

Kingbright

3.0x2.5mm SURFACE MOUNT LED LAMP

Part Number: APBL3025ESGC-F01

High Efficiency Red
Super Bright Green

Features

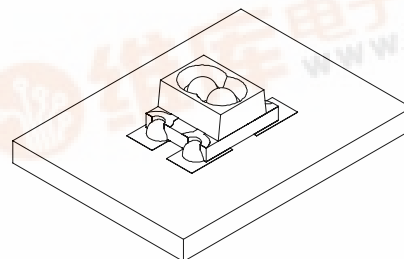
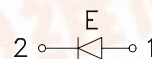
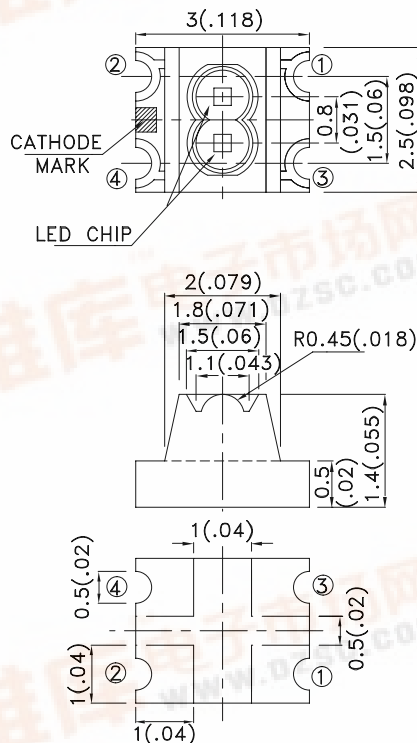
- 3.0mmx2.5mm SMT LED, 1.4mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACK LIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- INNER LENS TYPE
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

Description

The 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.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ 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
APBL3025ESGC-F01	High Efficiency Red (GaAsP/GaP)	WATER CLEAR	7	20	100°
	Super Bright Green (GaP)		7	20	

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	High Efficiency Red Super Bright Green	627 565		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red Super Bright Green	625 568		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red Super Bright Green	45 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Super Bright Green	15 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red Super Bright Green	2 2.2	2.5 2.5	V	IF=20mA
IR	Reverse Current	High Efficiency Red Super Bright Green		10 10	uA	VR = 5V

Notes:

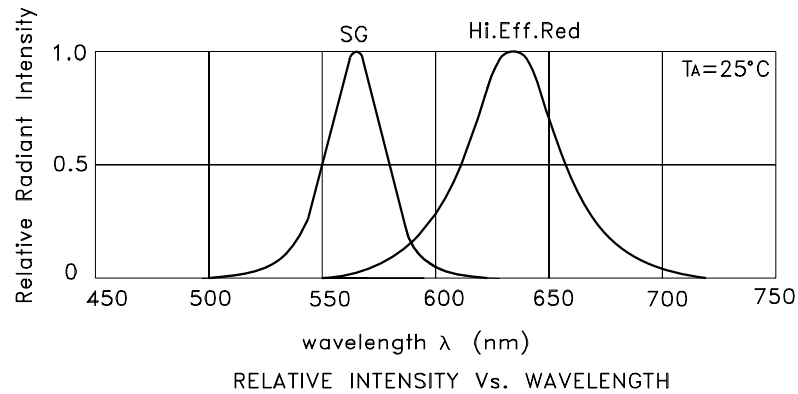
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

