

Part Number: KA-4040SRCGKS-R

Super Bright Red
Green

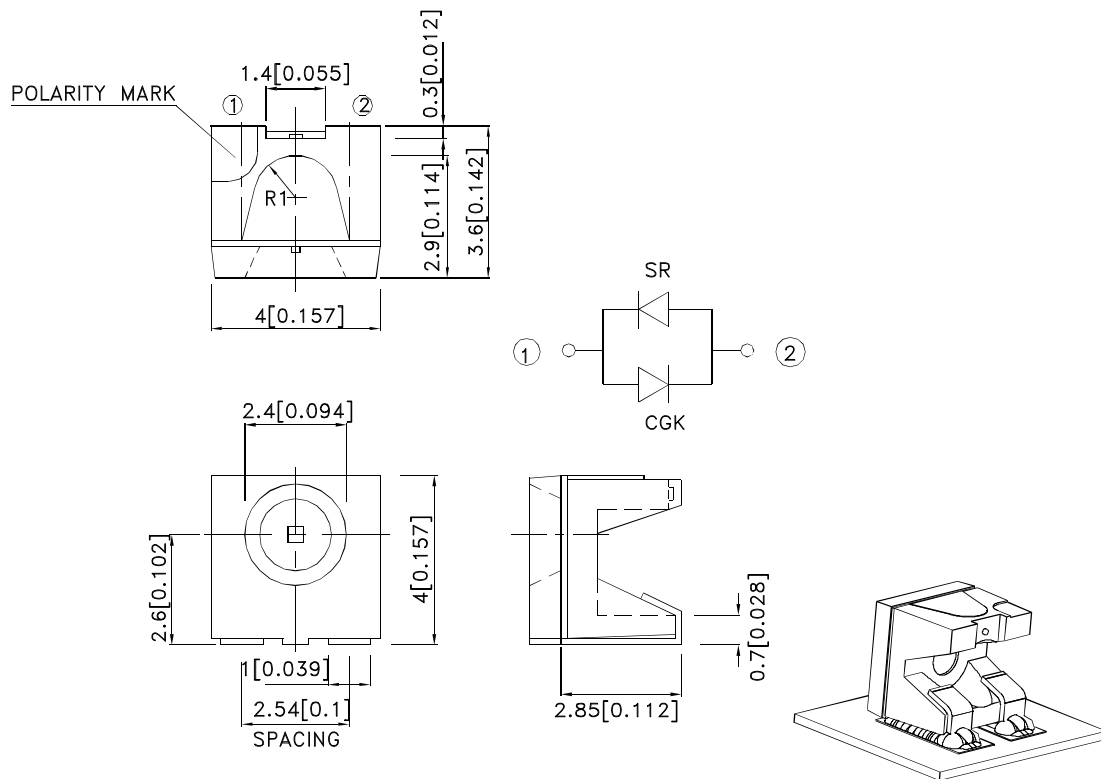
Features

- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Ideal for backlighting.
- Package : 500pcs / reel.
- Moisture sensitivity level : level 3.
- 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 AlGaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

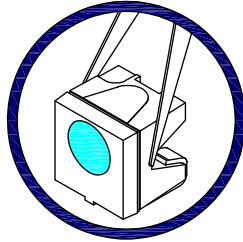


Handling Precautions

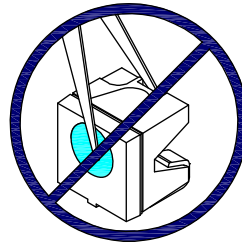
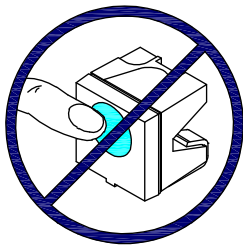
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. As silicone encapsulation is permeable to gases, some corrosive substances such as H₂S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

Detailed application notes are listed on our website.

http://www.kingbright.com/application_notes

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KA-4040SRCGKS-R	Super Bright Red (GaAlAs)	Water Clear	80	200	120°
			*20	*60	
	Green (AlGaInP)		40	90	
			*40	*90	

Notes:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

2. Luminous intensity/ luminous Flux: +/-15%.

* Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Super Bright Red Green	655 574		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Super Bright Red Green	640 570		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Super Bright Red Green	20 20		nm	I _F =20mA
C	Capacitance	Super Bright Red Green	45 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Super Bright Red Green	1.85 2.1	2.5 2.5	V	I _F =20mA

