



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

KAA-3528EPBSGC

HIGH EFFICIENCY RED
BLUE
SUPER BRIGHT GREEN

Features

- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE: 1500PCS / 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 Blue source color devices are made with InGaN on SiC Light Emitting Diode.

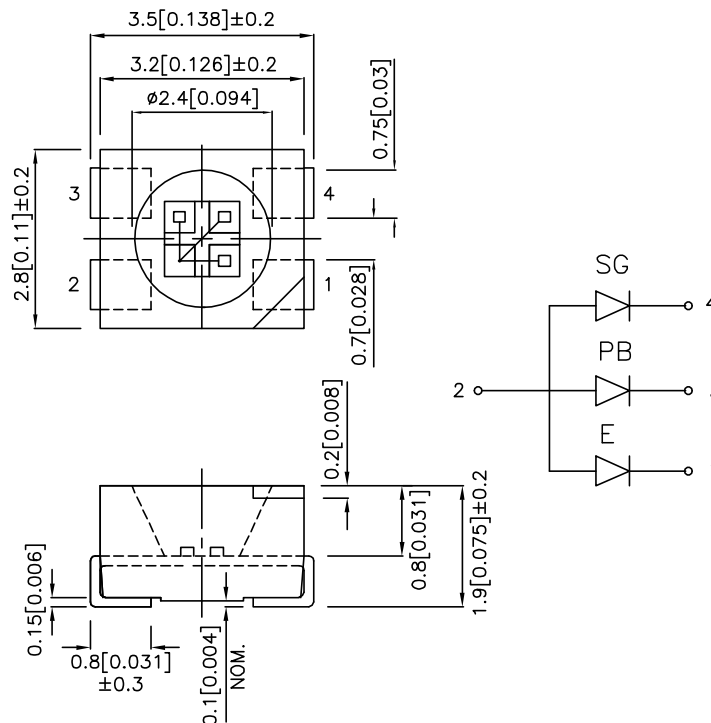
The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (0.01") unless otherwise noted.
3. Specifications are subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
KAA-3528EPBSGC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	10	30	120°
	BLUE (InGaN)		36	70	
	SUPER BRIGHT GREEN (GaP)		4	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 TA=25°C

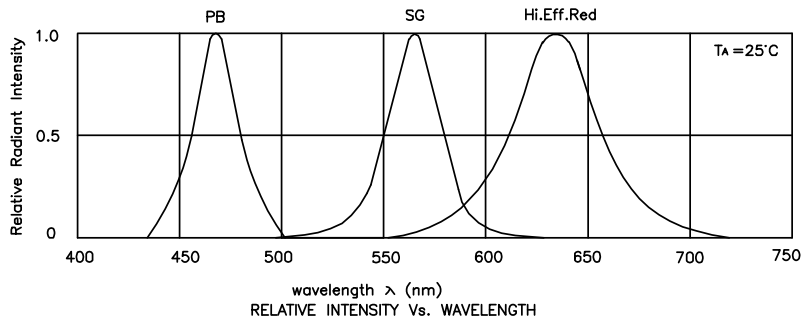
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red Blue Super Bright Green	627 468 565		nm	IF=20mA
λD	Dominant Wavelength	High Efficiency Red Blue Super Bright Green	625 470 568		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red Blue Super Bright Green	45 25 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Blue Super Bright Green	15 65 15		pF	VF=0V;f=1MHz
VF	Forward Voltage	High Efficiency Red Blue Super Bright Green	2.0 3.65 2.2	2.5 4.2 2.5	V	IF=20mA
IR	Reverse Current	All		10	uA	VR = 5V

