

Part Number: KP-23SURKCGKC

Hyper Red
Green

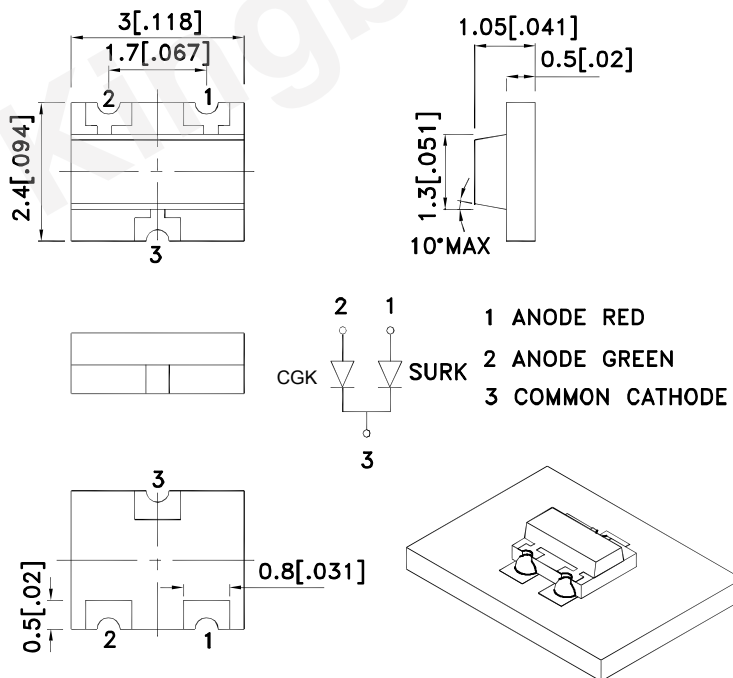
Features

- 3mmx2.4mm SMT LED, 1.05mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Hyper Red source color devices are made with Al-GaN 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 $\pm 0.2(0.008)$ 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.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KP-23SURKCGKC	Hyper Red (AlGaInP)	Water Clear	120	300	120°
			*40	*80	
	Green (AlGaInP)		40	70	
			*40	*70	

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	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green	28 20		nm	IF=20mA
C	Capacitance	Hyper Red Green	35 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Green	1.95 2.1	2.5 2.5	V	IF=20mA
IR	Reverse Current	Hyper Red Green		10 10	uA	VR = 5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

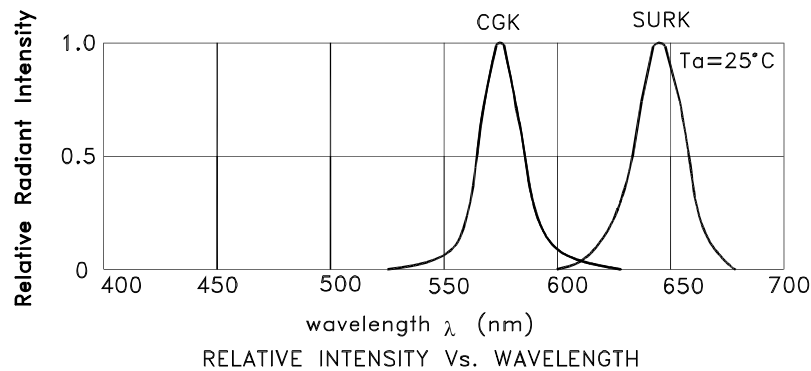
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