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

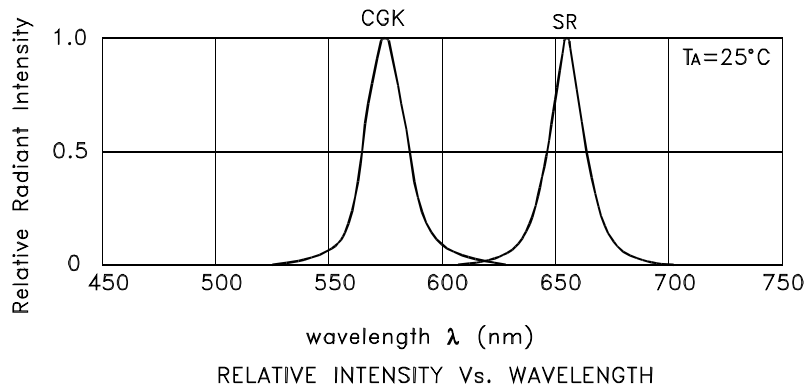
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

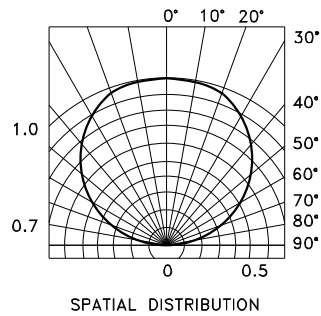
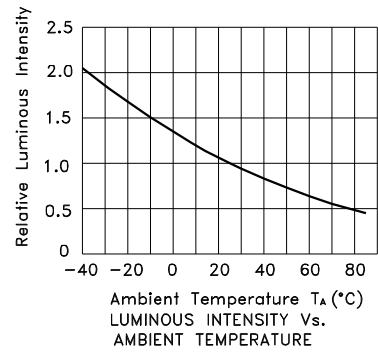
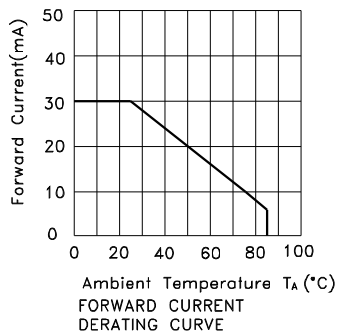
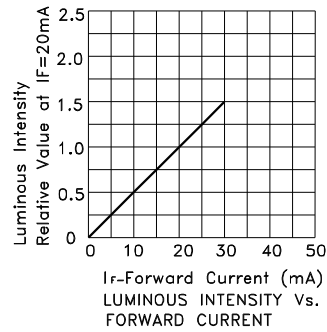
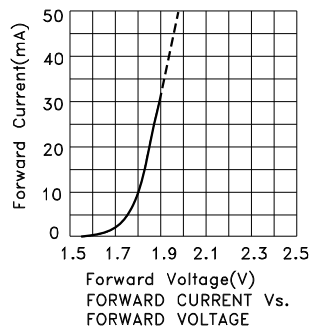
Parameter	Super Bright Red	Green	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	155	150	mA
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

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

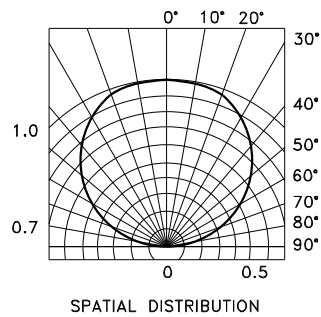
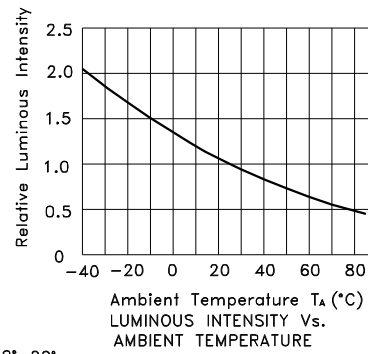
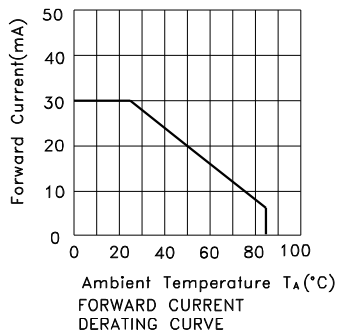
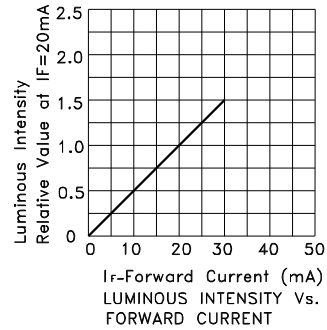
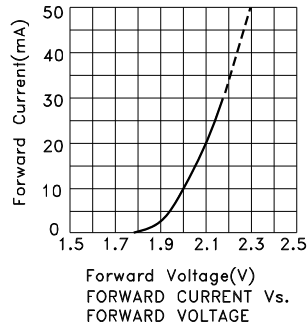


