Kingbright

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

PRELIMINARY SPEC

Part Number: APFA3210QBCVGASEKC

BLUE

GREEN

SUPER BRIGHT ORANGE

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

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 GaN on Sapphire Light Emitting Diode.

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

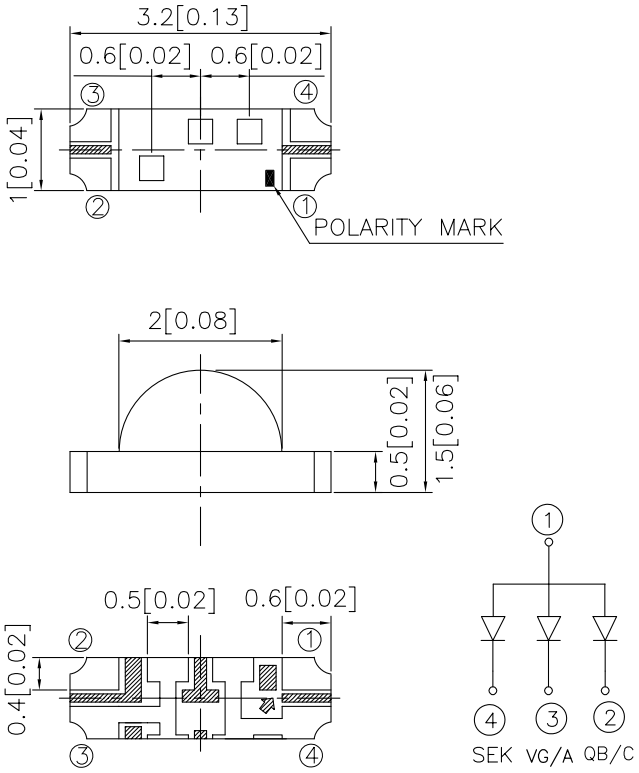
The Super Bright Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

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 ±0.1(0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd)[2] @ 20mA		Viewing Angle[1]
			Min.	Typ.	2θ1/2
APFA3210QBCVGASEKC	BLUE (GaN)	WATER CLEAR	36	70	130°
	GREEN (InGaN)		50	200	
	SUPER BRIGHT ORANGE (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 T_A=25°C

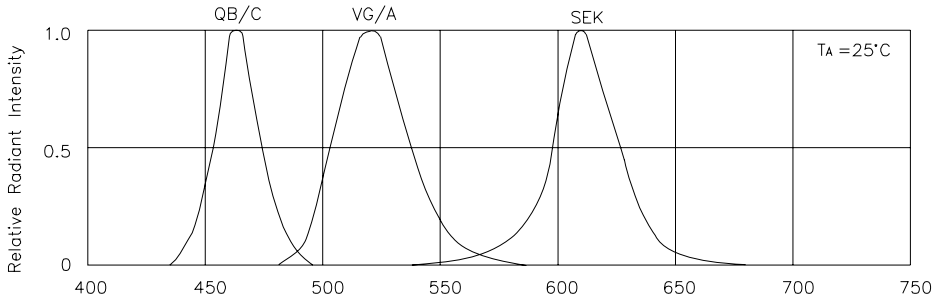
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue Green Super Bright Orange	470 520 610		nm	I_F=20mA
λD [1]	Dominant Wavelength	Blue Green Super Bright Orange	470 525 601		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Blue Green Super Bright Orange	25 35 29		nm	I_F=20mA
C	Capacitance	Blue Green Super Bright Orange	105 100 15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Blue Green Super Bright Orange	3.3 3.2 2.1	4.0 4.0 2.5	V	I_F=20mA
I_R	Reverse Current	Blue Green Super Bright Orange		10 10 10	uA	V_R = 5V

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

Absolute Maximum Ratings at T_A=25°C

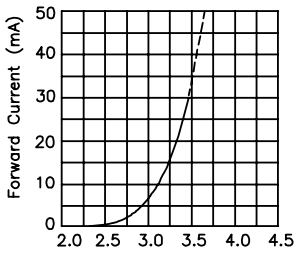
Parameter	Blue	Green	Super Bright Orange	Units
Power dissipation	120	120	75	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	150	100	195	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			

