Kingbright

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

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

KPF-3236SURKVGPBC

HYPER RED
GREEN
BLUE

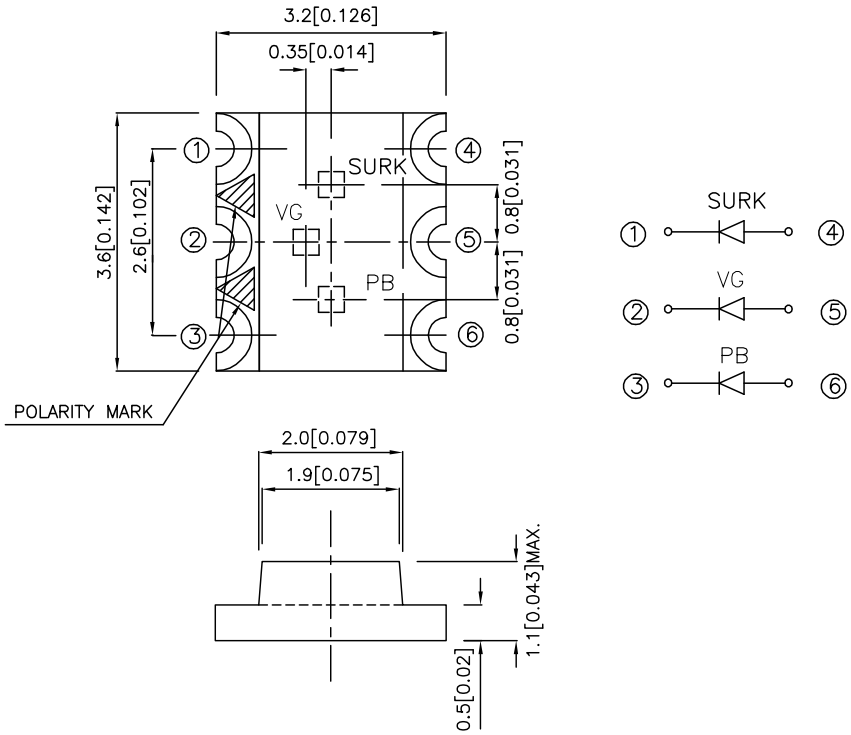
Features

- ●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 Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.
The Green source color devices are made with InGaN on SiC 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 grounded.

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.

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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
KPF-3236SURKVGPBC	HYPER RED (InGaAlP)	WATER CLEAR	70	150	120°
	GREEN (InGaN)		50	100	
	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.

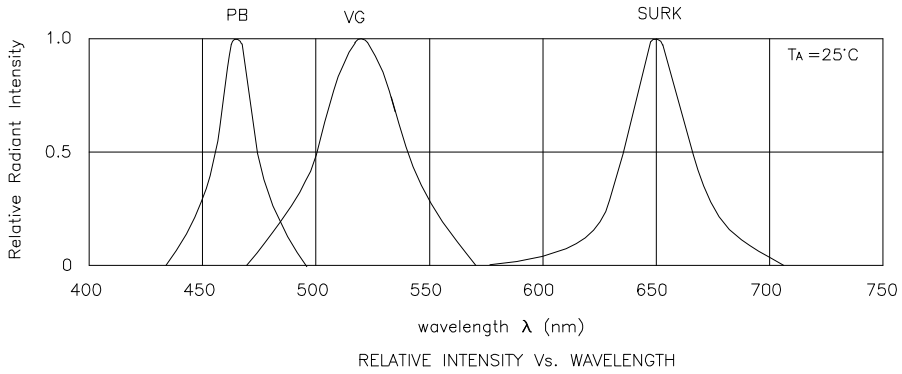
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green Blue	650 520 468		nm	I_F=20mA
λD	Dominant Wavelength	Hyper Red Green Blue	635 525 470		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green Blue	28 38 25		nm	I_F=20mA
C	Capacitance	Hyper Red Green Blue	35 45 65		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	Hyper Red Green Blue	1.95 3.5 3.65	2.5 4.5 4.2	V	I_F=20mA
I_R	Reverse Current	All		10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=25°C

