Kingbright

3.0x2.5mm SURFACE MOUNT LED LAMP

PRELIMINARY SPEC

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KPBL-3025PBASYKC

Blue
Super Bright Yellow

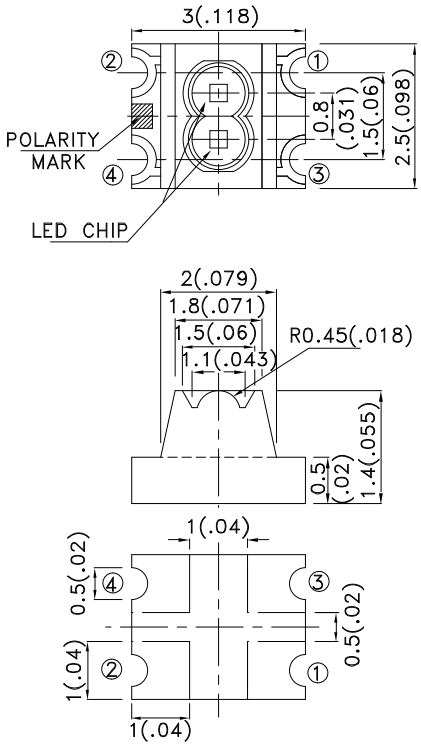
Features

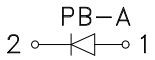
- 3.0mmx2.5mm SMT LED, 1.4mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACK LIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- INNER LENS TYPE
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

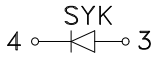
Description

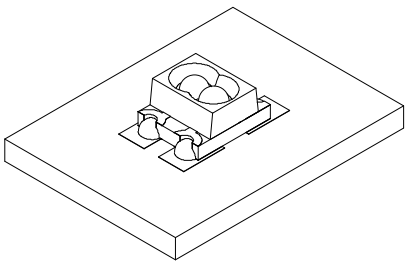
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.
The Super Bright Yellow device is made with InGaAlP (on GaAs substrate) light emitting diode chip.
Static electricity and surge damage the LEDS.
It is recommended to use a wrist band or anti-electrostatic glove when handling 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 subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPBL-3025PBASYKC	Blue (InGaN)	WATER CLEAR	70	150	100°
	Super Bright Yellow (InGaAlP)		70	150	

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

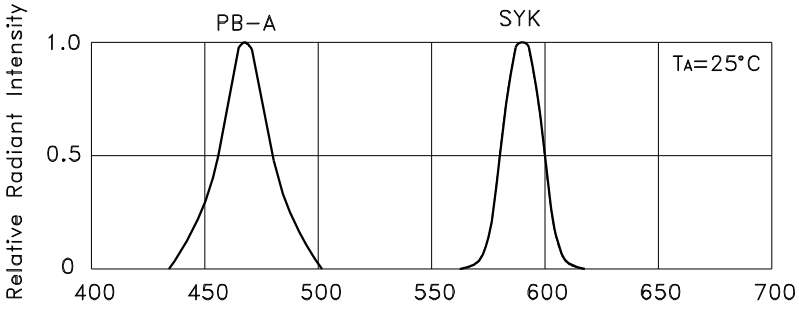
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue Super Bright Yellow	468 590		nm	I_F=20mA
λD [1]	Dominant Wavelength	Blue Super Bright Yellow	470 590		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Blue Super Bright Yellow	21 20		nm	I_F=20mA
C	Capacitance	Blue Super Bright Yellow	100 20		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Blue Super Bright Yellow	3.2 2	4 2.5	V	I_F=20mA
I_R	Reverse Current	Blue Super Bright Yellow		10 10	uA	V_R = 5V

Notes:
1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

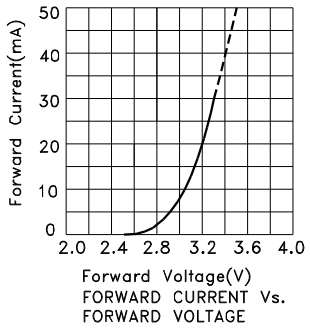
Parameter	Blue	Super Bright Yellow	Units
Power dissipation	120	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	100	175	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