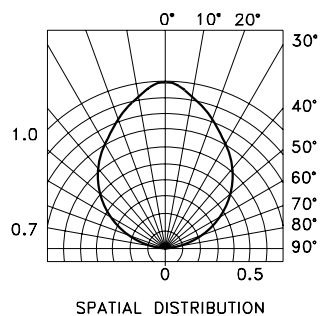
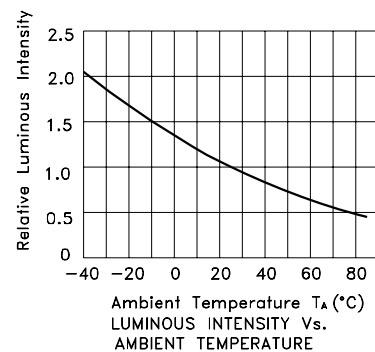
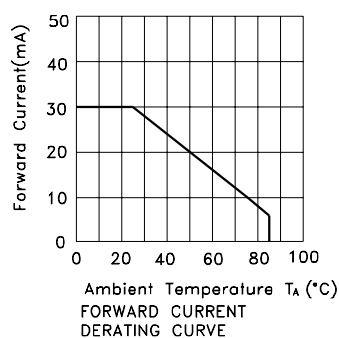
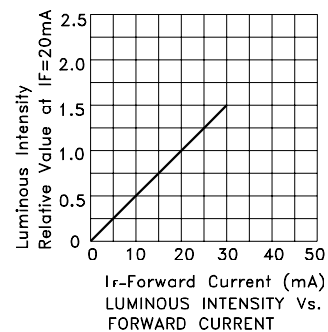
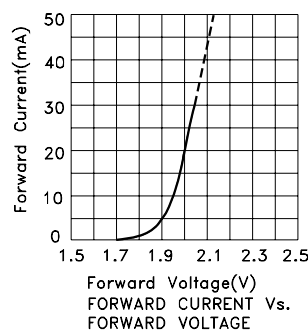
Parameter	High Efficiency Red	Super Bright Green	Units
Power dissipation	75	62.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	160	140	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

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



APBL3025ESGC-F01
High Efficiency Red



Super Bright Green

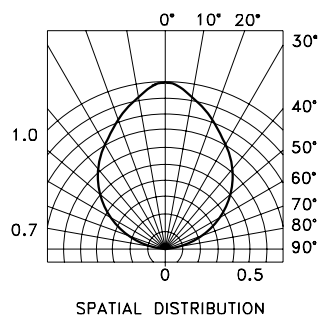
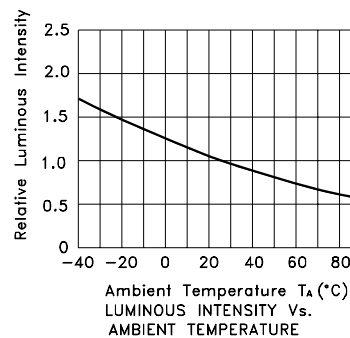
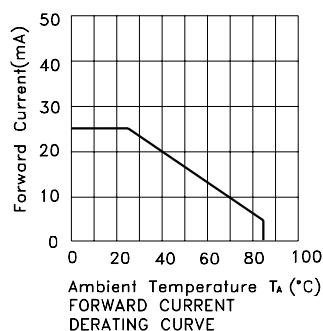
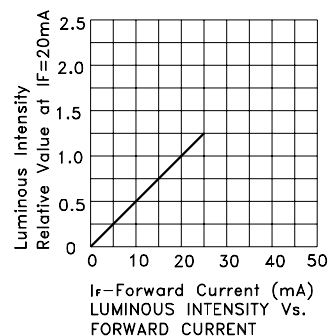
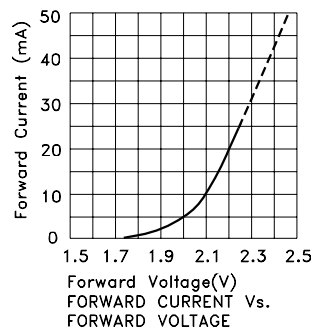


Figure 1 is a line graph showing the temperature profile of the furnace during the heat treatment of the specimen. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 300. The X-axis represents Time in seconds (sec), ranging from 0 to 300. The profile starts at 25°C at 0 seconds. It rises at a rate of 4°C/s to 150°C at 40 seconds. Then, it rises at a rate of 1°C/s to 180°C at 120 seconds. After this, it rises at a rate of 4°C/s to 230°C at 160 seconds. It then rises at a rate of 4°C/s to 260°C at 180 seconds. It holds at 260°C for 10 seconds (until 190 seconds). Finally, it cools at a rate of 4°C/s to 100°C at 250 seconds. Key time intervals are marked: 60~120s for the 1°C/s ramp, and 30~50s for the 4°C/s ramp after 180°C.

NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$. 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.

Figure 1 shows a rectangular plate with a width of 4.4 and a height of 2.7. The plate is divided into four quadrants by a horizontal line at height 0.6 and a vertical line at width 1.0. The top-left quadrant is labeled 'a' and the bottom-right quadrant is labeled 'b'.

