

PRELIMINARY SPEC

Part Number: APHBM2012SURKSYK
 HYPER RED
 SUPER BRIGHT YELLOW

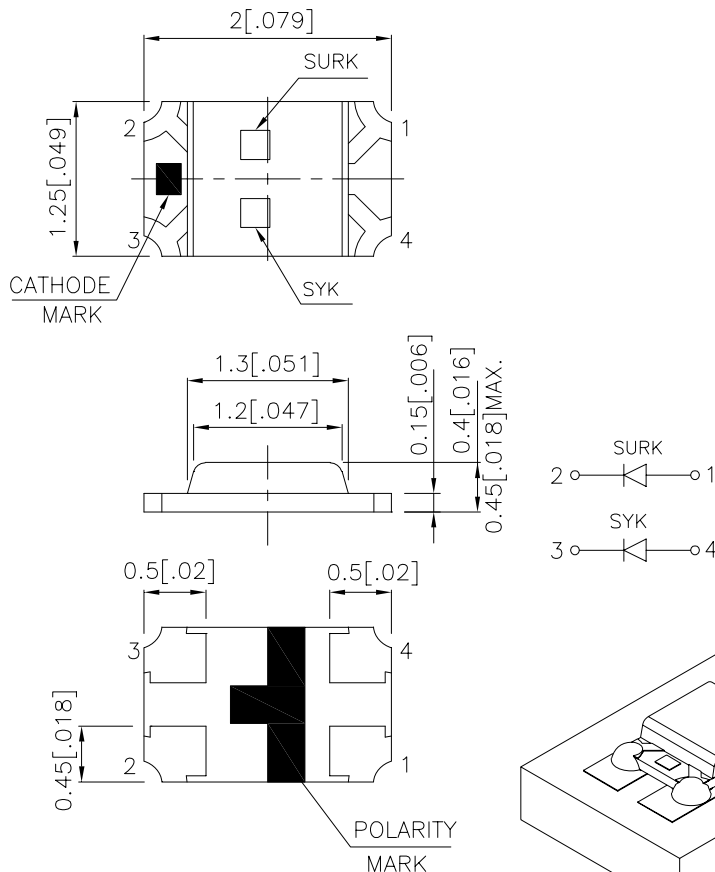
Features

- 2.0mmx1.25mm SMT LED, 0.45mm MAX. THICKNESS.
- BI - COLOR, LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.
 The Super Bright Yellow device is made with DH InGaAlP (on GaAs substrate) light emitting diode chip.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ 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.	2 θ 1/2
APHBM2012SURKSYKC	HYPHER RED (InGaAIP)	WATER CLEAR	70	200	120°
	SUPER BRIGHT YELLOW (InGaAIP)		50	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
λ_{peak}	Peak Wavelength	Hyper Red Super Bright Yellow	650 590		nm	IF=20mA
λ_D [1]	Dominant Wavelength	Hyper Red Super Bright Yellow	635 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red Super Bright Yellow	28 20		nm	IF=20mA
C	Capacitance	Hyper Red Super Bright Yellow	35 20		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Super Bright Yellow	1.95 2.0	2.5 2.5	V	IF=20mA
IR	Reverse Current	Hyper Red Super Bright Yellow		10 10	uA	VR = 5V

Notes:

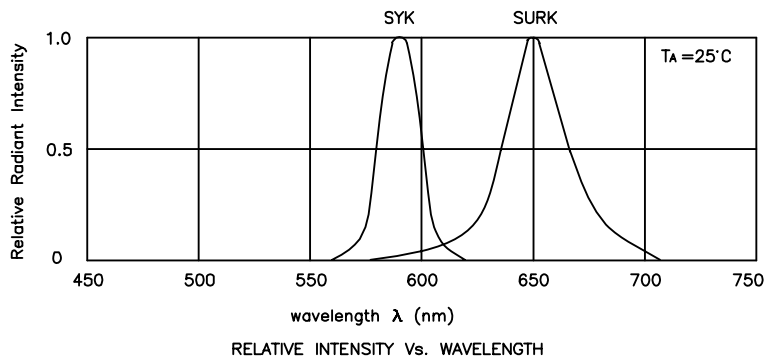
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