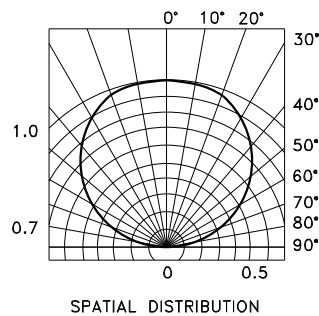
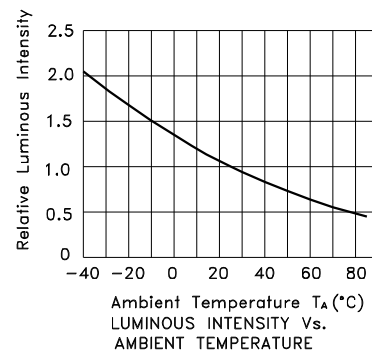
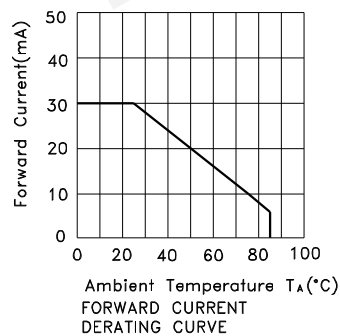
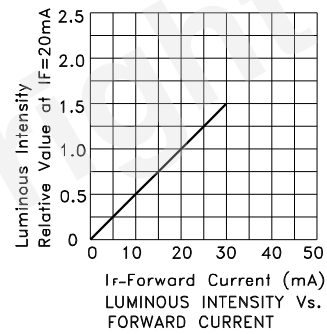
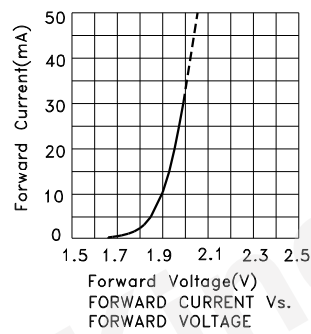
Parameter	Hyper Red	Green	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	185	150	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

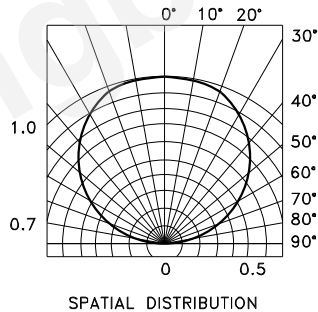
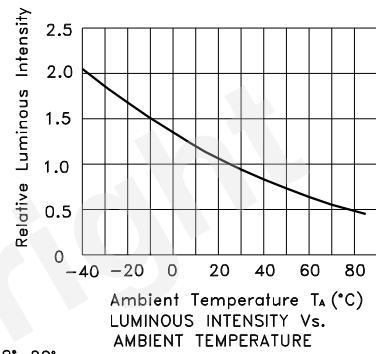
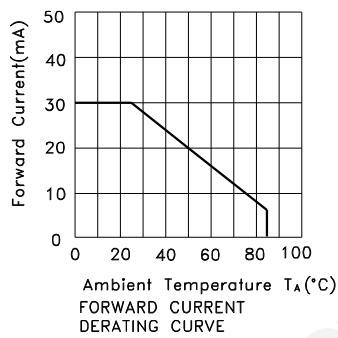
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



KP-23SURKCGKC
Hyper Red



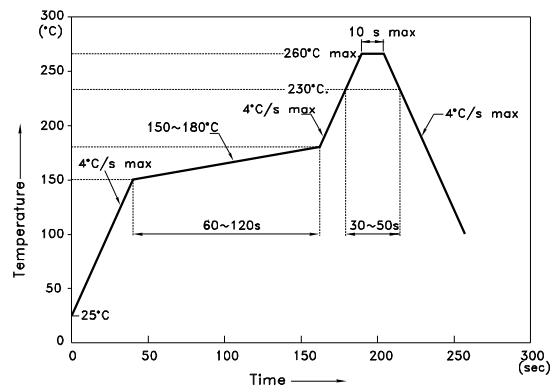
Green



KP-23SURKCGKC

**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.**

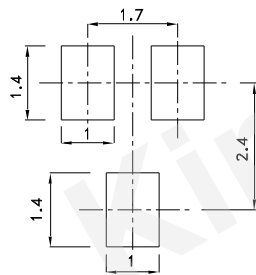
Reflow Soldering Profile For Lead-free SMT Process.



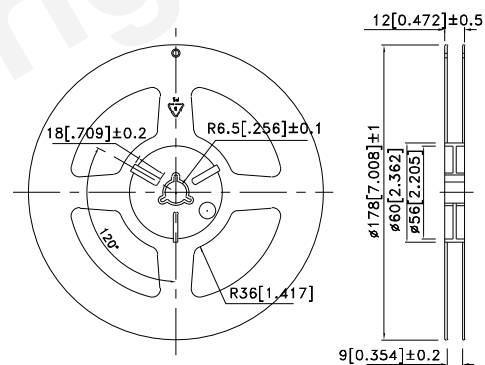
NOTES:

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.

