Kingbright

3.2mmx3.6mm FULL-COLOR SURFACE MOUNT LED LAMP

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

KPF-3236SRSGPBC-PRV SUPER BRIGHT RED
SUPER BRIGHT GREEN
BLUE

PRELIMINARY SPEC

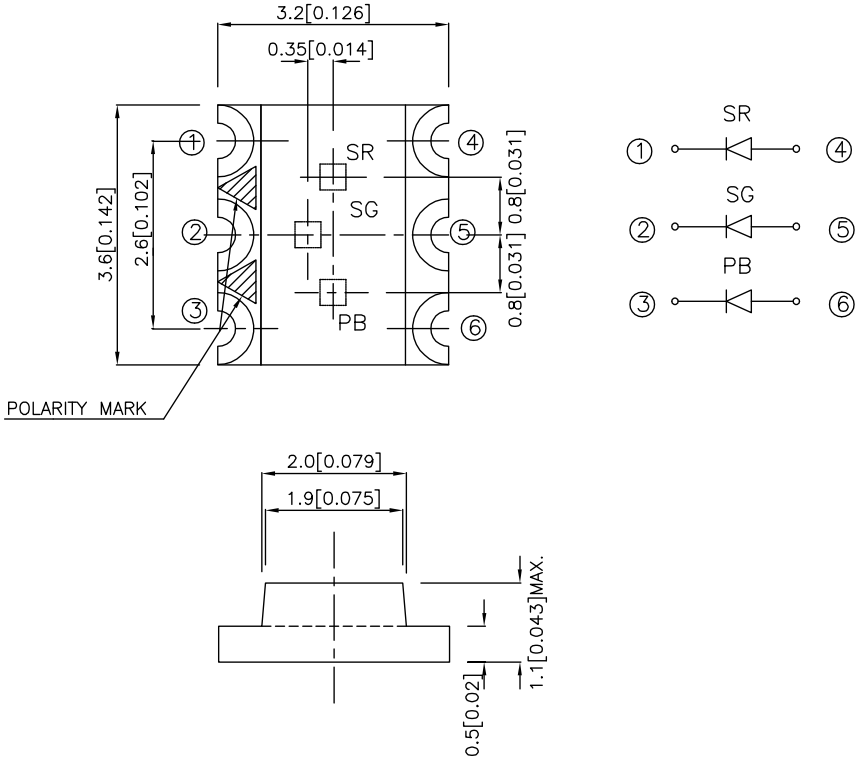
Features

- ●LOW POWER CONSUMPTION.
- ●3.2mmx3.6mm SMT LED, 1.1mm THICKNESS.
- ●ONE RED, ONE GREEN AND ONE BLUE CHIPS IN ONE PACKAGE.
- ●CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- ●PACKAGE : 1000PCS / REEL.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.
The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
The Blue source color devices are made with InGaN on SiC 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

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2(0.008") unless otherwise noted.
3. Specifications are subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
KPF-3236SRSGPBC-PRV	SUPER BRIGHT RED (GaAlAs)	WATER CLEAR	36	70	120°
	SUPER BRIGHT GREEN (GaP)		2.6	12	
	BLUE (InGaN)		18	60	

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

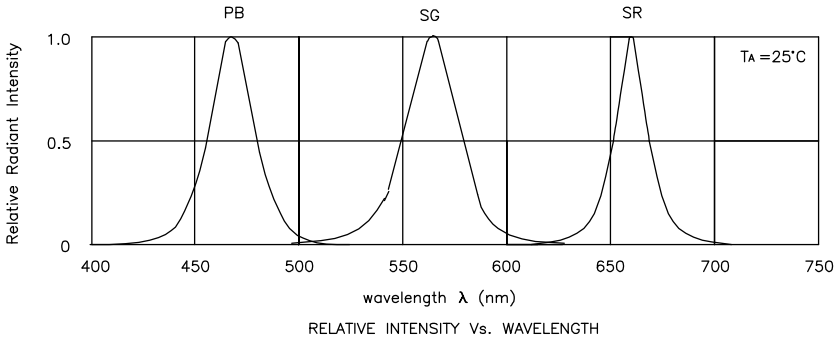
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red Super Bright Green Blue	660 565 468		nm	I_F=20mA
λD	Dominant Wavelength	Super Bright Red Super Bright Green Blue	640 568 470		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red Super Bright Green Blue	20 30 25		nm	I_F=20mA
C	Capacitance	Super Bright Red Super Bright Green Blue	45 15 65		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	Super Bright Red Super Bright Green Blue	1.85 2.2 3.65	2.5 2.5 4.2	V	I_F=20mA
I_R	Reverse Current	All		10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=25°C

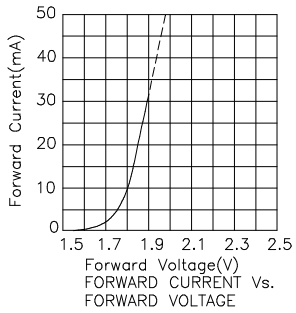
Parameter	Super Bright Red	Super Bright Green	Blue	Units
Power dissipation	100	105	102	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	155	140	160	mA
Reverse Voltage	5	5	5	V
Operating / Storage Temperature	-40°C To +85°C			

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

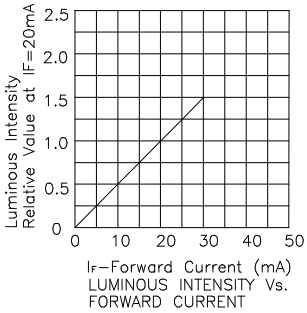


RELATIVE INTENSITY Vs. WAVELENGTH

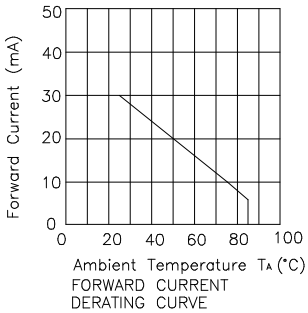
KPF-3236SRSGPBC-PRV
Super Bright Red



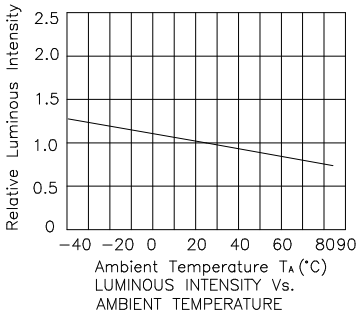
FORWARD CURRENT Vs.
FORWARD VOLTAGE



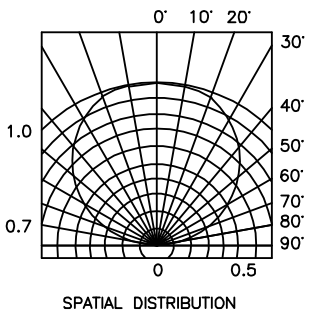
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

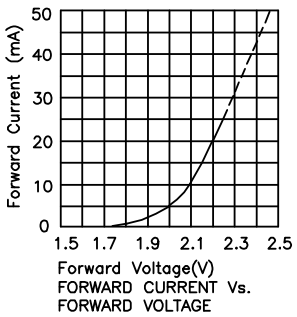


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

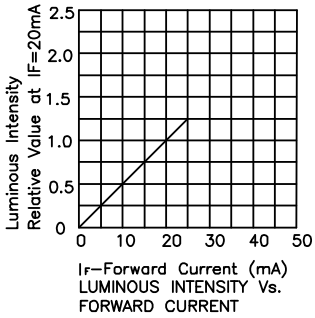


SPATIAL DISTRIBUTION

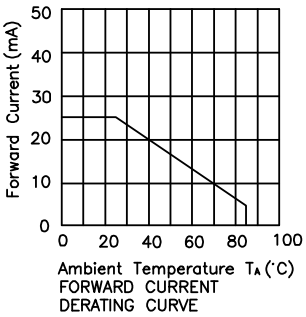
Super Bright Green



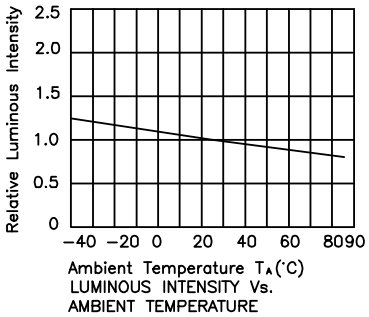
FORWARD CURRENT Vs.
FORWARD VOLTAGE



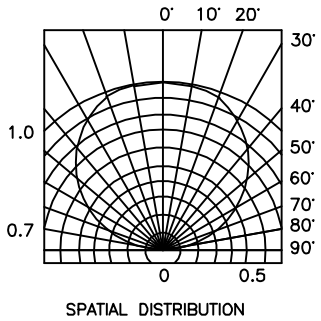
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