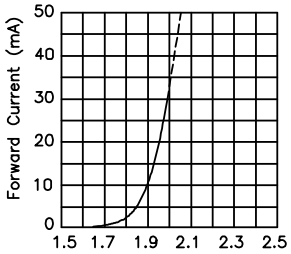
Parameter	Hyper Red	Green	Blue	Units
Power dissipation	170	105	102	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	185	150	160	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			

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

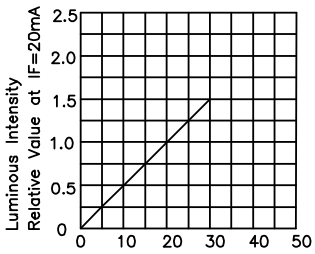


RELATIVE INTENSITY Vs. WAVELENGTH

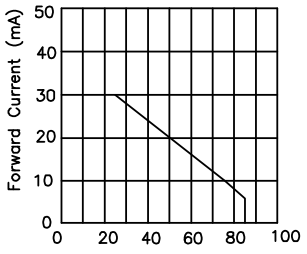
KPF-3236SURKVGPBC
Hyper Red



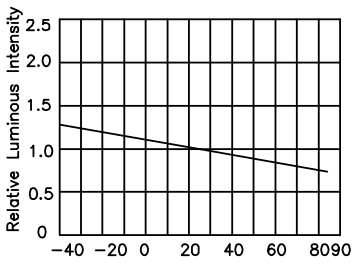
FORWARD CURRENT Vs.
FORWARD VOLTAGE



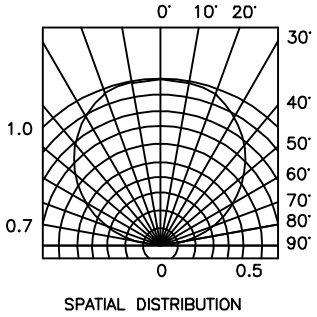
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

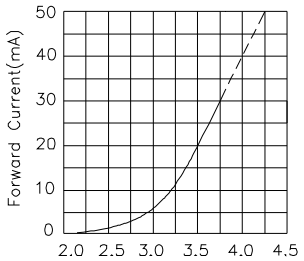


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

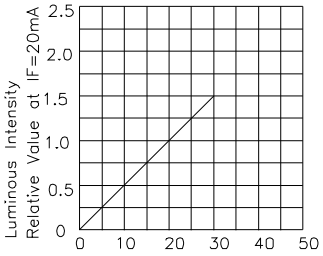


SPATIAL DISTRIBUTION

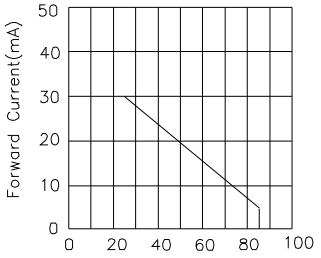
Green



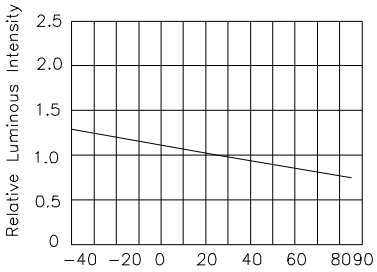
FORWARD CURRENT Vs.
FORWARD VOLTAGE



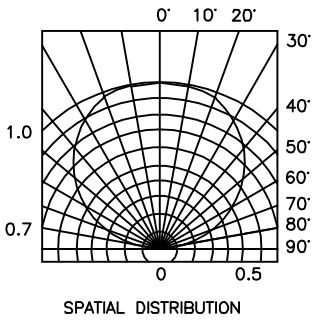
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

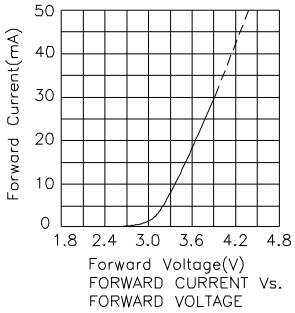


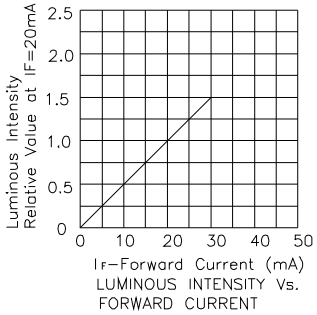
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

