P/N: KPBL-3025EYC HIGH EFFICIENCY RED
YELLOW

Features

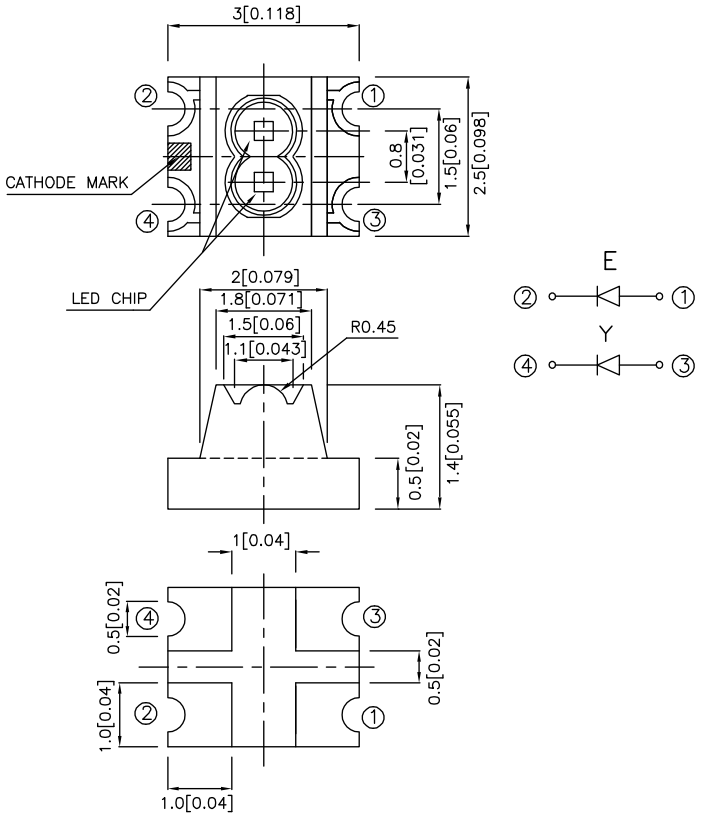
- ●3.0mmx2.5mm SMT LED, 1.4mm THICKNESS.
- ●LOW POWER CONSUMPTION.
- ●WIDE VIEWING ANGLE.
- ●IDEAL FOR BACK LIGHT AND INDICATOR.
- ●VARIOUS COLORS AND LENS TYPES AVAILABLE.
- ●INNER LENS TYPE
- ●PACKAGE : 2000PCS / REEL.
- ●RoHS COMPLIANT.

Description

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 ±0.2(0.008") unless otherwise noted.
3. Specifications are subject to change without notice.

Kingbright

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
KPBL-3025EYC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	7	20	100°
	YELLOW (GaAsP/GaP)		4	15	

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

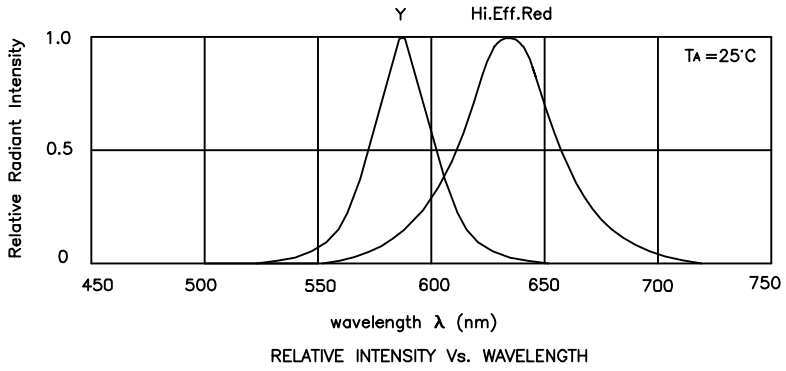
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red Yellow	627 590		nm	I_F=20mA
λD	Dominant Wavelength	High Efficiency Red Yellow	625 588		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red Yellow	45 35		nm	I_F=20mA
C	Capacitance	High Efficiency Red Yellow	15 20		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	High Efficiency Red Yellow	2.0 2.1	2.5 2.5	V	I_F=20mA
I_R	Reverse Current	High Efficiency Red Yellow		10 10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=25°C

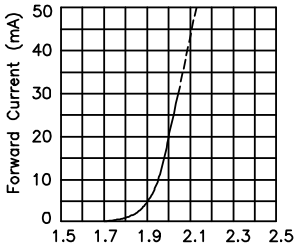
Parameter	High Efficiency Red	Yellow	Units
Power dissipation	105	105	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	160	140	mA
Reverse Voltage	5		V
Operating/Storage Temperature	-40°C To +85°C		

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

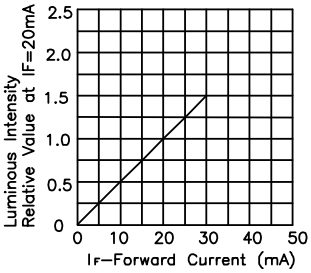


RELATIVE INTENSITY Vs. WAVELENGTH

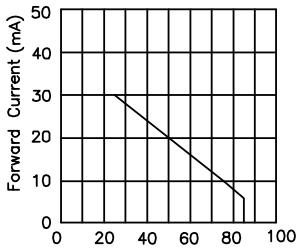
KPBL-3025EYC
High Efficiency Red



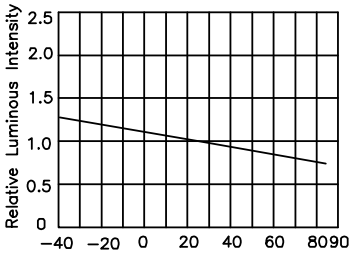
FORWARD CURRENT Vs.
FORWARD VOLTAGE



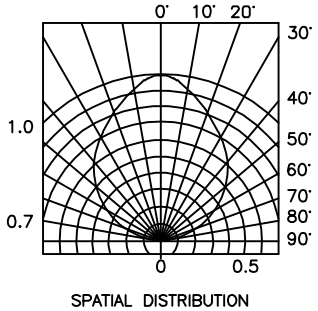
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

