

Kingbright

3.2x1.0mm RIGHT ANGLE FULL COLOR SMD CHIP LED LAMP

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APFA3210PBAVGASURKC

BLUE/ GREEN
HYPER RED

Features

- LOW POWER CONSUMPTION.
- 3.2mmX1.0mm RIGHT ANGLE SMT LED,1.5mm THICKNESS.
- WIDE VIEWING ANGLE.
- 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.

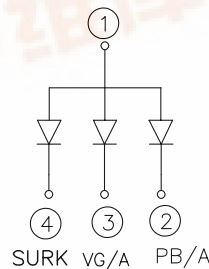
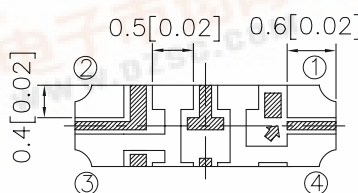
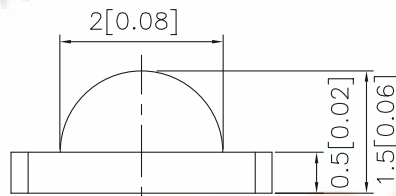
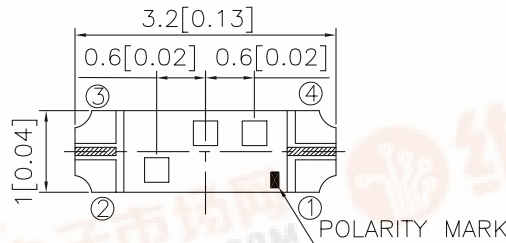
Static electricity and surge damage the LEDs.

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 $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APFA3210PBAVGASURKC	BLUE (InGaN)	WATER CLEAR	18	60	130°
	GREEN (InGaN)		50	200	
	HYPHER RED (InGaAlP)		70	200	

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	I _F =20mA
λ _D [1]	Dominant Wavelength	Blue Green Hyper Red	470 525 635		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Blue Green Hyper Red	21 35 28		nm	I _F =20mA
C	Capacitance	Blue Green Hyper Red	100 100 35		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Blue Green Hyper Red	3.3 3.2 1.95	3.8 4.0 2.5	V	I _F =20mA
I _R	Reverse Current	Blue Green Hyper Red		10 10 10	uA	V _R = 5V

Notes:

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

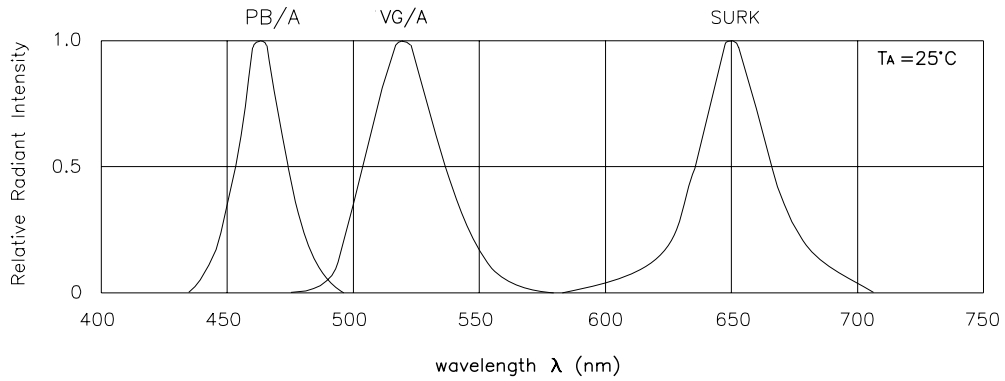
Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Green	Hyper Red	Units
Power dissipation	114	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.