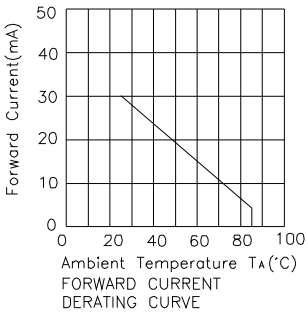


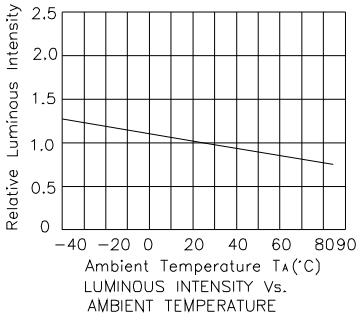
SPATIAL DISTRIBUTION

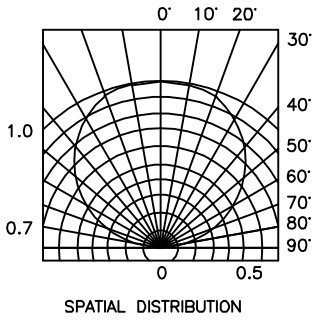
Blue









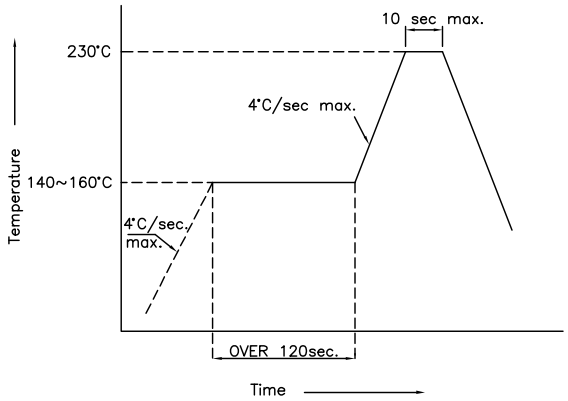


SPATIAL DISTRIBUTION

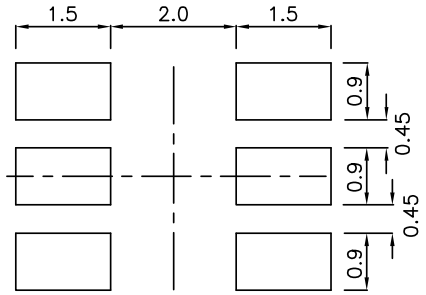
KPF-3236SURKVGPBC

SMT Reflow Soldering Instructions

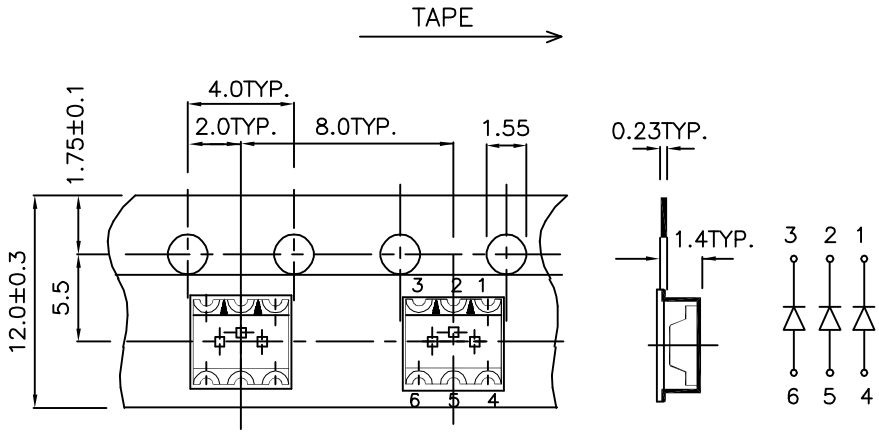
Number of reflow process shall be 2 times or less and cooling process to normal temperature is required between first and second soldering process.



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.