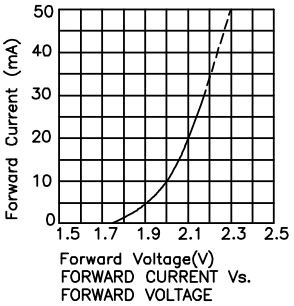


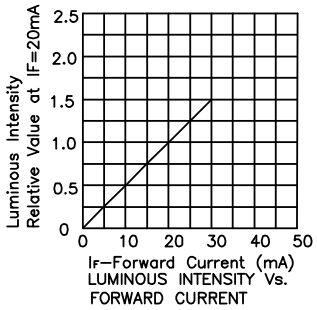
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

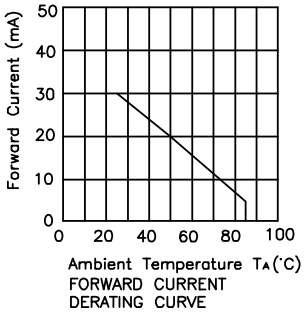


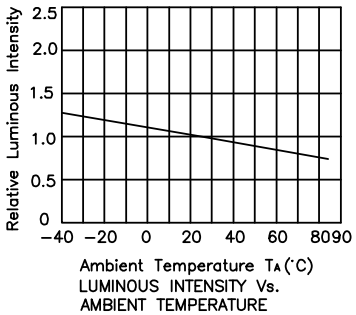
SPATIAL DISTRIBUTION

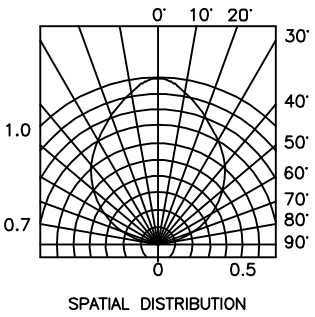
Yellow


Forward Current (mA)
50
40
30
20
10
0
1.5 1.7 1.9 2.1 2.3 2.5
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE


Luminous Intensity
Relative Value at IF=20mA
2.5
2.0
1.5
1.0
0.5
0
0 10 20 30 40 50
IF–Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

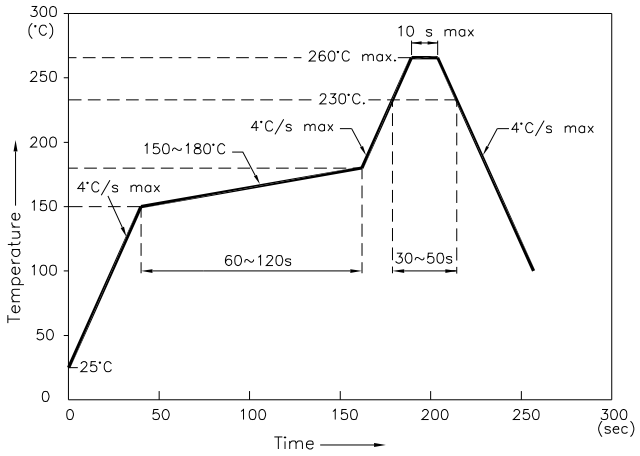

Forward Current (mA)
50
40
30
20
10
0
0 20 40 60 80 100
Ambient Temperature TA(°C)
FORWARD CURRENT
DERATING CURVE


Relative Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
–40 –20 0 20 40 60 8090
Ambient Temperature TA(°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE


0° 10° 20°
30°
40°
50°
60°
70°
80°
90°
1.0
0.7
0
0.5
SPATIAL DISTRIBUTION

KPBL-3025EYC

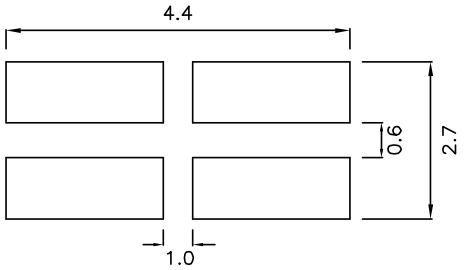
Reflow Soldering Profile For Lead-free SMT Process.



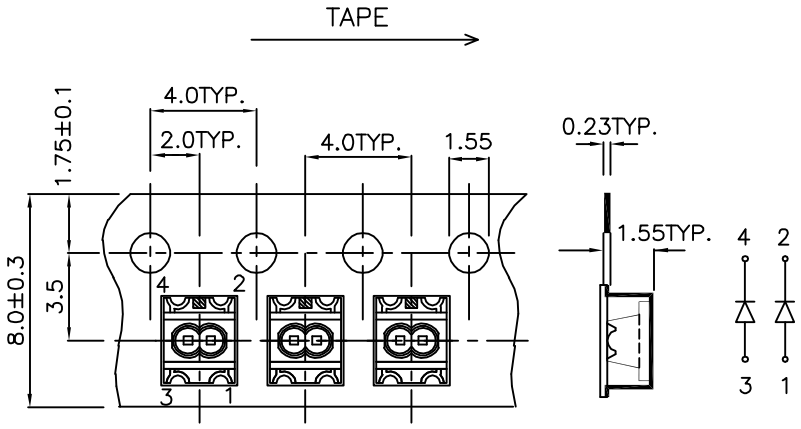
NOTES:

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)



Tape Specifications (Units : mm)



Remarks:

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

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

Note: Accuracy may depend on the sorting parameters.