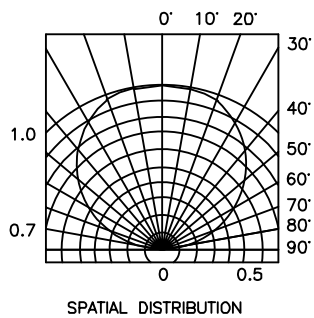
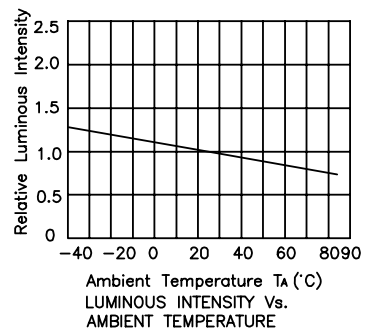
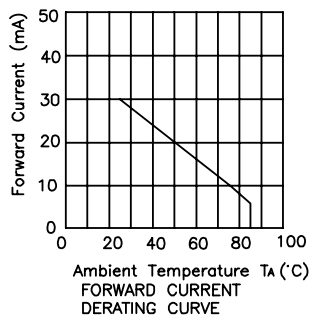
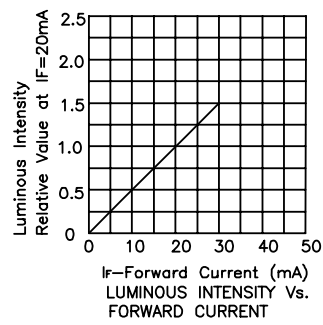
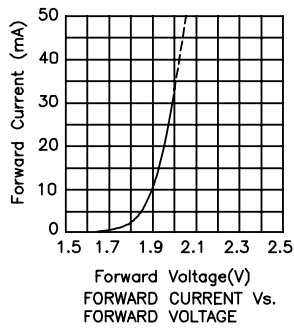
Parameter	Hyper Red	Super Bright Yellow	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	185	175	mA
Reverse Voltage	5	5	V
Operating/storage Temperature	-40°C To +85°C		

Note:

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

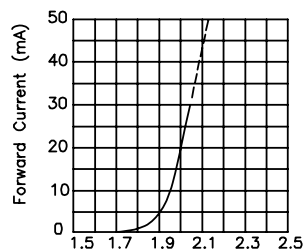


APHBM2012SURKSYKC Hyper Red

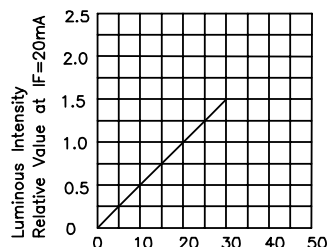


Kingbright

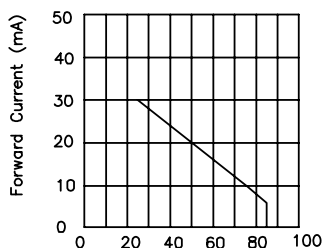
Super Bright Yellow



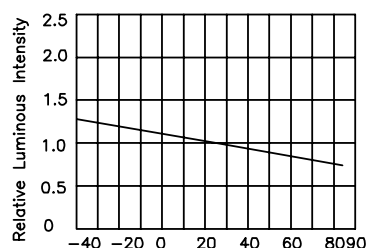
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



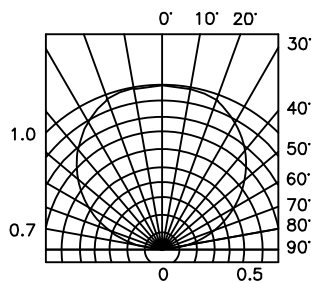
I_F —Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



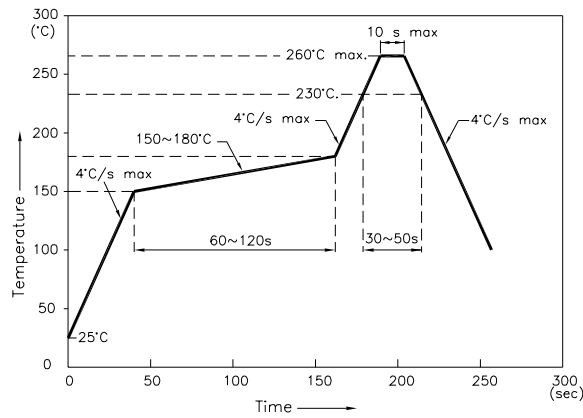
Ambient Temperature T_A (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

APHBM2012SURKSYKC

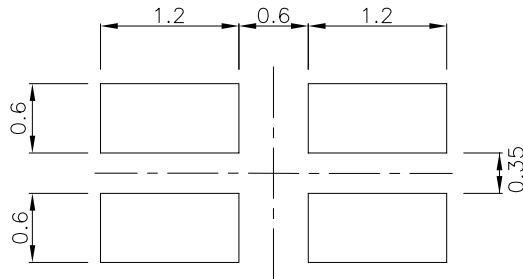
Reflow Soldering Profile For Lead-free SMT Process.