Technical drawing of a tape reel showing top, side, and cross-sectional views with dimensions and a legend.

Top View Dimensions:

- Overall width: 8.0 ± 0.3
- Overall length: 17.5 ± 0.1
- Distance from top edge to first hole center: 3.5 ± 0.05
- Distance between hole centers: 4.0 ± 0.1
- Distance from hole center to next feature: 2.0 ± 0.05
- Distance between hole centers: 4.0 ± 0.1
- Hole diameter: $\varnothing 1.55 \pm 0.05$
- Distance from hole center to next feature: 2.75 ± 0.1
- Distance from hole center to next feature: 3.25 ± 0.1
- Angle: 5°MAX.

Side View Dimensions:

- Overall height: 0.25 ± 0.1
- Distance from top edge to first hole center: 1.55 ± 0.1
- Angle: 5°MAX.

Cross-Section A-A:

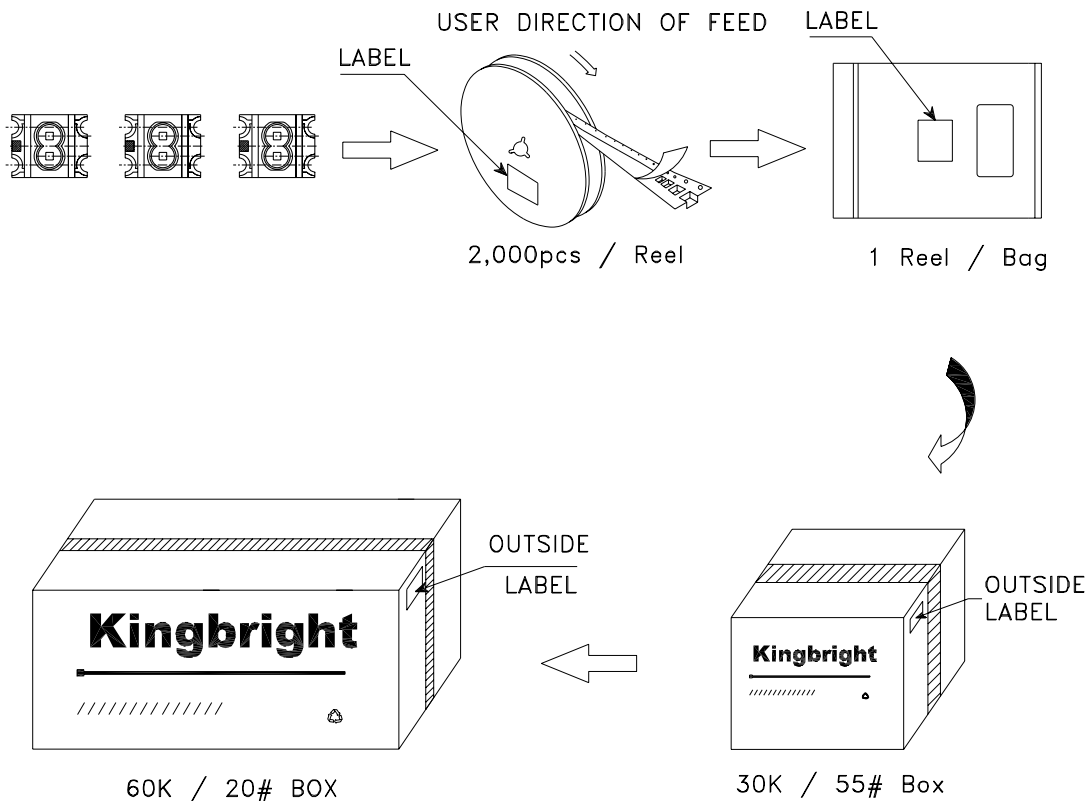
Section A-A shows the internal structure of the reel, including the tape and the reel body.

Legend:

- Symbol 1: Circle with a dot (representing a hole)
- Symbol 2: Circle with a cross (representing a hole)
- Symbol 3: Circle with a dot and a cross (representing a hole)
- Symbol 4: Circle with a cross and a dot (representing a hole)

PACKING & LABEL SPECIFICATIONS

APBL3025ESGC-F01



Kingbright	
P/NO: APBL3025xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
MADE IN CHINA	RoHS Compliant