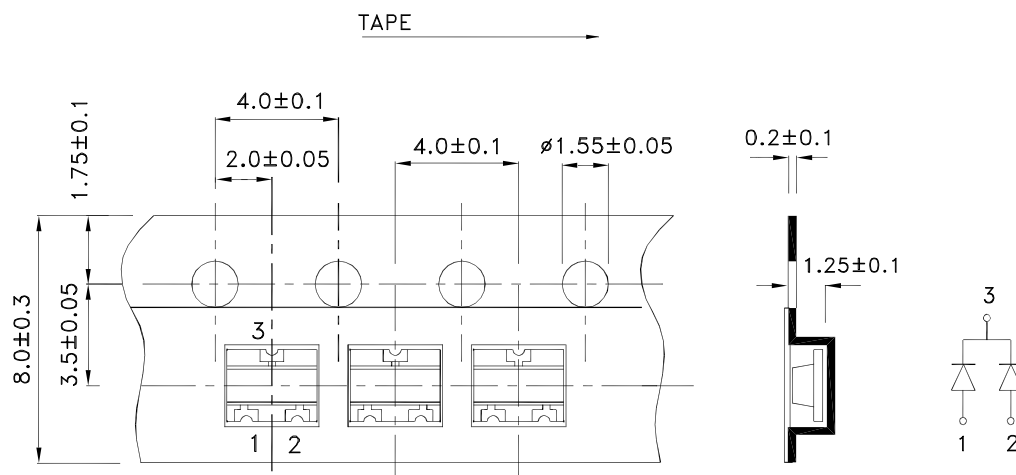
Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.1)



Reel Dimension

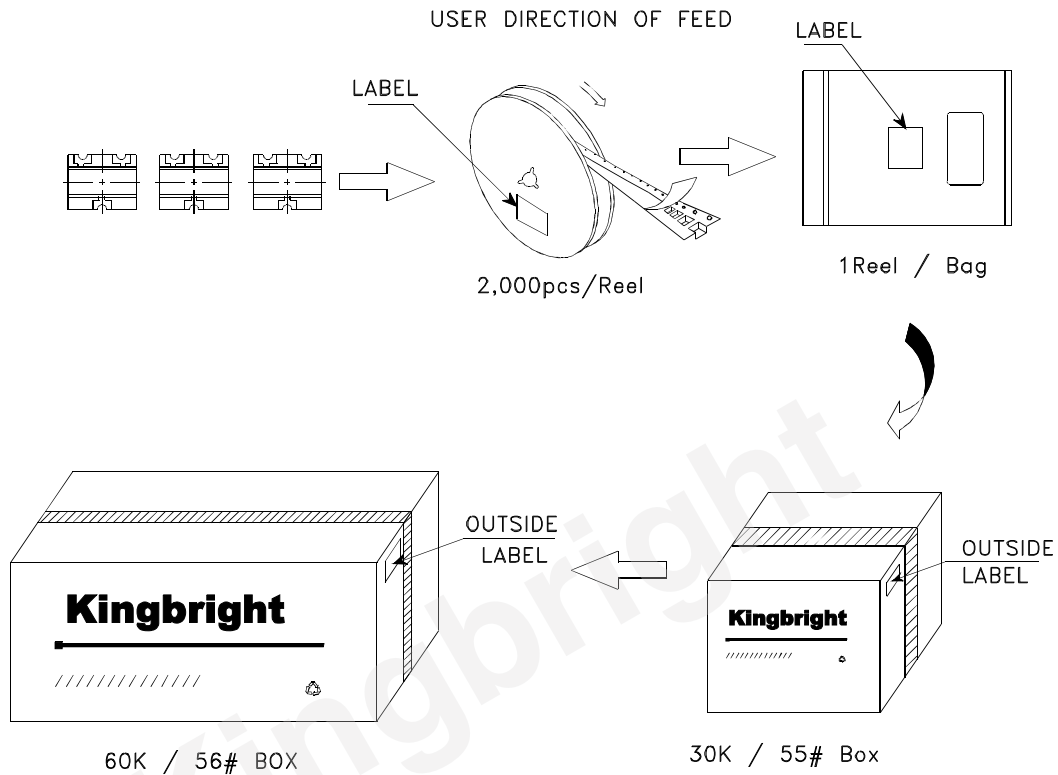



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KP-23SURKCGKC



Kingbright	
P/N0: KP-23xxx	
QTY: 2,000 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes