

Part Number: KAA-3528SURKCGKC

Hyper Red  
Green

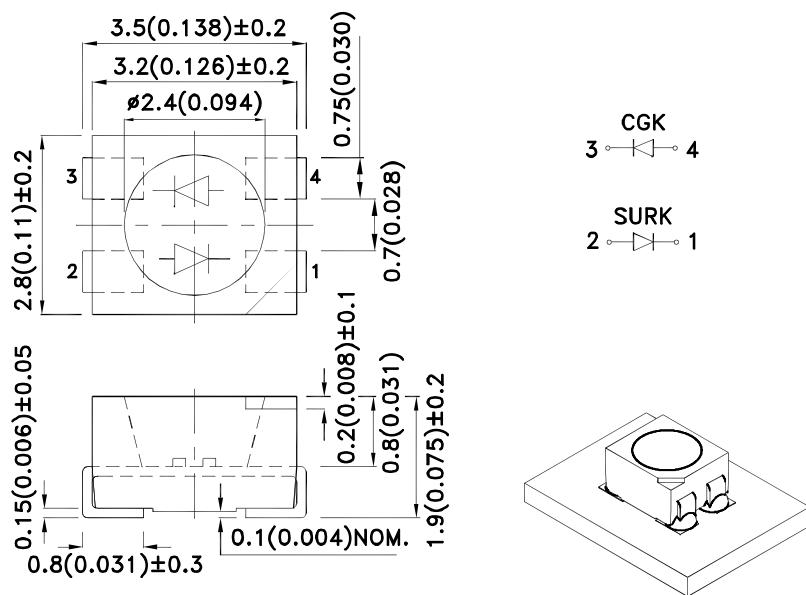
### Features

- Both chips can be controlled separately.
- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with Al-GaInP on GaAs substrate 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 ±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.



# Kingbright

## Selection Guide

Part No.	Dice	Lens Type	I <sub>v</sub> (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	
KAA-3528SURKCGKC	Hyper Red (AlGaInP)	Water Clear	200	320	120°
			*55	*100	
	Green (AlGaInP)		40	80	
			*40	*80	

Notes:

1. θ1/2 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
λpeak	Peak Wavelength	Hyper Red Green	645 574		nm	I <sub>f</sub> =20mA
λD [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	I <sub>f</sub> =20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green	28 20		nm	I <sub>f</sub> =20mA
C	Capacitance	Hyper Red Green	35 15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red Green	1.95 2.1	2.5 2.5	V	I <sub>f</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Red Green		10 10	uA	V <sub>R</sub> = 5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

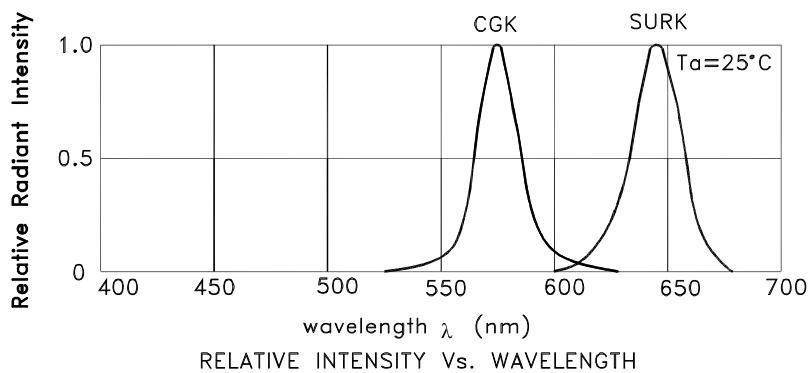
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

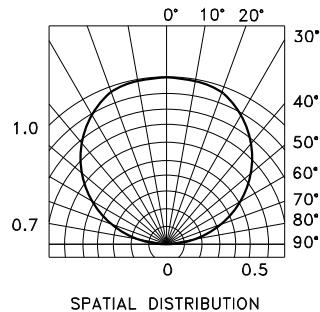
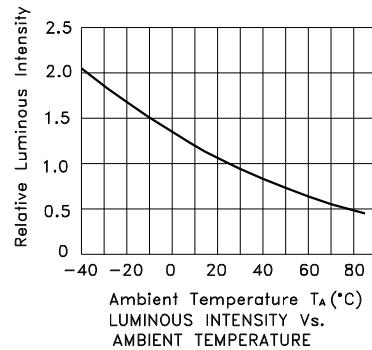
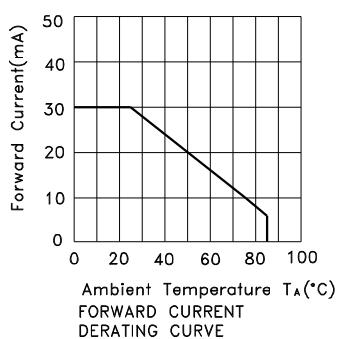
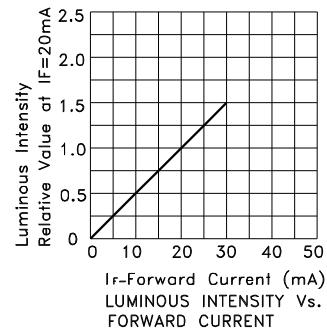
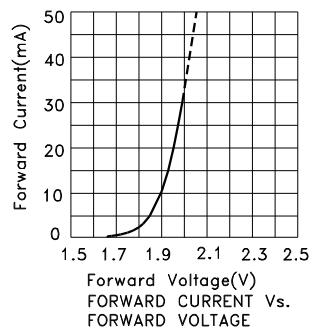
Parameter	Hyper Red	Green	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	185	150	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

