

Kingbright

3.2mm x 1.6mm FULL-COLOR SURFACE MOUNT LED LAMP

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APTF3216PBAVGASUK

BLUE / GREEN
HYPER RED

Features

- 3.2mmx1.6mm SMT LED, 0.75mm THICKNESS.
- LOW POWER CONSUMPTION.
- ONE BLUE, ONE GREEN AND ONE RED CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

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

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

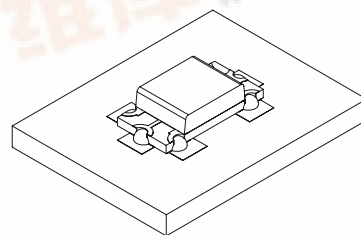
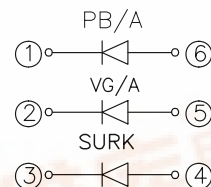
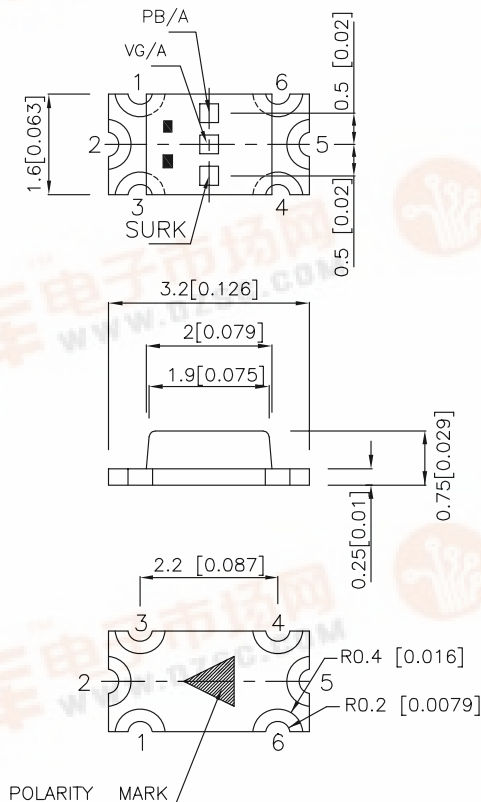
The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

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 ± 0.2 (0.008") unless otherwise noted.
3. Specifications are subjected 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
APTF3216PBAVGASUK	BLUE (InGaN)	WATER CLEAR	18	60	120°
	GREEN (InGaN)		50	150	
	HYPER RED (InGaAlP)		70	150	

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
λ_{peak}	Peak Wavelength	Blue Green Hyper Red	468 520 650		nm	IF=20mA
λ_D [1]	Dominant Wavelength	Blue Green Hyper Red	470 525 635		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue Green Hyper Red	21 35 28		nm	IF=20mA
C	Capacitance	Blue Green Hyper Red	100 100 35		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue Green Hyper Red	3.2 3.2 1.95	4.0 4.0 2.5	V	IF=20mA
IR	Reverse Current	Blue Green Hyper Red		10 10 10	uA	VR= 5V

Notes:

1.Wavelength: +/-1nm

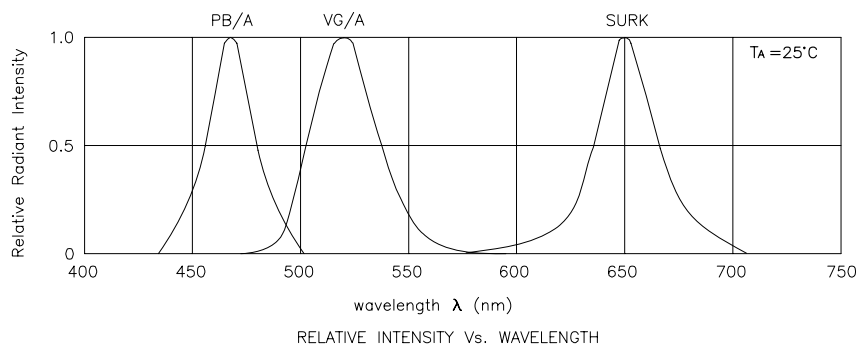
2.Forward Voltage: +/-0.1V

Absolute Maximum Ratings at TA=25°C

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

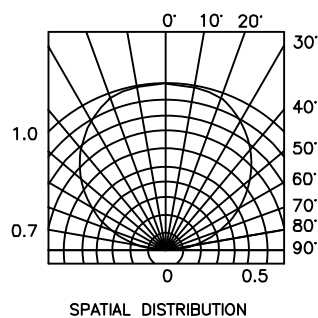
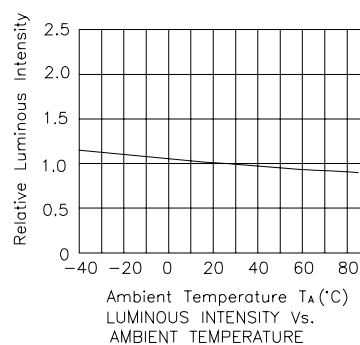
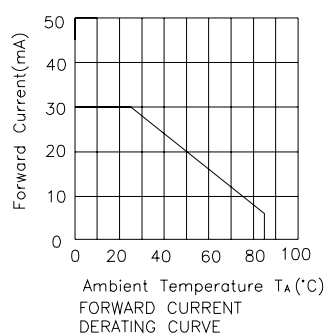
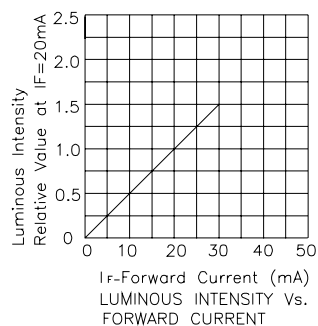
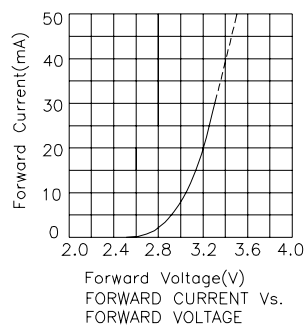
Note:

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



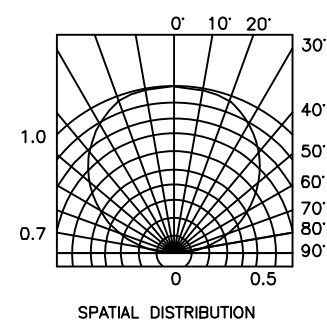
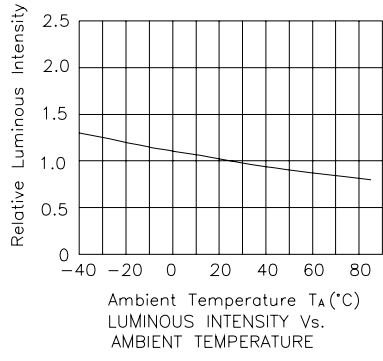
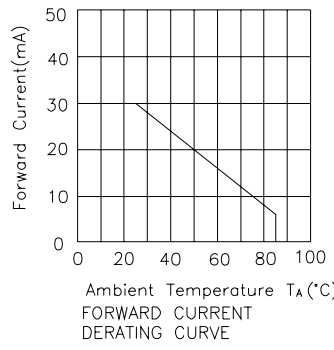
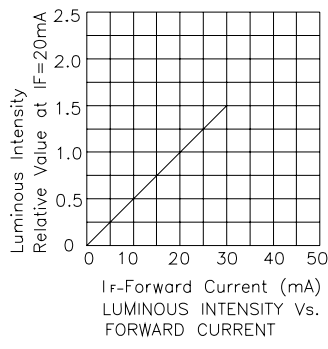
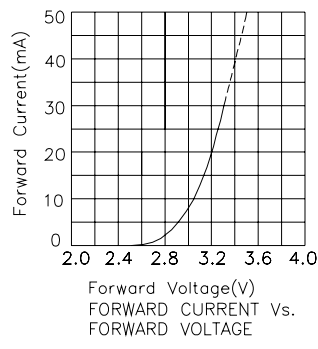
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Blue