KA-4040SRCGKS-R Super Bright Red



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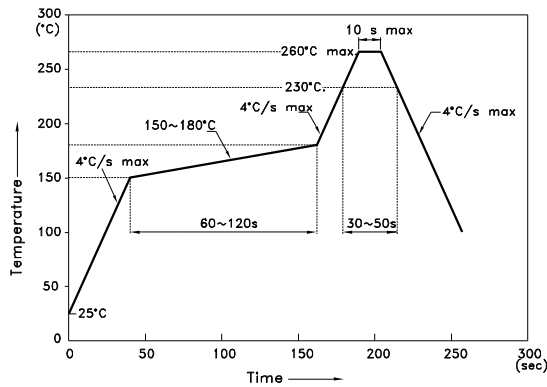
Green



KA-4040SRCGKS-R

Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

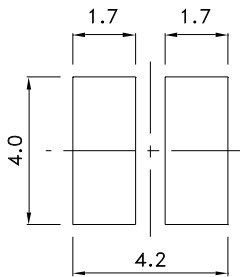
Reflow Soldering Profile For Lead-free SMT Process.



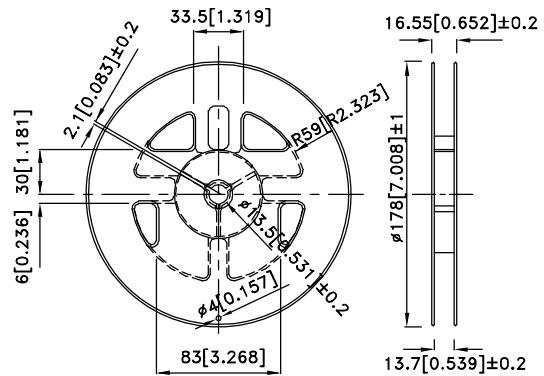
NOTES:

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.

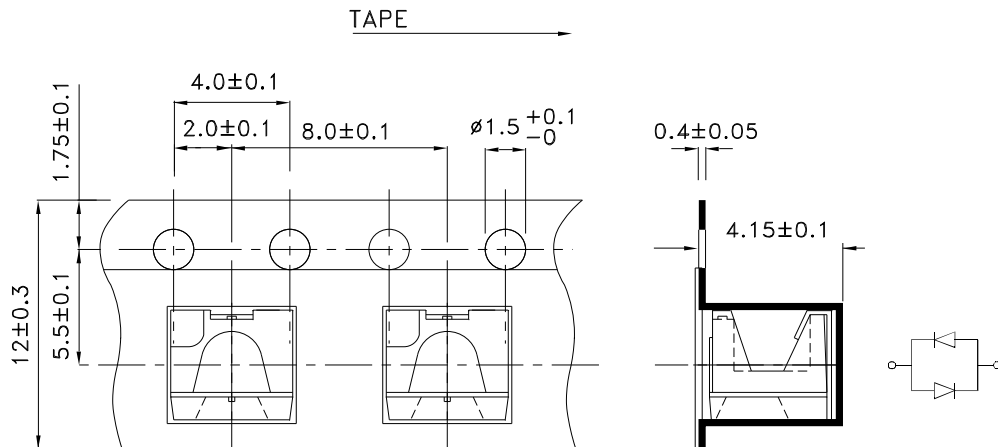
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



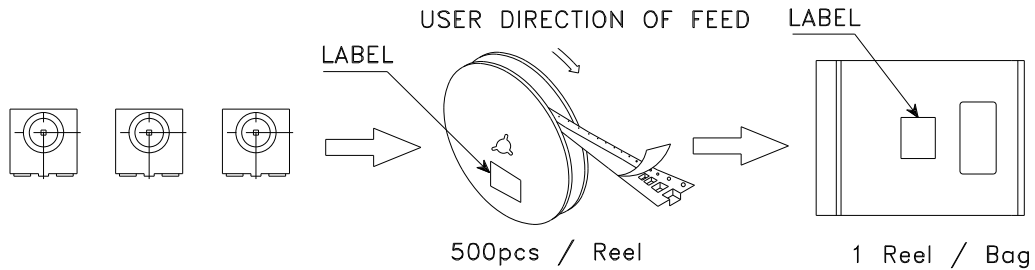
Tape Dimensions (Units : mm)



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PACKING & LABEL SPECIFICATIONS

KA-4040SRCGKS-R



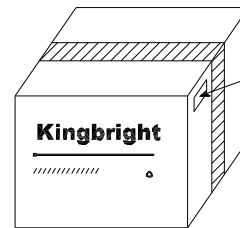
500pcs / Reel

1 Reel / Bag




10K / 56# BOX

OUTSIDE LABEL



5K / 55# Box

OUTSIDE LABEL

<h1>Kingbright</h1>	
P/NO: KA-4040xxx	
QTY: 500 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 <small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small>	
RoHS Compliant	

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