Kingbright

3.0x2.5mm SURFACE MOUNT LED LAMP

APBL3025SRQGCPR-F01	SUPER BRIGHT RED GREEN

Features

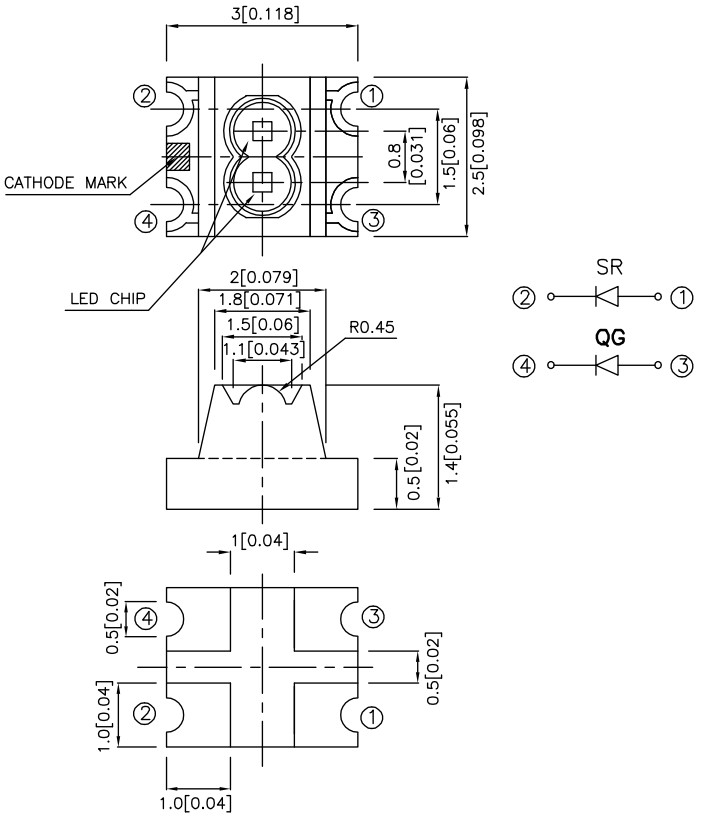
- ●3.0mmx2.5mm SMT LED, 1.4mm THICKNESS.
- ●LOW POWER CONSUMPTION.
- ●WIDE VIEWING ANGLE.
- ●IDEAL FOR BACK LIGHT AND INDICATOR.
- ●VARIOUS COLORS AND LENS TYPES AVAILABLE.
- ●INNER LENS TYPE
- ●PACKAGE : 2000PCS / REEL.
- ●RoHS COMPLIANT.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

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

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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
APBL3025SRQGCPR-F01	SUPER BRIGHT RED (GaAlAs)	WATER CLEAR	36	100	100°
	GREEN (GaP)		7	20	

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

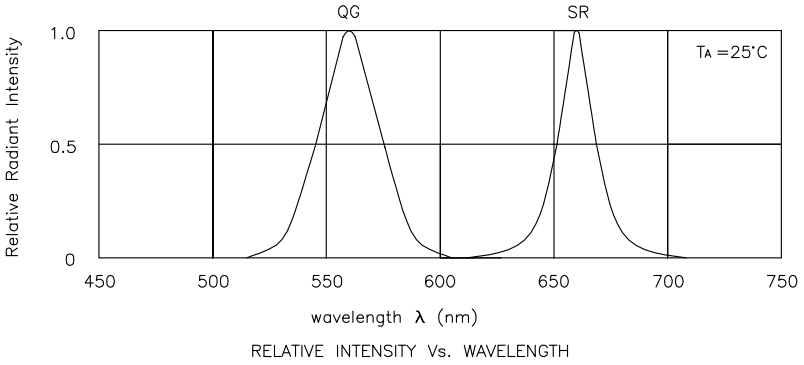
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red Green	660 560		nm	I_F=20mA
λD	Dominant Wavelength	Super Bright Red Green	640 565		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red Green	20 30		nm	I_F=20mA
C	Capacitance	Super Bright Red Green	45 45		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	Super Bright Red Green	1.85 2.15	2.5 2.5	V	I_F=20mA
I_R	Reverse Current	All		10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=25°C

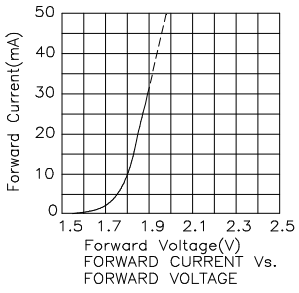
Parameter	Super Bright Red	Green	Units
Power dissipation	100	105	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	155	130	mA
Reverse Voltage	5		V
Operating/Storage Temperature	-40°C To +85°C		

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

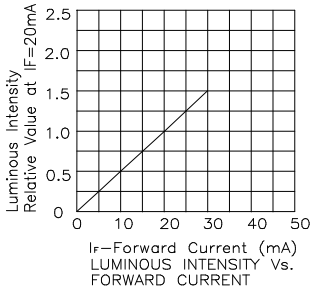


RELATIVE INTENSITY Vs. WAVELENGTH

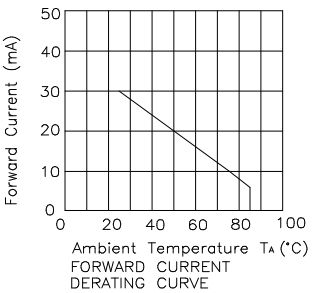
APBL3025SRQGCPR-F01
Super Bright Red



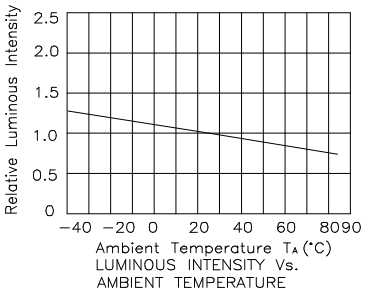
FORWARD CURRENT Vs.
FORWARD VOLTAGE



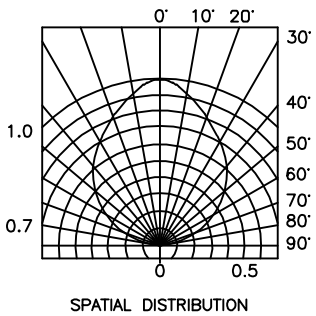
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

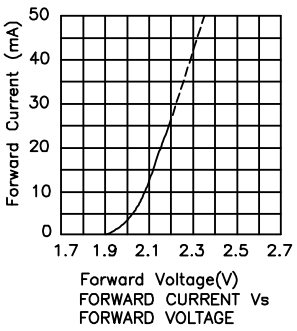


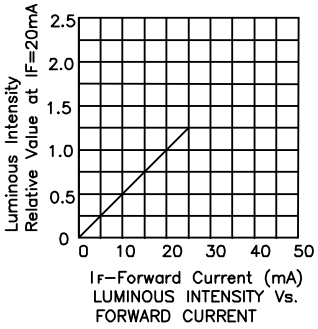
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

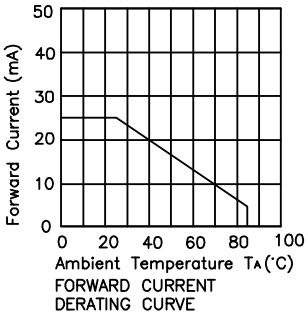


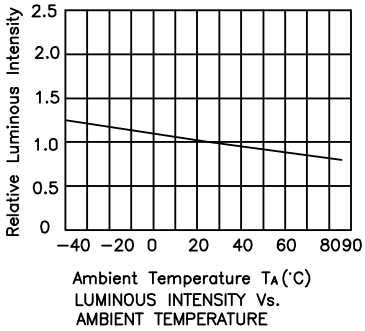
SPATIAL DISTRIBUTION

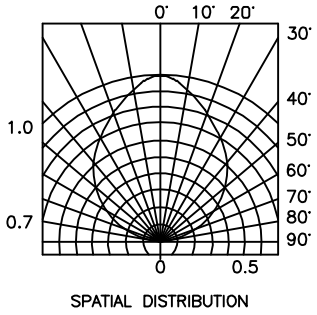
Green


Forward Current (mA)
50
40
30
20
10
0
1.7 1.9 2.1 2.3 2.5 2.7
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

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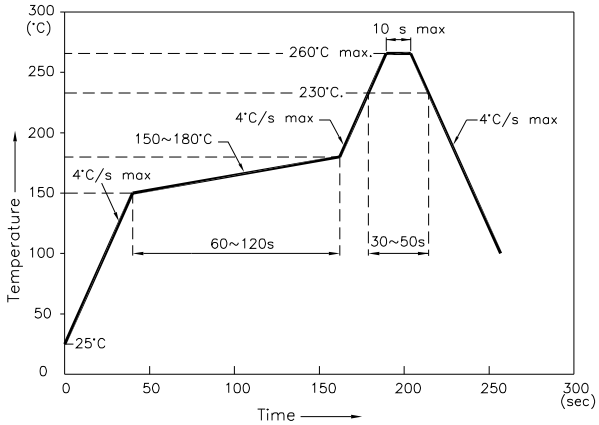
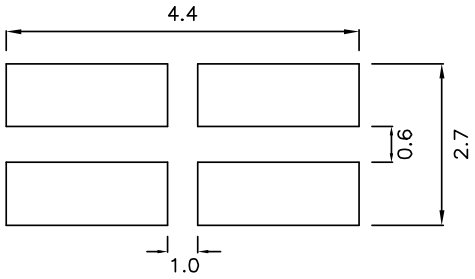
Reflow Soldering Profile For Lead-free SMT Process.



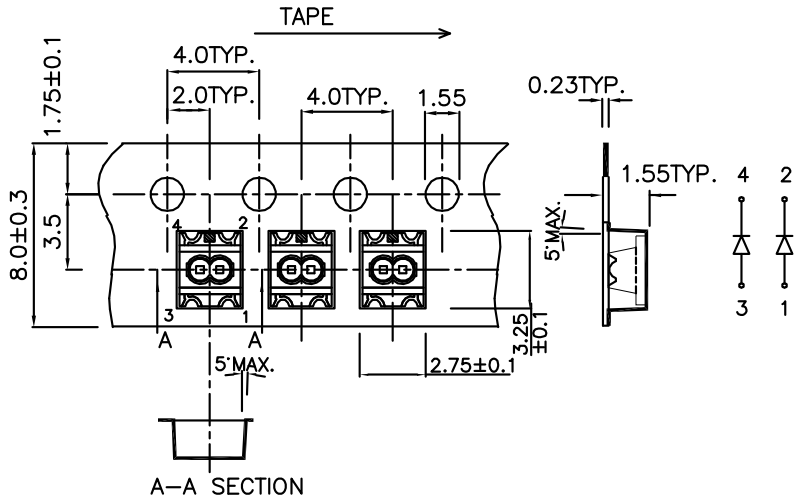
NOTES:

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, or wavelength), the typical accuracy of the sorting process is as follows:

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

Note: Accuracy may depend on the sorting parameters.