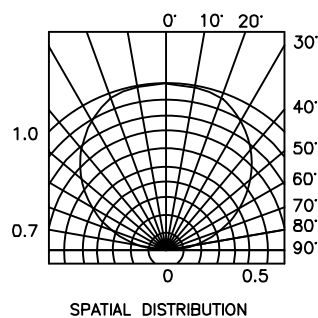
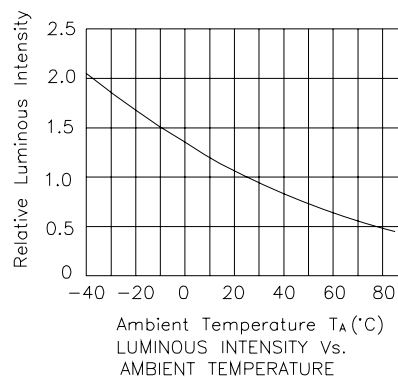
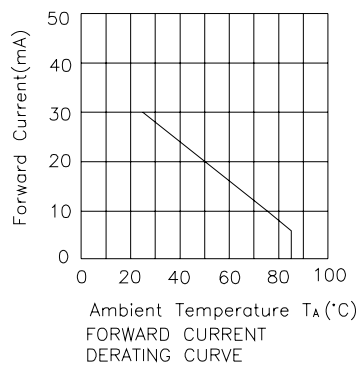
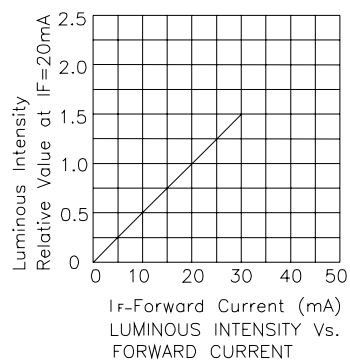
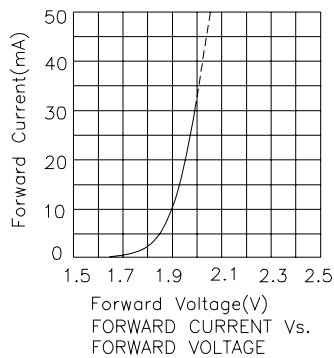
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Green



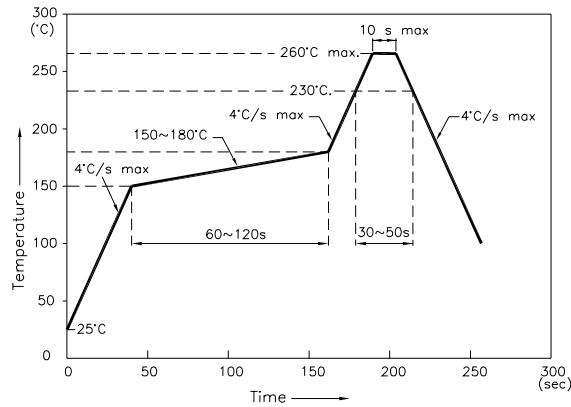
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Hyper Red



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Reflow Soldering Profile For Lead-free SMT Process.

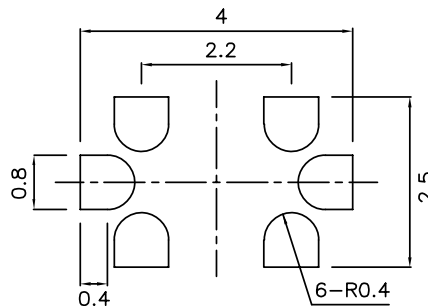


NOTES:

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.