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

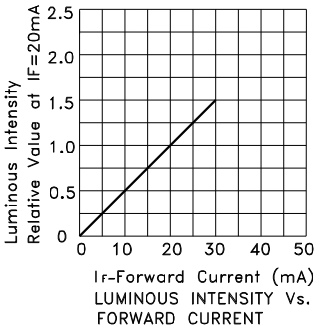


RELATIVE INTENSITY Vs. WAVELENGTH

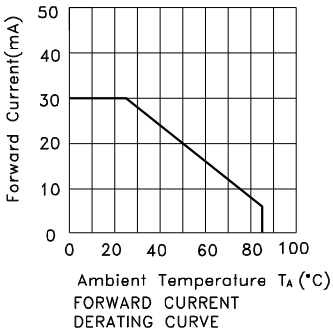
KPBL-3025PBASYKC
Blue



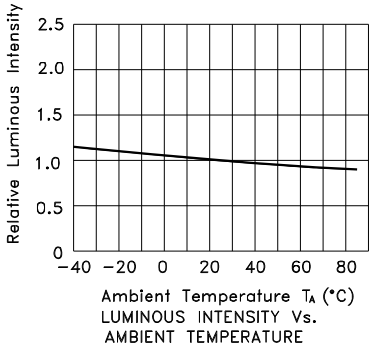
FORWARD CURRENT Vs.
FORWARD VOLTAGE



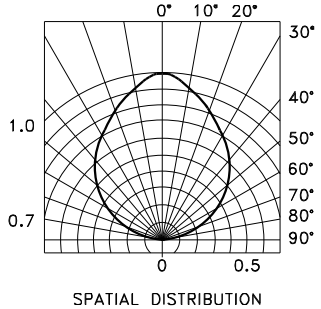
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

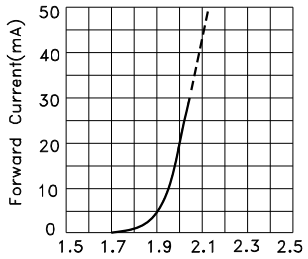


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

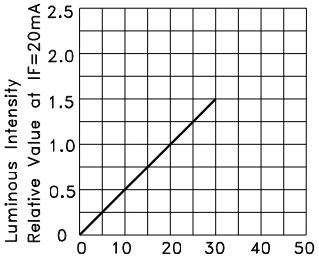


SPATIAL DISTRIBUTION

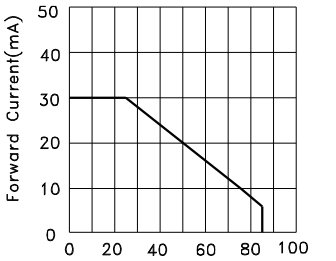
Super Bright Yellow



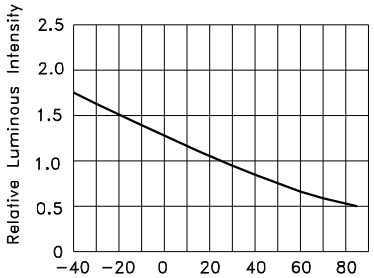
FORWARD CURRENT Vs.
FORWARD VOLTAGE



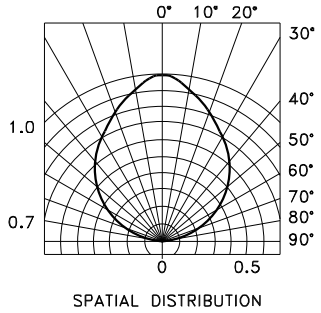
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



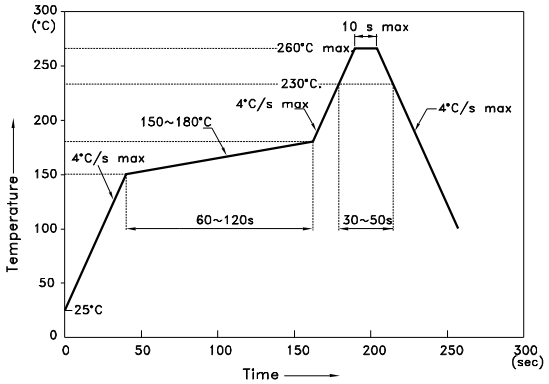
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

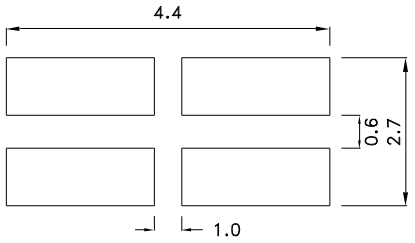
KPBL-3025PBASYKC

Reflow Soldering Profile For Lead-free SMT Process.



NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.1)



Tape Specifications
(Units : mm)