



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

KPTF-3216PBVGSURKC 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.

### 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 SiC Light Emitting Diode.

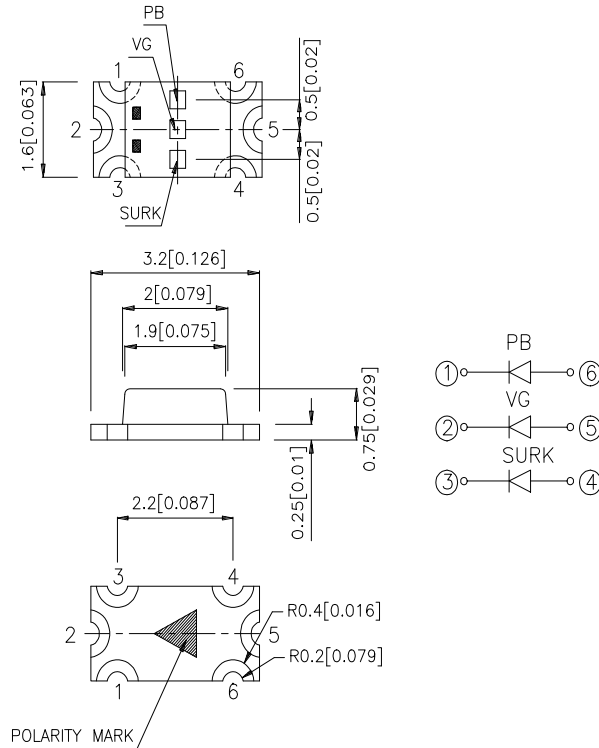
The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

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  $\pm 0.2$  (0.0079") unless otherwise noted.
3. Specifications are subject to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
KPTF-3216PBVGSURKC	BLUE ( InGaN )	WATER CLEAR	50	100	120°
	GREEN ( InGaN )		70	150	
	HYPER RED ( InGaAlP )		70	150	

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

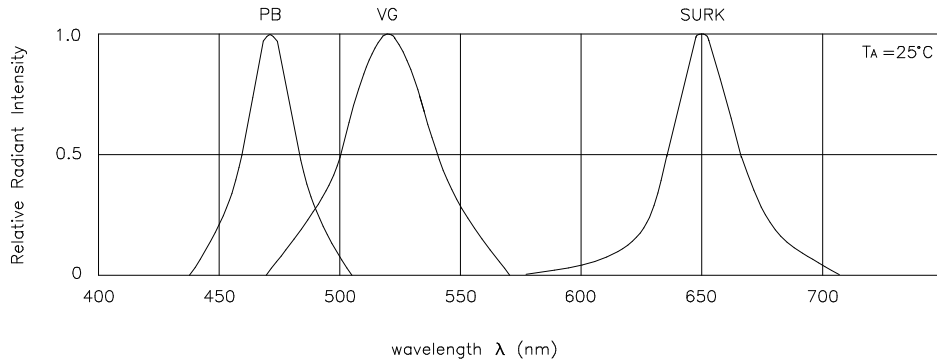
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Blue Green Hyper Red	468 520 650		nm	I <sub>F</sub> =20mA
λ <sub>D</sub>	Dominate Wavelength	Blue Green Hyper Red	470 525 635		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Blue Green Hyper Red	25 38 28		nm	I <sub>F</sub> =20mA
C	Capacitance	Blue Green Hyper Red	65 45 35		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Blue Green Hyper Red	3.65 3.5 1.95	4.2 4.5 2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	All		10	μA	V <sub>R</sub> = 5V

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

Parameter	Blue	Green	Hyper Red	Units
Power dissipation	102	105	170	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	160	150	185	mA
Reverse Voltage	5	5	5	V
Operating / Storage Temperature	-40°C To +85°C			

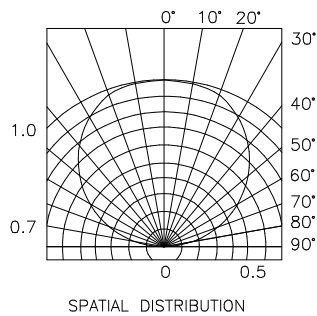
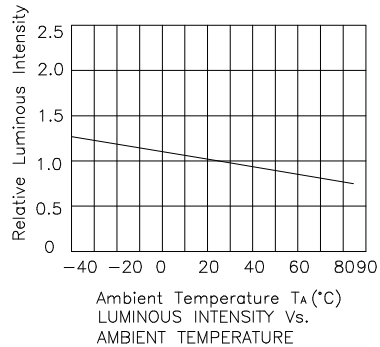
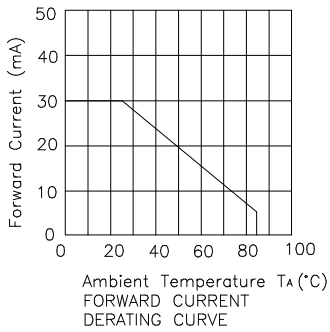
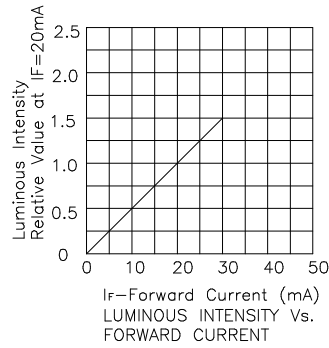
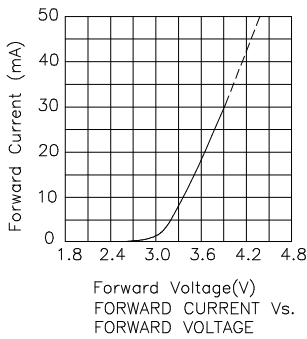
Note:

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

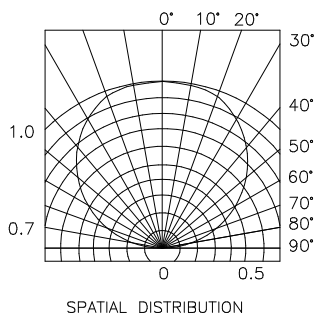
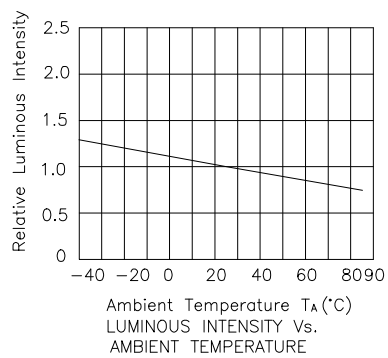
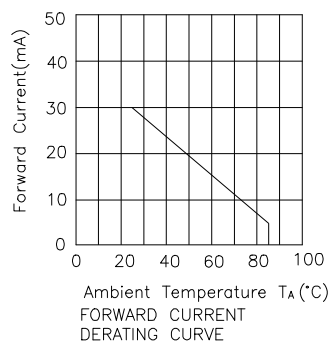
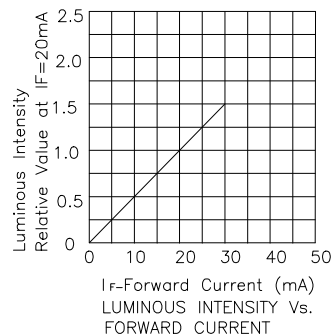
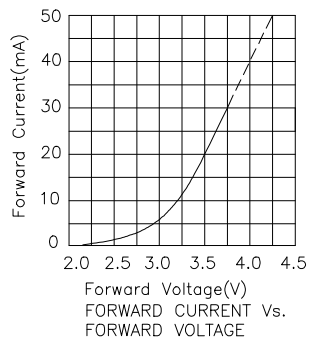


RELATIVE INTENSITY Vs. WAVELENGTH

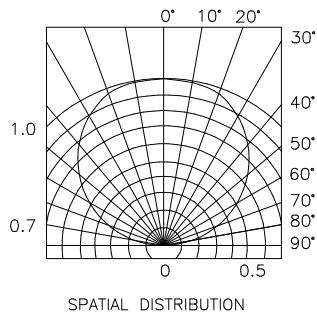
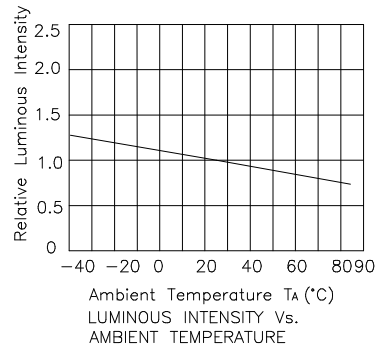
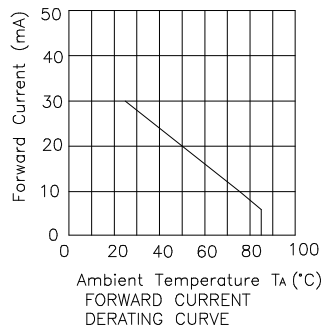
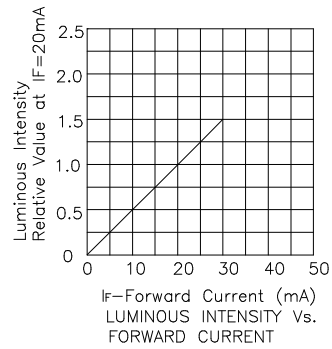
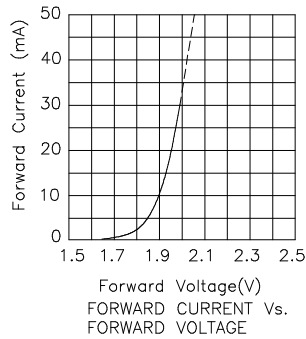
## KPTF-3216PBVGSURKC Blue



## Green

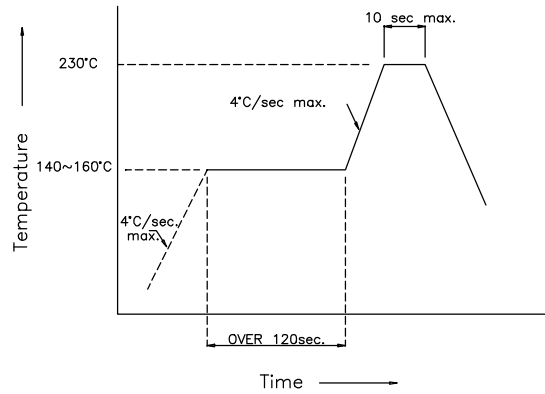


## Hyper Red

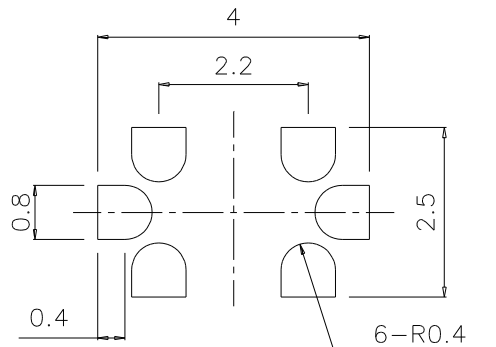


## KPTF-3216PBVGSURKC SMT Reflow Soldering Instructions

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)