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

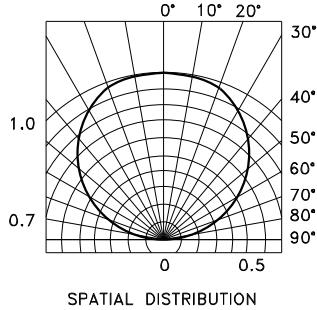
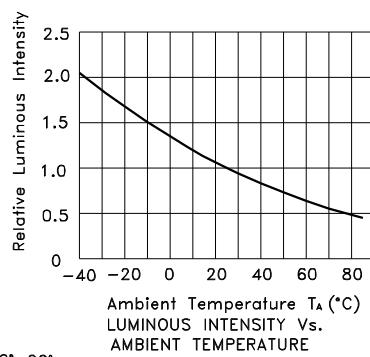
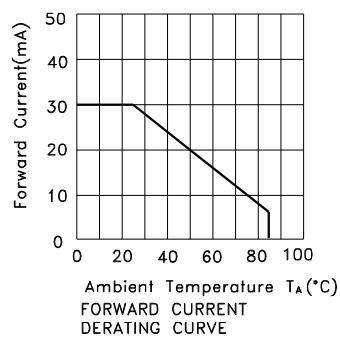
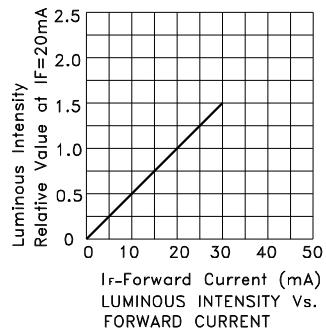
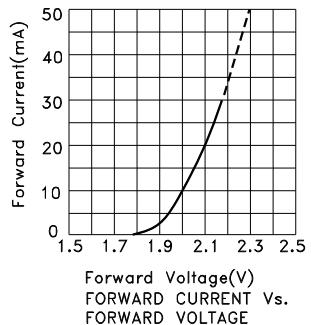


**KAA-3528SURKCGKC**  
Hyper Red



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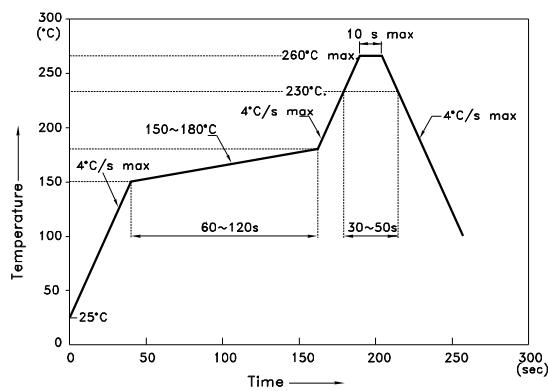
Green



## KAA-3528SURKCGKC

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.

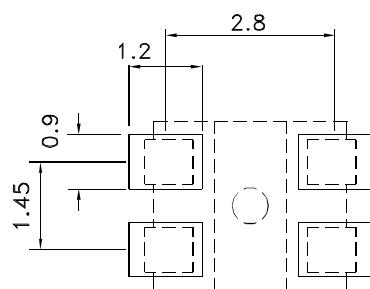
Reflow Soldering Profile For Lead-free SMT Process.



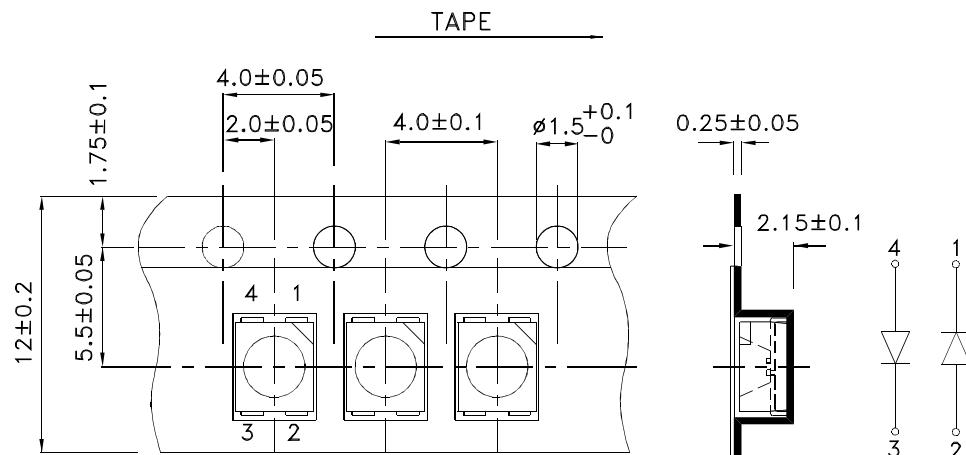
NOTES:

1. We recommend the reflow temperature  $245^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ ). The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
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.