Absolute Maximum Ratings at TA=25°C

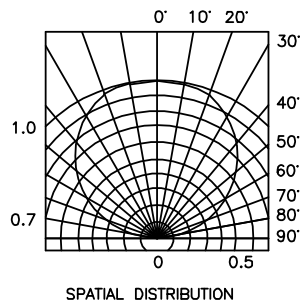
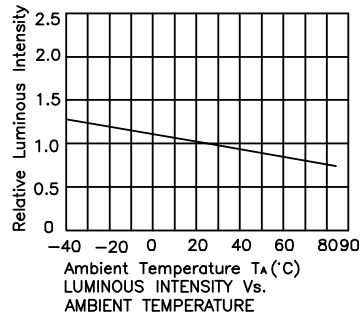
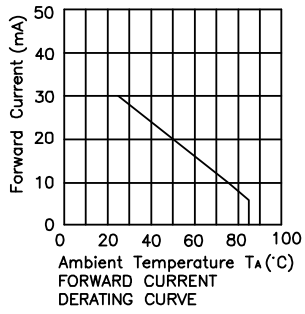
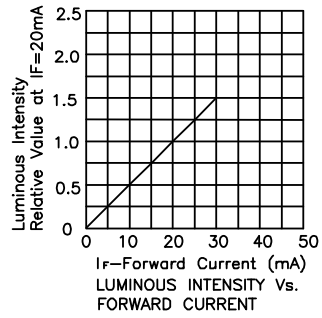
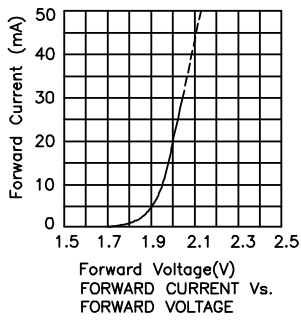
Parameter	High Efficiency Red	Blue	Super Bright Green	Units
Power dissipation	75	126	62.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	160	160	140	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			

Note:

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

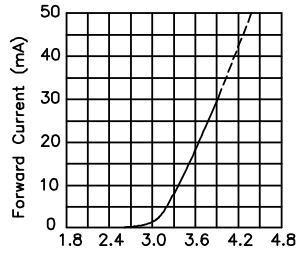


KAA-3528EPBSGC High Efficiency Red

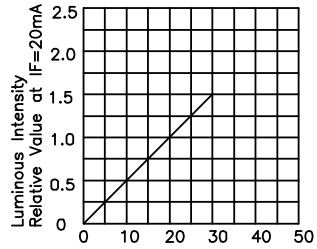


Kingbright

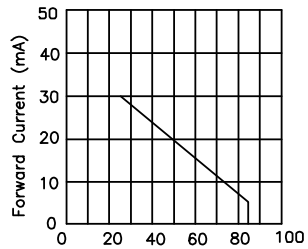
Blue



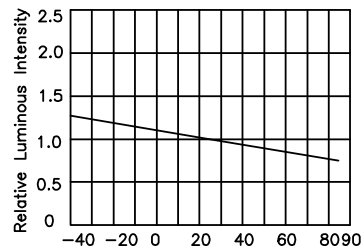
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



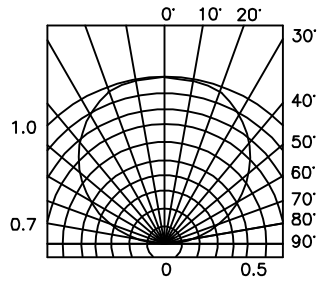
I_f —Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_a (°C)
FORWARD CURRENT
DERATING CURVE