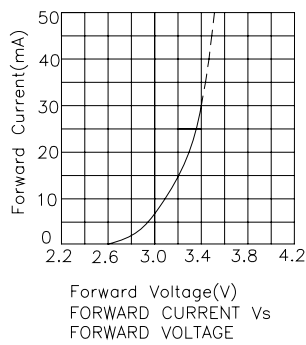
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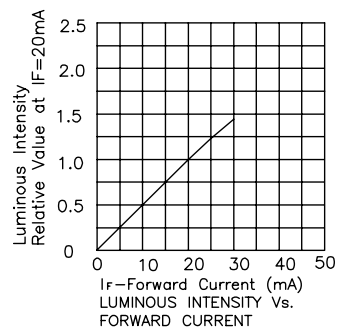
RELATIVE INTENSITY Vs. WAVELENGTH

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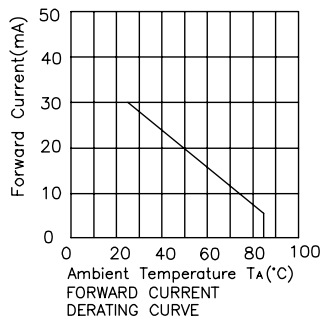
Blue



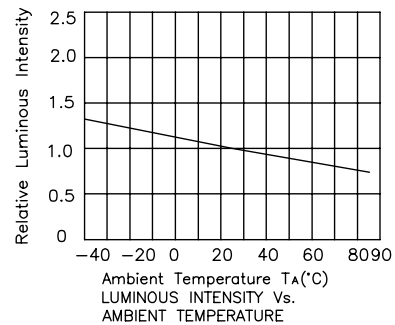
FORWARD CURRENT Vs. FORWARD VOLTAGE



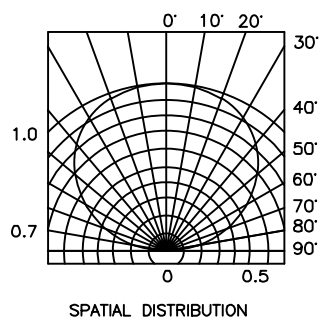
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE



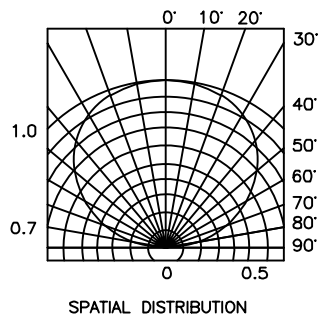
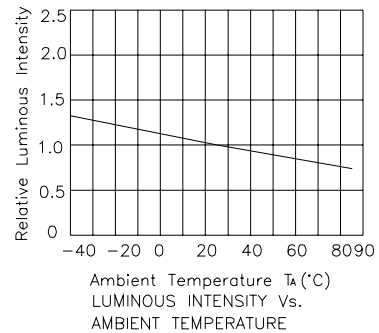
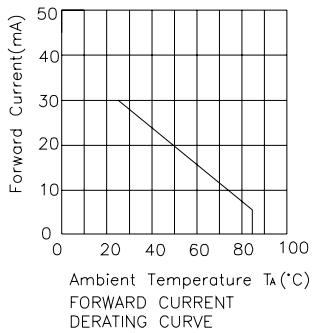
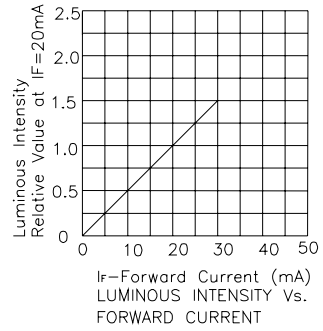
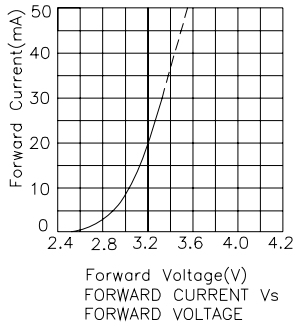
LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