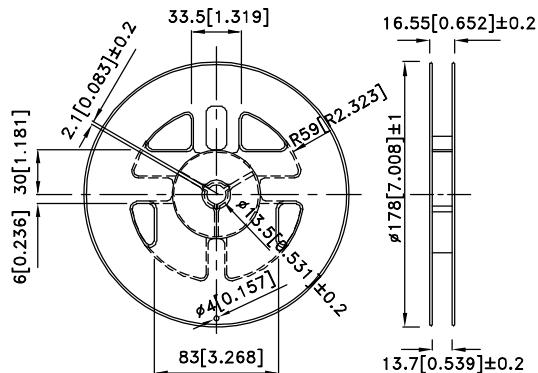
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Tape Dimensions (Units : mm)

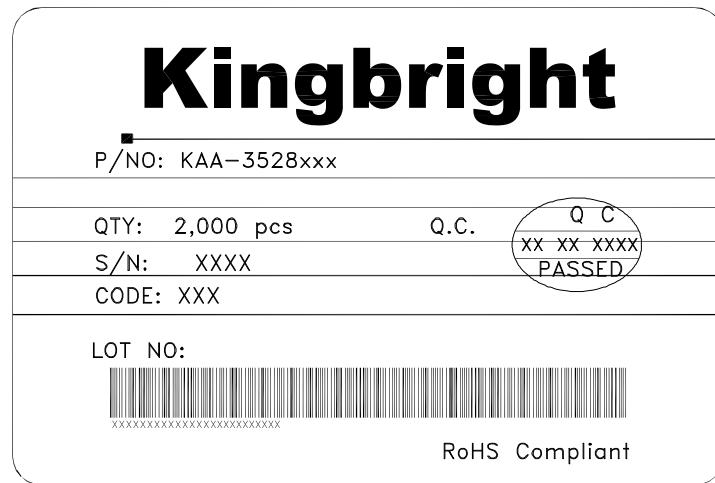
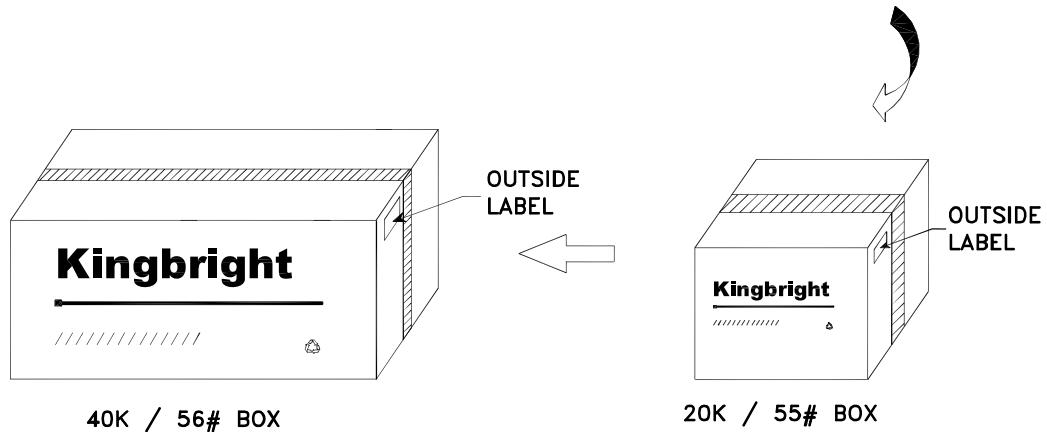
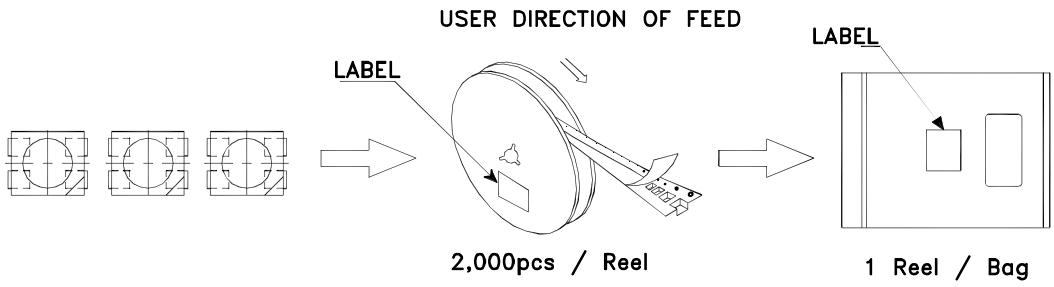


### Reel Dimension



## PACKING & LABEL SPECIFICATIONS

KAA-3528SURKCGKC



Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)