

# Kingbright®

## 3.0x2.5mm BI-COLOR SMD CHIP LED LAMPS

KPB-3025

### Features

- 3.0mmx2.5mm SMT LED 1.1mm THICKNESS.
- BI -COLOR,LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.

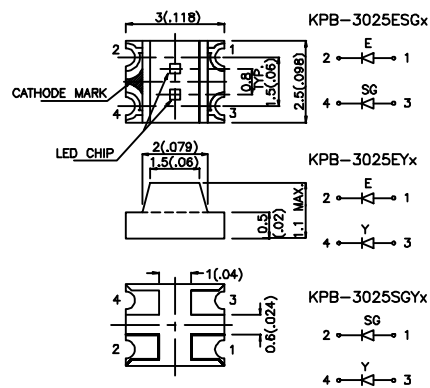
### Description

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

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange 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 subjected to change without notice.

### Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle 2θ1/2
			Min.	Typ.	
KPB-3025ESGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	12.5	120°
	SUPER BRIGHT GREEN (GaP)		3.2	12.5	
KPB-3025ESGC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	5	12.5	120°
	SUPER BRIGHT GREEN (GaP)		3.2	12.5	
KPB-3025EYW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	12.5	120°
	YELLOW (GaAsP/GaP)		3.2	8	
KPB-3025EYC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	5	12.5	120°
	YELLOW (GaAsP/GaP)		3.2	8	
KPB-3025SGYW	SUPER BRIGHT GREEN (GaP)	WHITE DIFFUSED	3.2	12.5	120°
	YELLOW (GaAsP/GaP)		3.2	8	
KPB-3025SGYC	SUPER BRIGHT GREEN (GaP)	WATER CLEAR	3.2	12.5	120°
	YELLOW (GaAsP/GaP)		3.2	8	

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

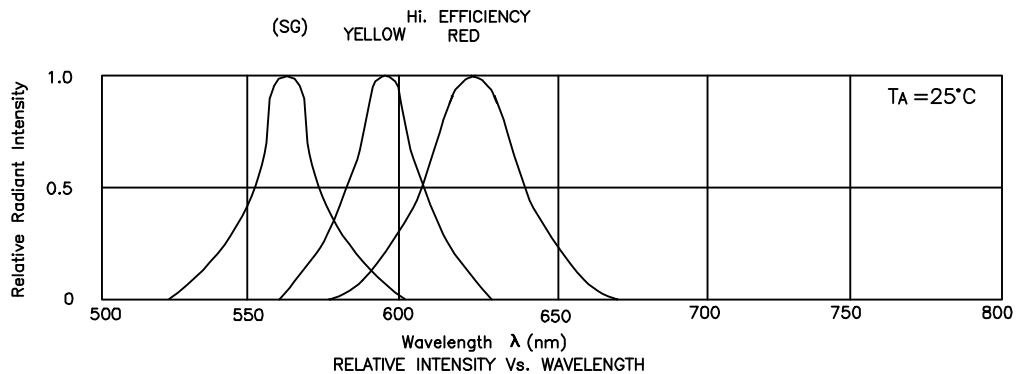
Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{\text{peak}}$	Peak Wavelength	High Efficiency Red Yellow Super Bright Green	625 590 565		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Yellow Super Bright Green	45 35 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Yellow Super Bright Green	12 10 45		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Yellow Super Bright Green	2.0 2.1 2.2	2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All	10		uA	VR = 5V

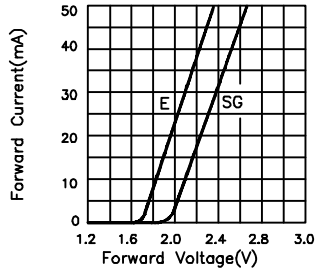
Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	High Efficiency Red	Yellow	Super Bright Green	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	150	150	150	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40 °C To +85 °C			

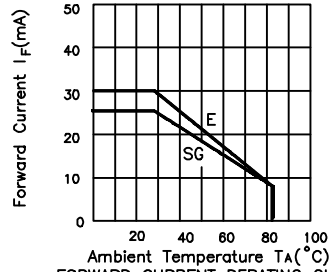
Note:  
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



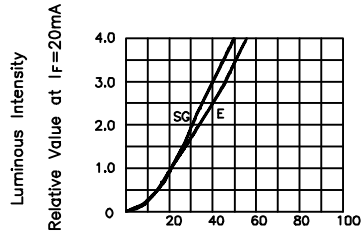
### High Efficiency Red / Super Bright Green KPB-3025ESG



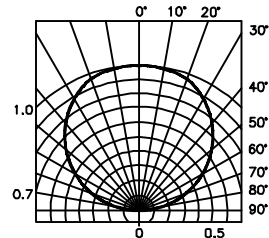
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