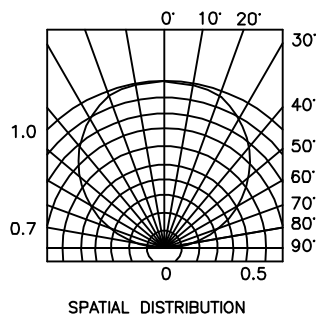
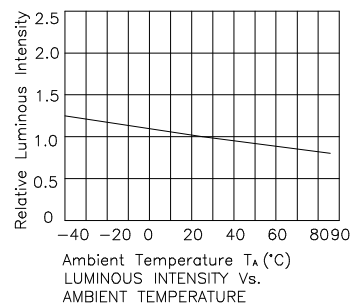
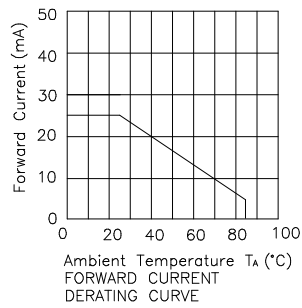
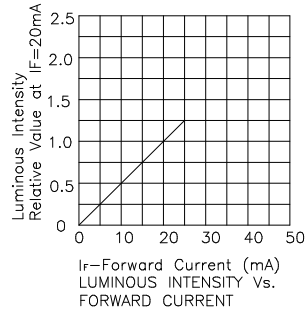
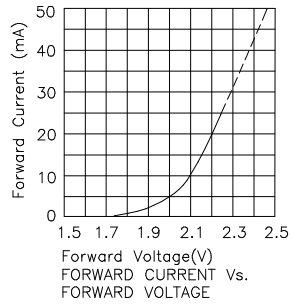
Ambient Temperature T_a (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

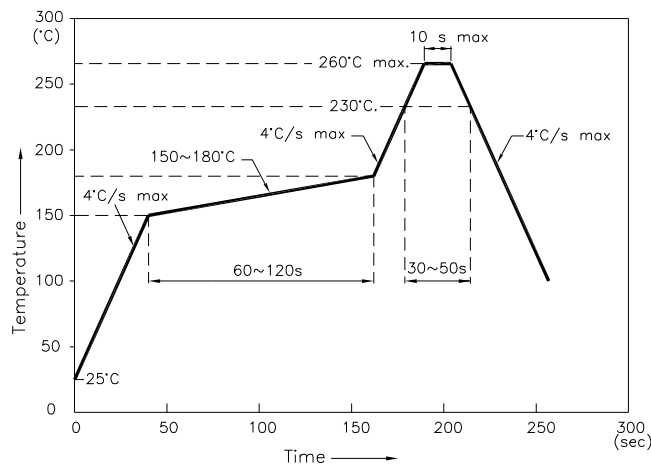
Kingbright

Super Bright Green



KAA-3528EPBSGC

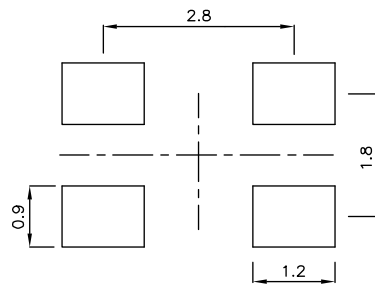
Reflow Soldering Profile For Lead-free SMT Process.



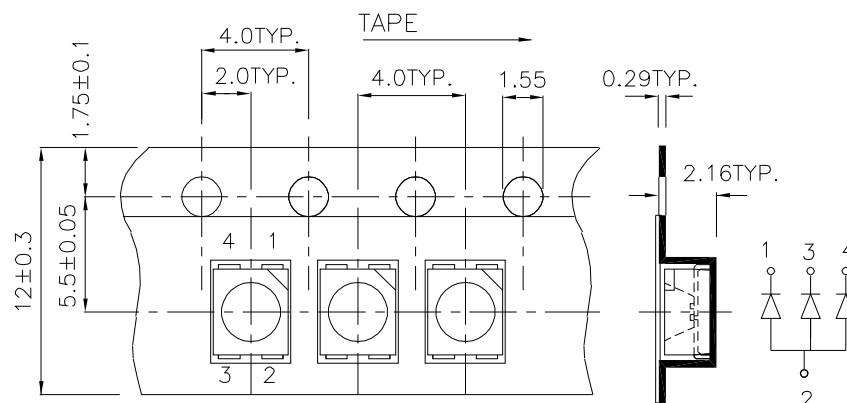
NOTES:

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

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: $\pm 1\text{nm}$
2. Luminous Intensity: $\pm 15\%$
3. Forward Voltage: $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.