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

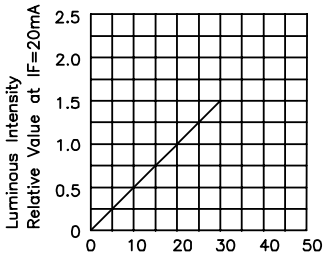


RELATIVE INTENSITY Vs. WAVELENGTH

APFA3210QBCVGASEKC
Blue

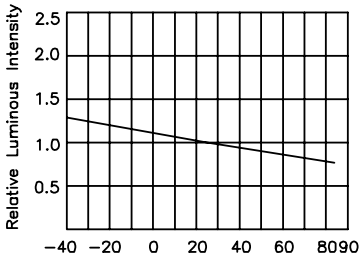


FORWARD CURRENT Vs.
FORWARD VOLTAGE

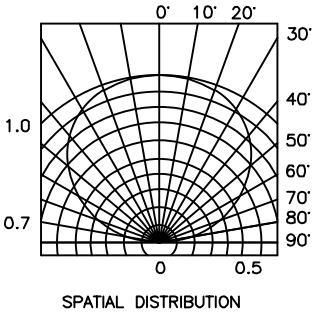


LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

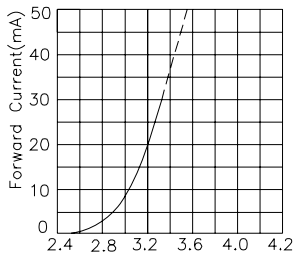


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

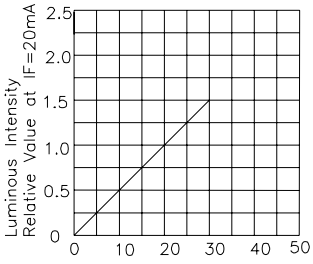


SPATIAL DISTRIBUTION

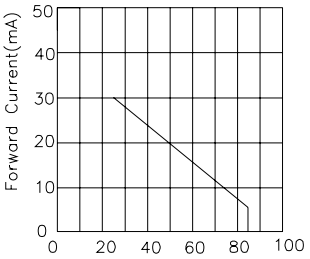
Green



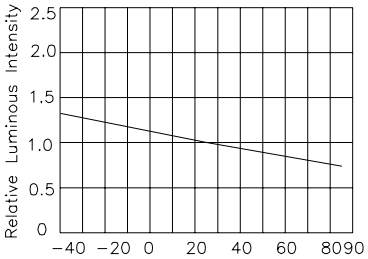
FORWARD CURRENT Vs
FORWARD VOLTAGE



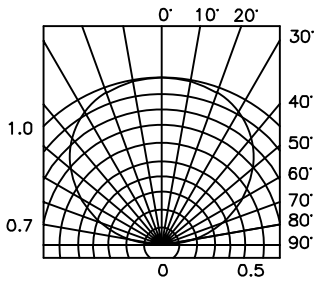
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