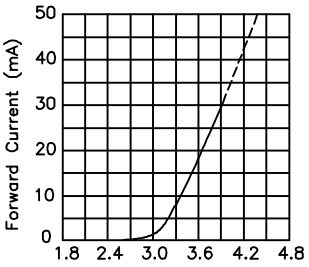


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

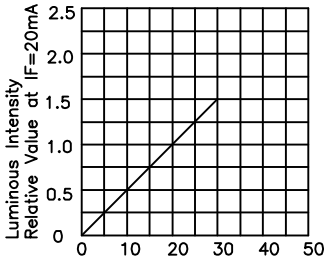


SPATIAL DISTRIBUTION

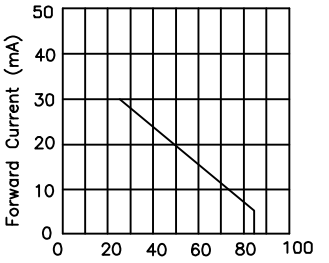
Blue



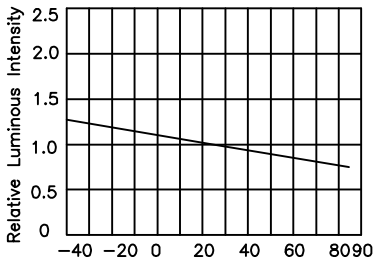
FORWARD CURRENT Vs.
FORWARD VOLTAGE



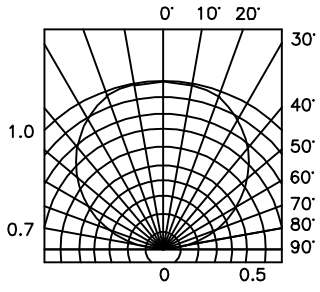
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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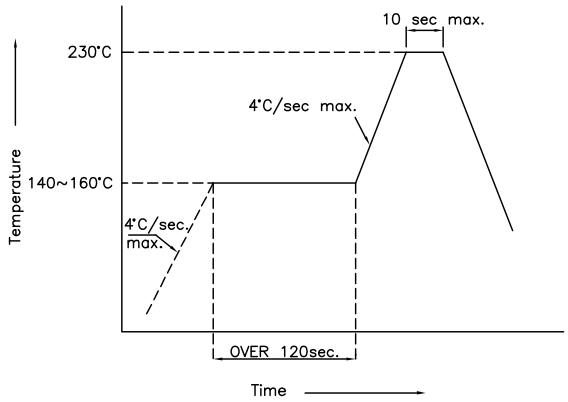
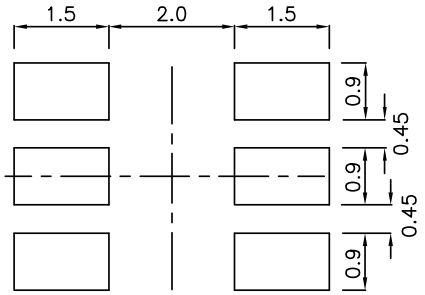
SMT Reflow Soldering Instructions

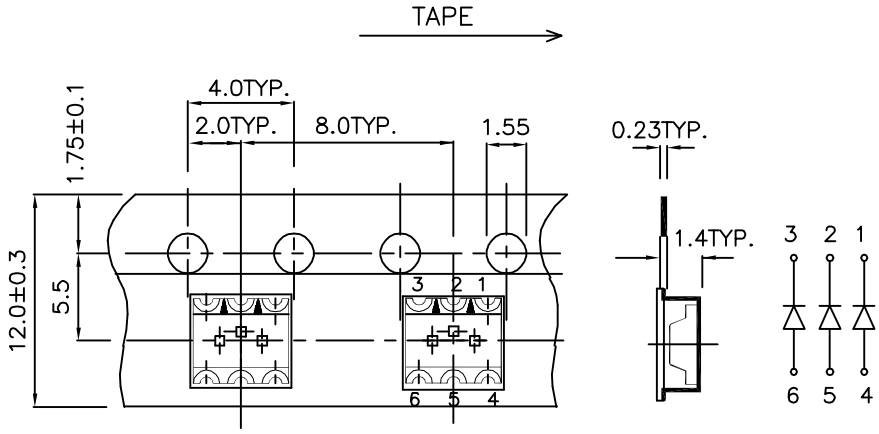
Number of reflow process shall be 2 times or less and cooling process to normal temperature is required between first and second soldering process.



Recommended Soldering Pattern (Units : mm)



Tape Specifications (Units : mm)



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.