

### 3.2x1.6mm SMD CHIP LED LAMPS

KP-3216EC HIGHEFFICIENCY RED KP-3216SGC SUPERBRIGHT GREEN KP-3216YC YELLOW

#### **Features**

- •3.2mmx1.6mmSMTLED, 1.1mmTHICKNESS.
- •LOW POWER CONSUMPTION.
- •WIDE VIEWING ANGLE.
- •IDEAL FOR BACKLIGHT AND INDICATOR.
- •VARIOUS COLORS AND LENS TYPES AVAILABLE.
- •PACKAGE: 2000PCS/REEL.

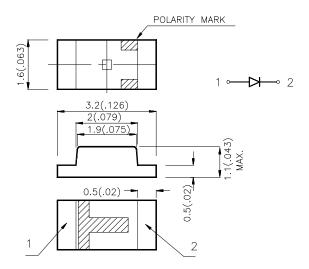
## **Description**

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

## **Package Dimensions**



### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.2 (0.0079")$  unless otherwise noted.
- 3. Lead spacing is measured where the lead emerge package.
- 4. Specifications are subject to change without notice.

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## **Selection Guide**

Part No.	Dice	Lens Type	<b>lv (mcd)</b> @ 20 mA		<b>Viewing</b> Angle
			Min.	Тур.	201/2
KP-3216EC	HIGH EFFICIENCY RED(GaAsP/GaP)	WATER CLEAR	5	12	120°
KP-3216SGC	SUPER BRIGHT GREEN (GaP)	WATER CLEAR	3	12	120°
KP-3216YC	YELLOW (GaAsP/GaP)	WATER CLEAR	2	8	120°

Note:

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	ts Test Conditions	
λpeak	Peak Wavelength	High Efficiency Red Super Bright Green Yellow	627 565 590		nm	IF=20mA	
λD	Dominate Wavelength	High Efficiency Red Super Bright Green Yellow	625 568 588		nm	IF=20mA	
Δλ1/2	Spectral Line Halfwidth	High Efficiency Red Super Bright Green Yellow	45 30 35		nm	IF=20mA	
С	Capacitance	High Efficiency Red Super Bright Green Yellow	15 15 20		pF	VF=0V;f=1MHz	
V <sub>F</sub>	Forward Voltage	High Efficiency Red Super Bright Green Yellow	2.0 2.2 2.1	2.5 2.5 2.5	V	IF=20mA	
I <sub>R</sub>	Reverse Current	High Efficiency Red Super Bright Green Yellow		10	uA	VR = 5V	

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	High Efficiency red	Super Bright Green	Yellow	Units		
Power dissipation	105	105	105	mW		
DC Forward Current	30	25	30	mA		
Peak Forward Current [1]	160	140	140	mA		
Reverse Voltage	5	5	5	V		
Operating Temperature	-40°C To +85°C					
Storage Temperature	-40°C To +85°C					

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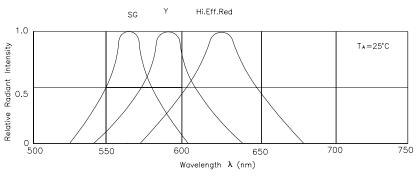
Note

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<sup>1.</sup>  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

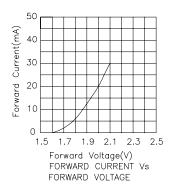
<sup>1. 1/10</sup> Duty Cycle, 0.1ms Pulse Width.

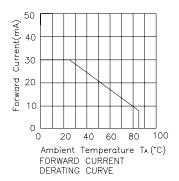


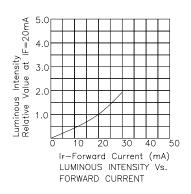


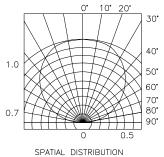
## RELATIVE INTENSITY Vs. WAVELENGTH

## High Efficiency Red KP-3216EC







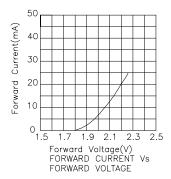


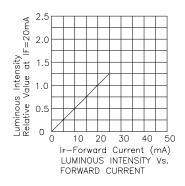
SI MINE DISTRIBUTION

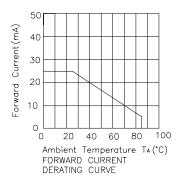
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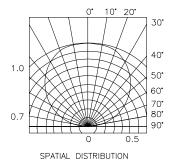
# Kingbright

## Super Bright Green KP-3216SGC

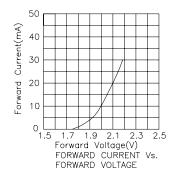


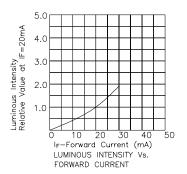


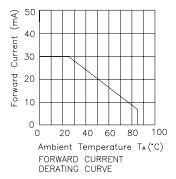


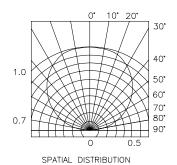


## Yellow KP-3216YC









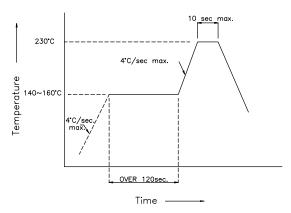
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# Kingbright

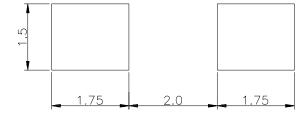
## KP-3216

## **SMT Reflow Soldering Instructions**

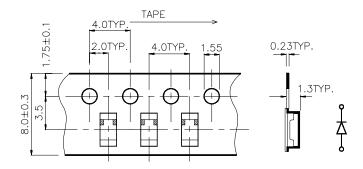
Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.



## Recommended Soldering Pattern (Units:mm)



## Tape Specifications (Units:mm)



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