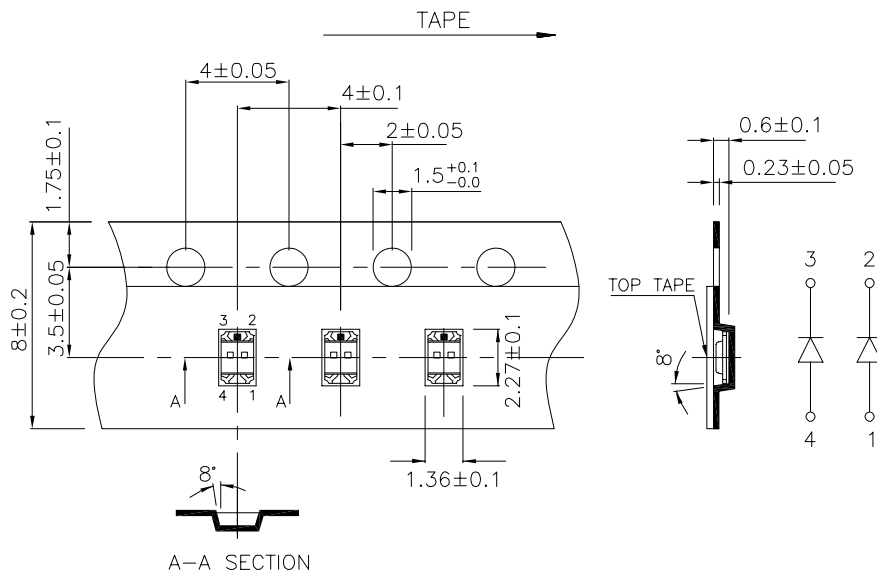
NOTES:

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)

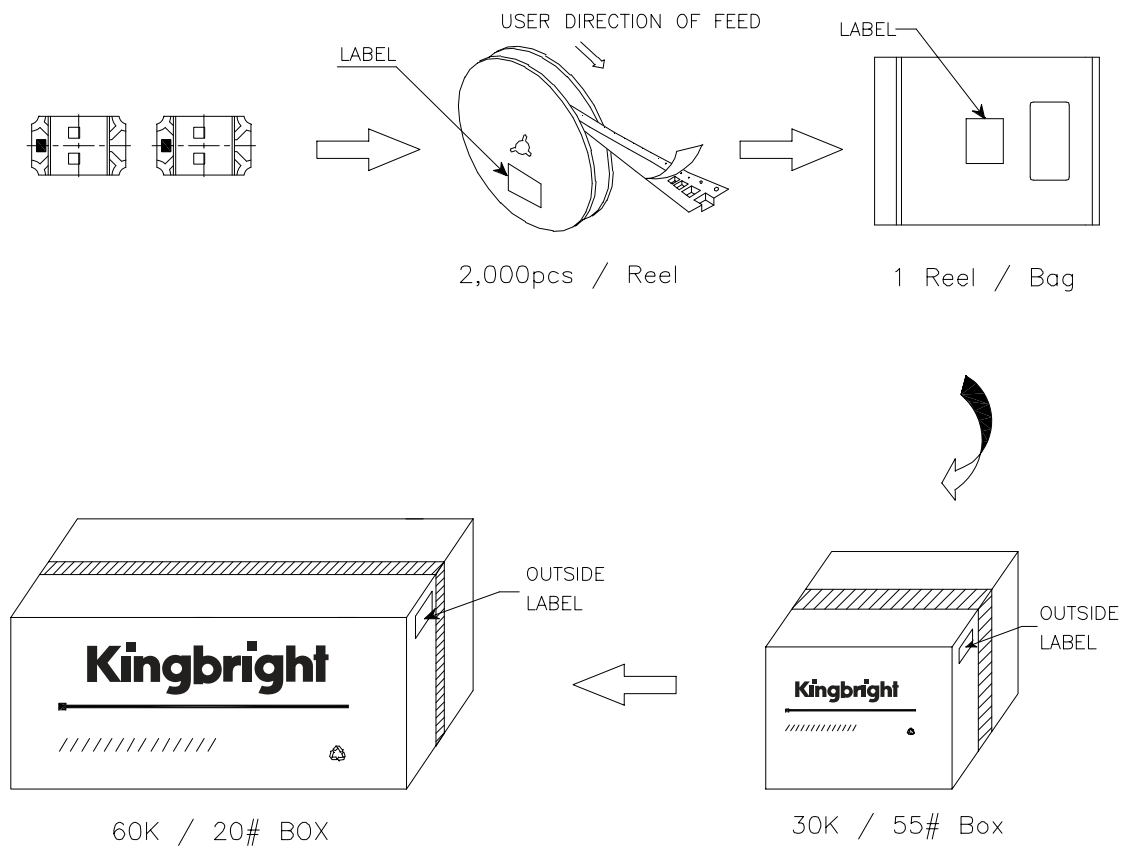



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APHBM2012SURKSYKC



Kingbright	
P/NO: APHBM2012XXX	
QTY: 2,000 pcs	Q.C. Q C xx xx. xxxx PASSED
S/N: XXXX	Date
CODE: XXX	
LOT NO:	
	
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
MADE IN CHINA	RoHS Compliant