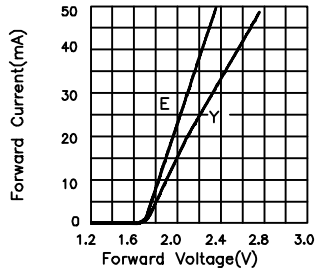


LUMINOUS INTENSITY Vs. FORWARD CURRENT

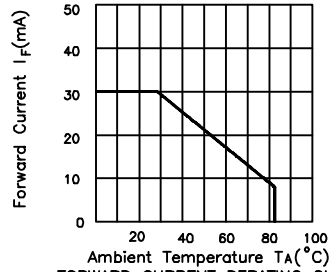


SPATIAL DISTRIBUTION

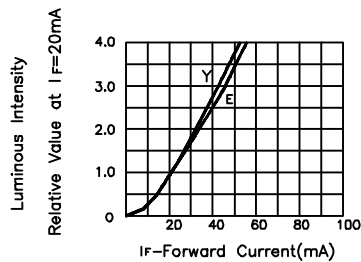
### High Efficiency Red / Yellow KPB-3025EY



FORWARD CURRENT Vs. FORWARD VOLTAGE

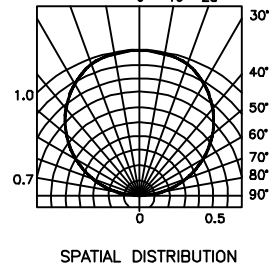
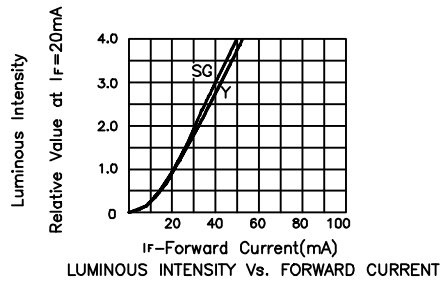
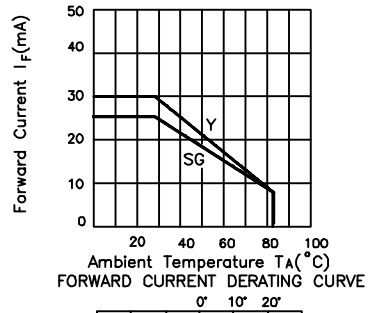
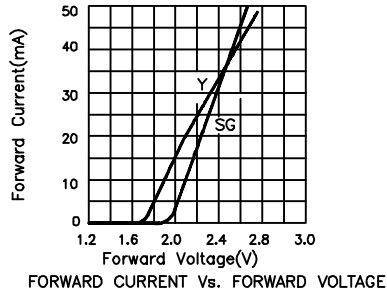


FORWARD CURRENT DERATING CURVE

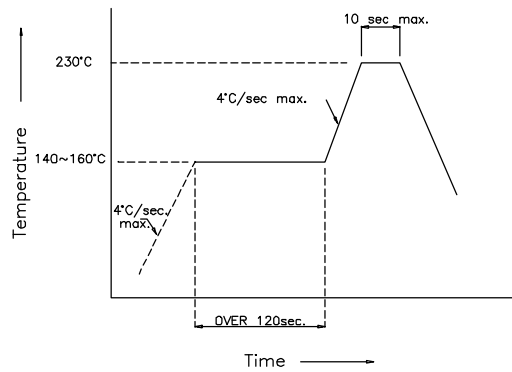


SPATIAL DISTRIBUTION

Super Bright Green / Yellow KPB-3025SGY

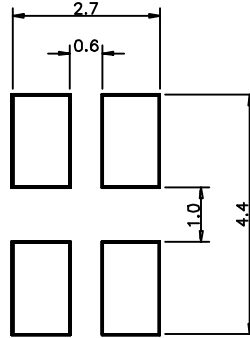


KPB-3025 Series SMT Reflow Soldering Instructions

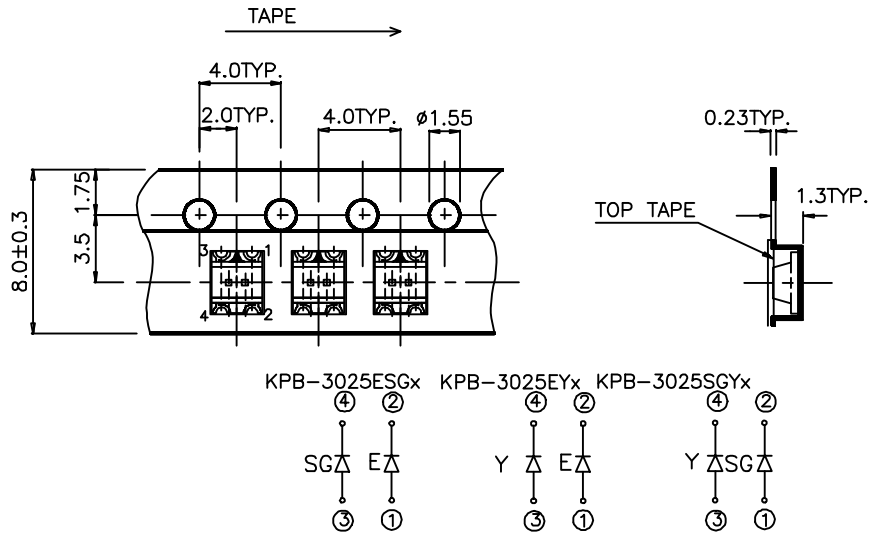


KPB-3025 Series Recommended Soldering Pattern

FOR REFLOW SOLDERING



KPB-3025 Series Tape Specifications



(Units : mm)