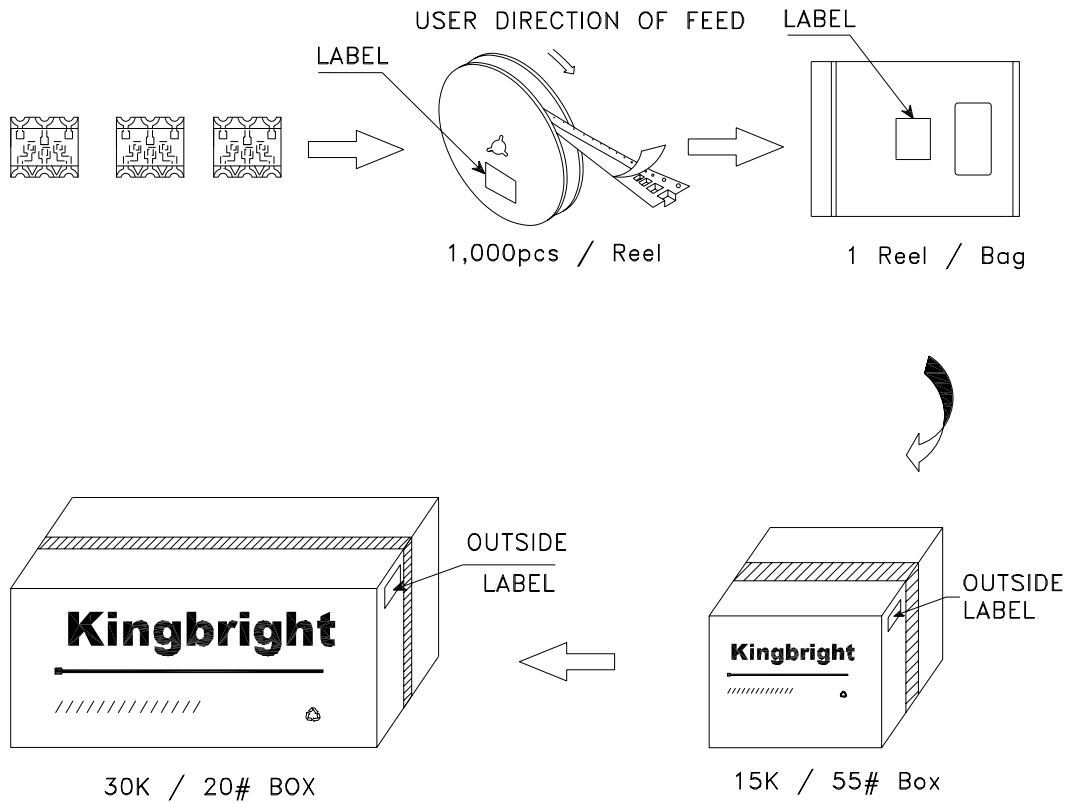
### Tape Specifications (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

## APF3236SURKVGAPBA



<b>Kingbright</b>	
P/NO: APF3236xxx	
QTY: 1,000 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:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	