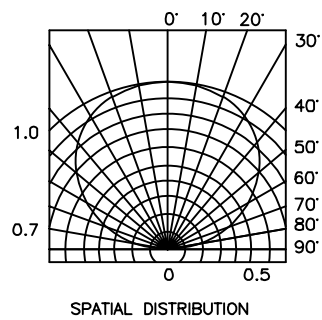
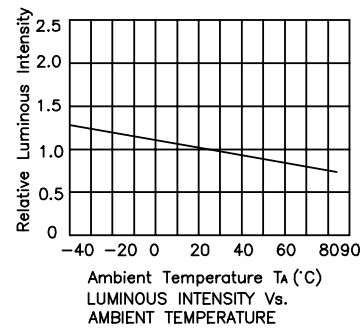
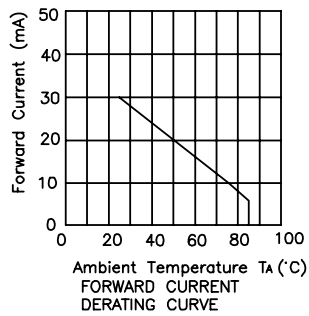
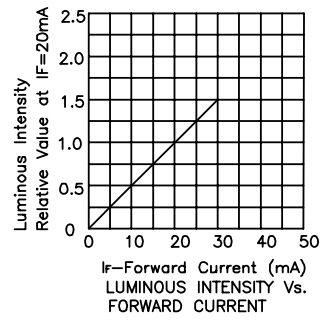
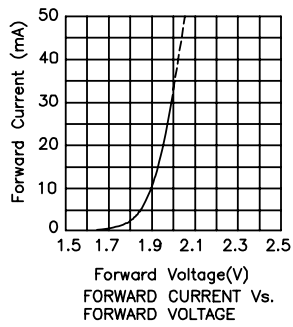
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Green



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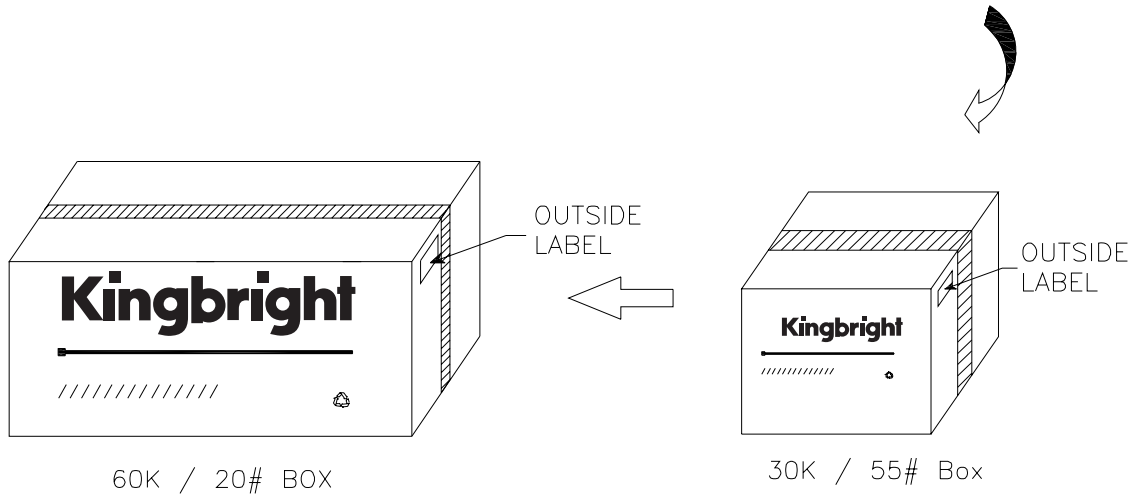
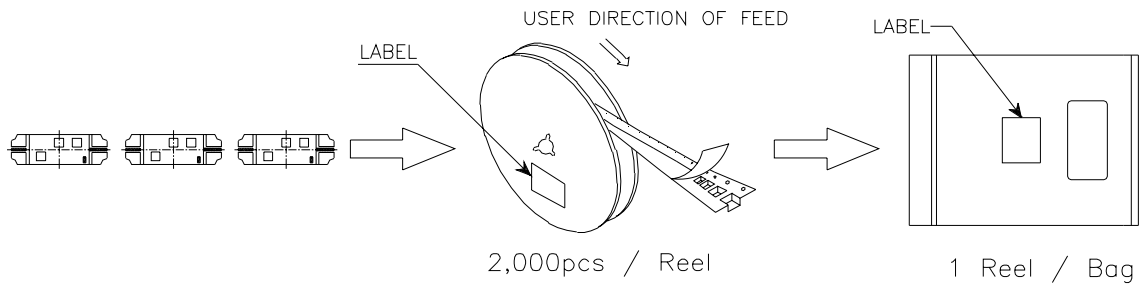
Hyper Red




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PACKING & LABEL SPECIFICATIONS

APFA3210PBAVGASURKC



Kingbright	
P/N : APFA3210xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx. xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
MADE IN CHINA	RoHS Compliant