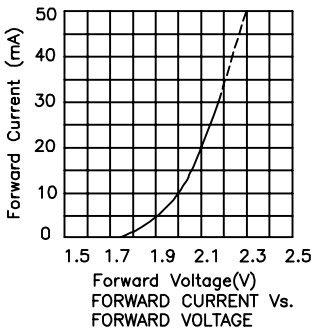


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

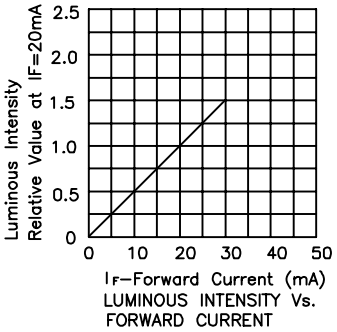


SPATIAL DISTRIBUTION

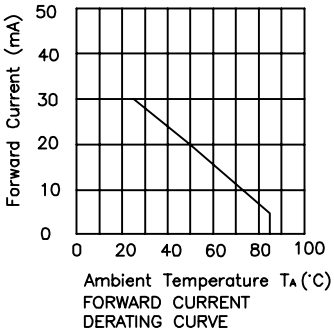
Super Bright Orange



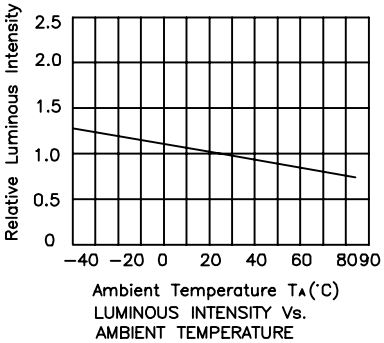
FORWARD CURRENT Vs.
FORWARD VOLTAGE



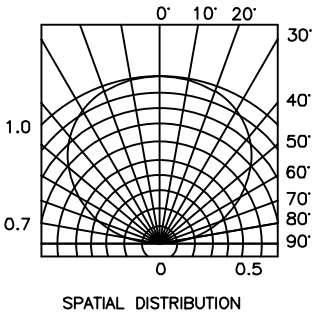
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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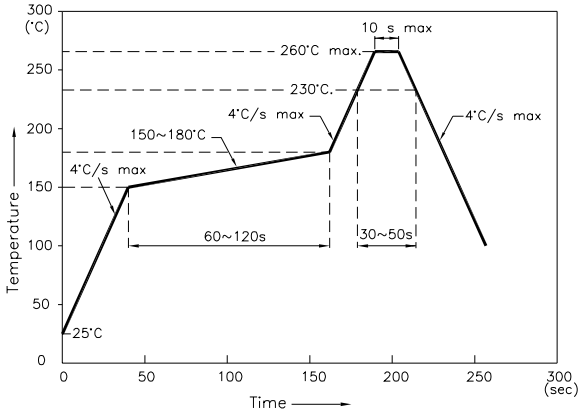
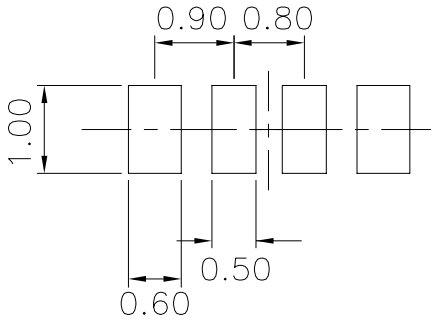
Reflow Soldering Profile For Lead-free SMT Process.

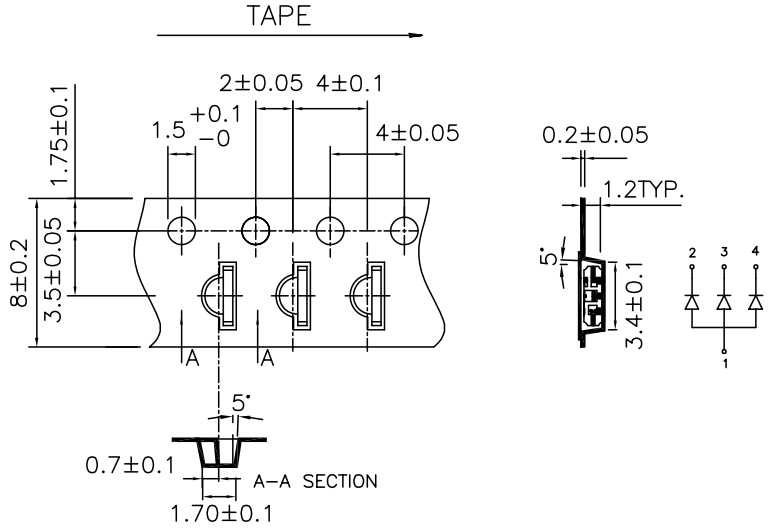


NOTES:
1. We recommend the reflow temperature 245°C(+/−5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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



Tape Specifications
(Units : mm)



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PACKING & LABEL SPECIFICATIONS **APFA3210QBCVGASEKC**