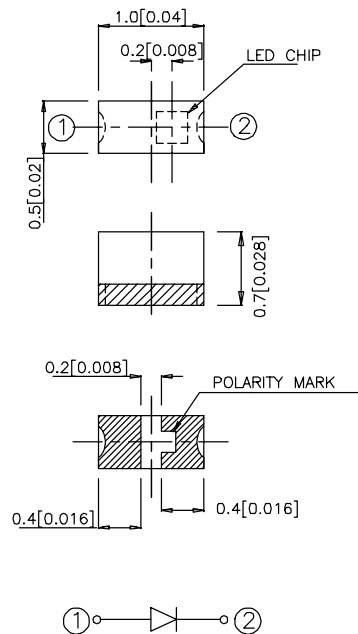


### Features

- 1.0mmx0.5mm SMT LED, 0.7mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.

APH1005EC  
 APH1005SGC  
 APH1005YC

### Package Dimensions



### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1$  (0.004") unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change without notice.

### Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle 2 $\theta$ 1/2
			Min.	Typ.	
APH1005EC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	8	16	120°
APH1005SGC	SUPER BRIGHT GREEN (GaP)	WATER CLEAR	7	14	120°
APH1005YC	YELLOW (GaAsP/GaP)	WATER CLEAR	3	5	120°

### Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

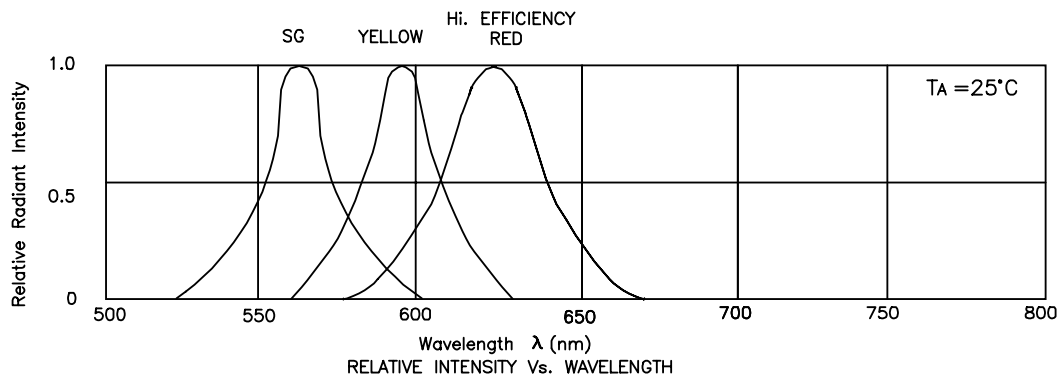
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{\text{peak}}$	Peak Wavelength	High Efficiency Red Super Bright Green Yellow	625 565 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Super Bright Green Yellow	45 30 35		nm	IF=20mA
C	Capacitance	High Efficiency Red Super Bright Green Yellow	12 45 10		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Super Bright Green Yellow	2.0 2.2 2.1	2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	High Efficiency Red	Super Bright Green	Yellow	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	150	150	150	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			

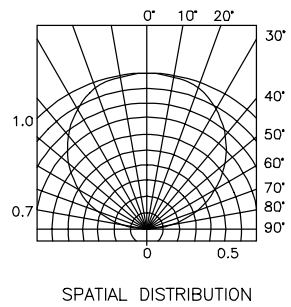
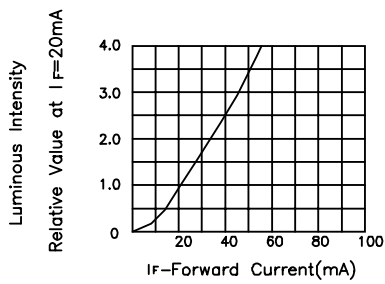
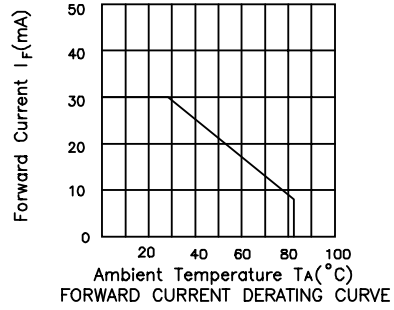
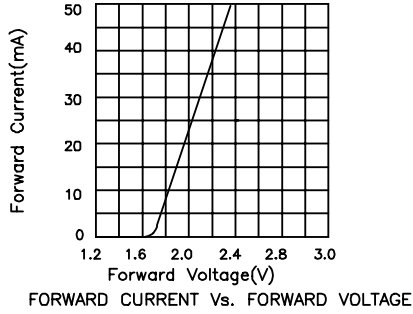
Note:

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

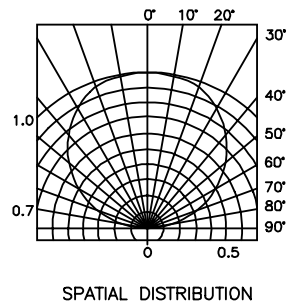
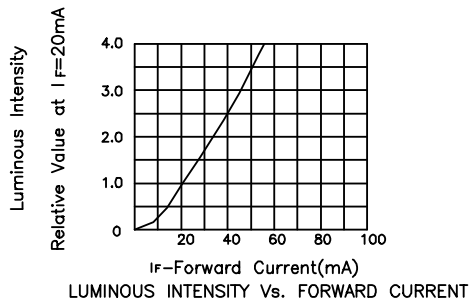
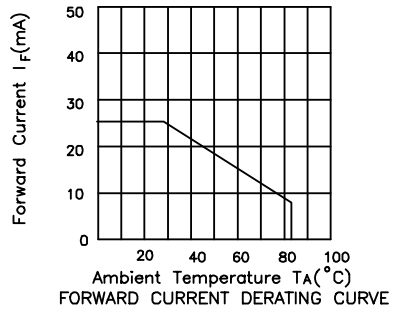
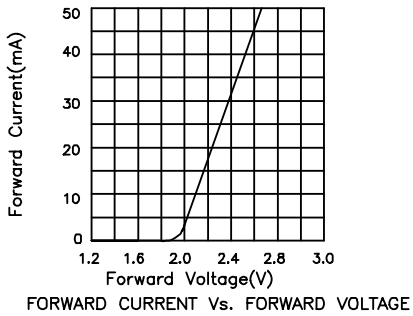


# Kingbright

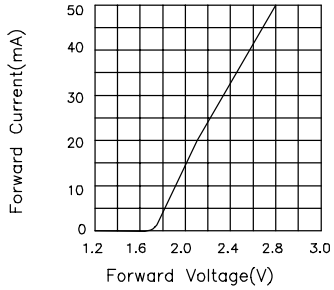
## High Efficiency Red APH1005EC



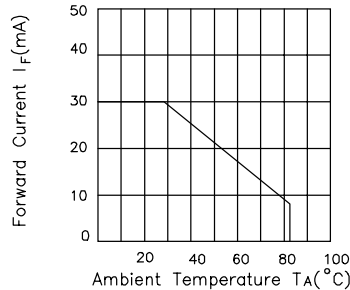
## Super Bright Green APH1005SGC



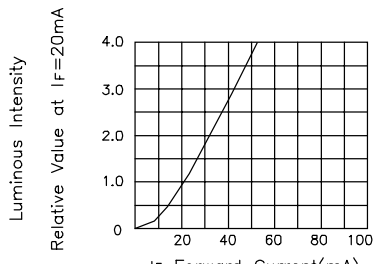
## Yellow APH1005YC



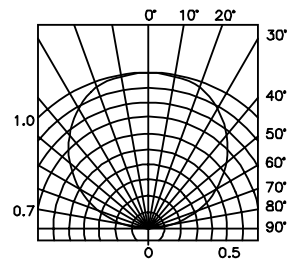
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

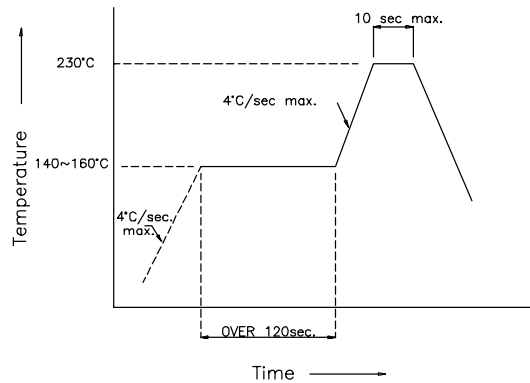


LUMINOUS INTENSITY Vs. FORWARD CURRENT



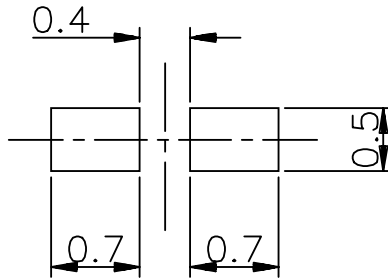
SPATIAL DISTRIBUTION

## APH1005 SERIES SMT Reflow Soldering Instructions



## APH1005 SERIES Recommended Soldering Pattern (Units : mm)

FOR REFLOW SOLDERING



## APH1005 SERIES Tape Specifications (Units : mm)