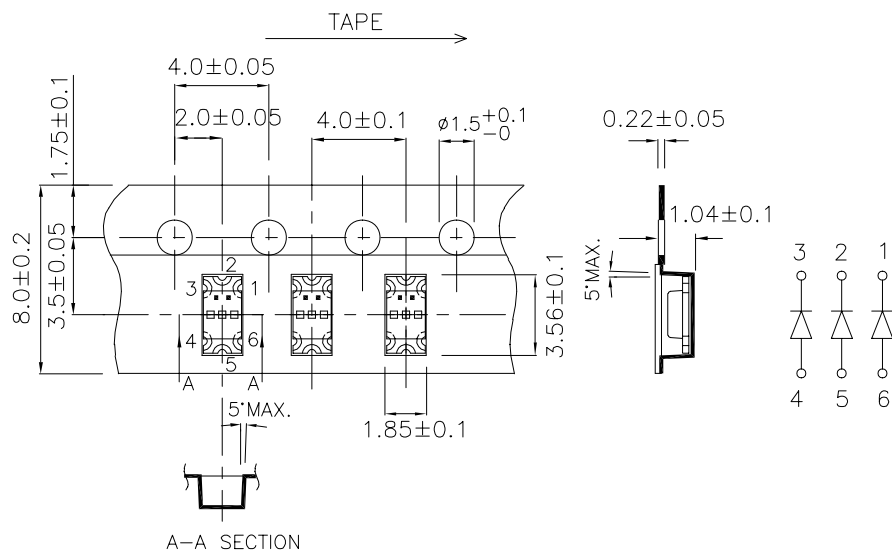
Recommended Soldering Pattern

(Units : mm; Tolerance: ± 0.1)



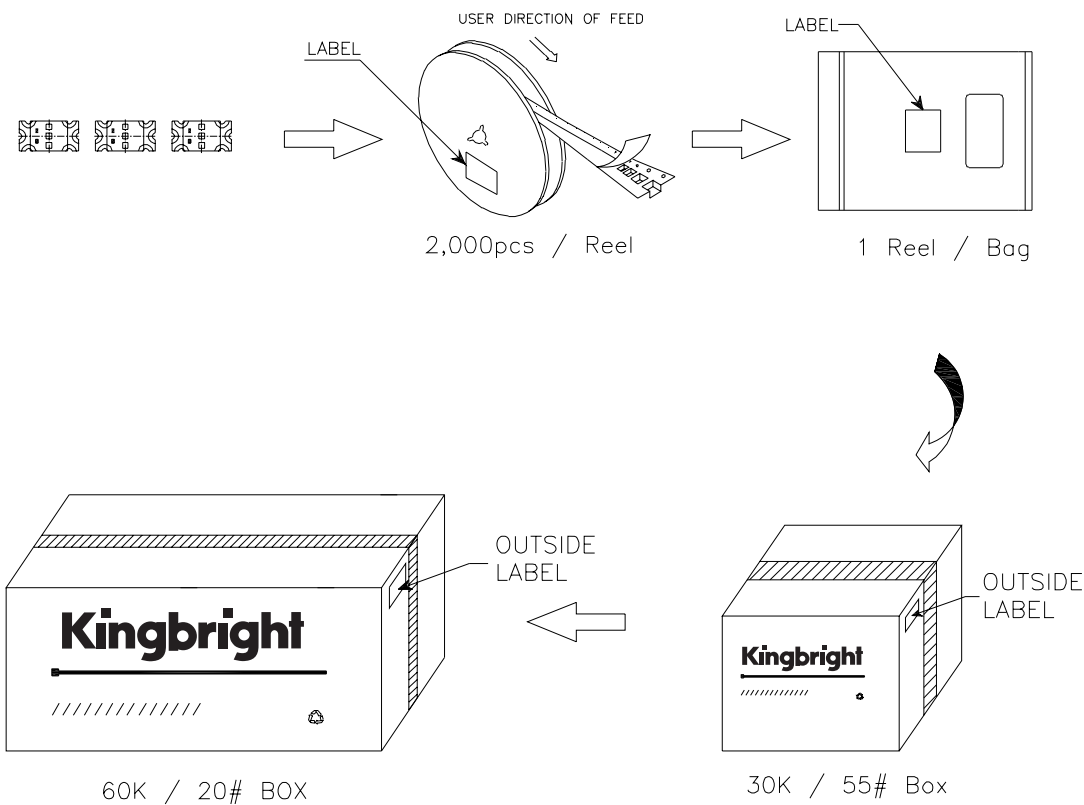
Tape Specifications

(Units : mm)



PACKING & LABEL SPECIFICATIONS

APTF3216PBAVGASUK



Kingbright	
P/NO: APTF3216XXX	
QTY: 2,000 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
MADE IN CHINA	RoHS Compliant