

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: AAA3528SURKQBKCGKC09

HYPER RED
BLUE / GREEN

Features

- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE: 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.

Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

The Blue source color devices are made with AlInGaN on Sapphire Light Emitting Diode.

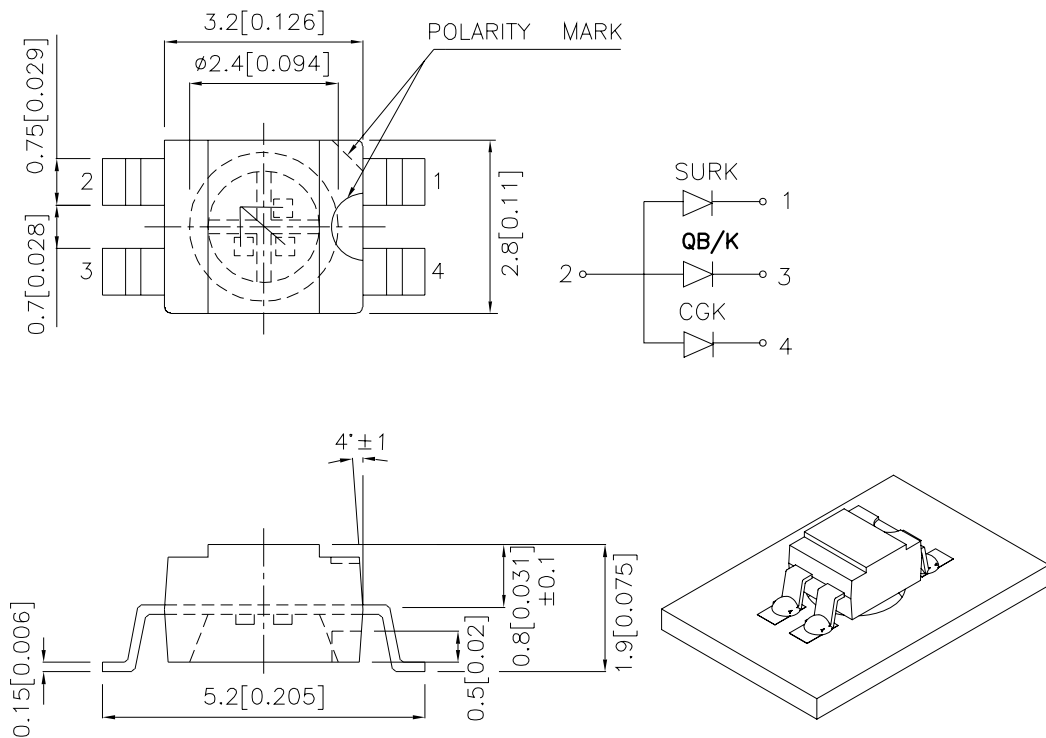
The Green source color devices are made with InGaAlP on GaAs substrate Light Emitting Diode.

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 $\pm 0.2(0.008)$ unless otherwise noted.
3. Specifications are subject to change without 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
AAA3528SURKQBKCGKC09	HYPER RED (InGaAlP)	WATER CLEAR	70	200	120°
	BLUE (AlInGaN)		50	90	
	GREEN (InGaAlP)		18	80	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous Intensity / Luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Hyper Red Blue Green	650 468 574		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Hyper Red Blue Green	635 470 570		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Hyper Red Blue Green	28 25 20		nm	I _F =20mA
C	Capacitance	Hyper Red Blue Green	35 100 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Hyper Red Blue Green	1.95 3.3 2.1	2.5 4.0 2.5	V	I _F =20mA
I _R	Reverse Current	Hyper Red Blue Green		10 10 10	uA	V _R = 5V

Notes:

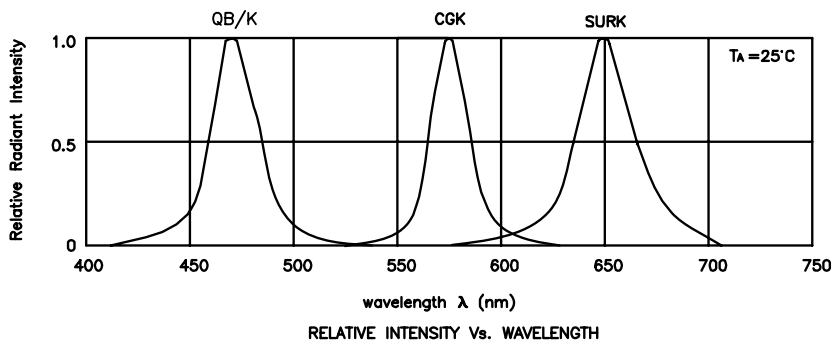
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

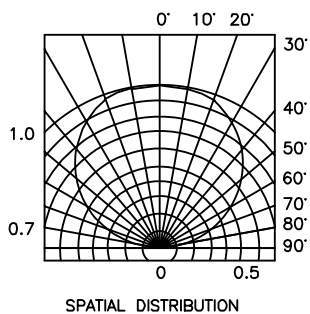
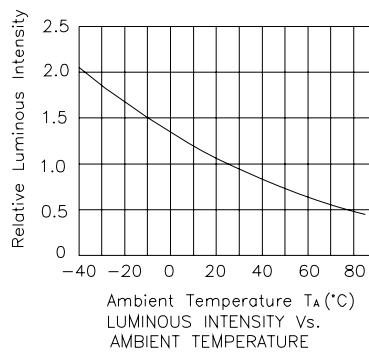
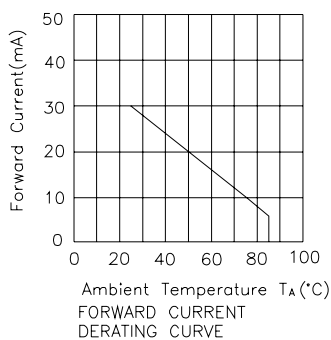
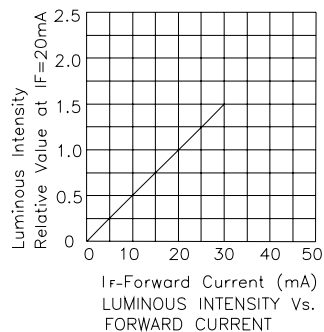
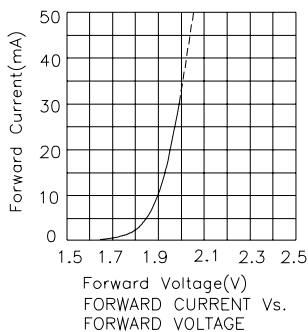
Parameter	Hyper Red	Blue	Green	Units
Power dissipation	75	120	75	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	185	150	150	mA
Reverse Voltage	5			V
Operating / Storage Temperature	-40°C To +85°C			

Note:

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

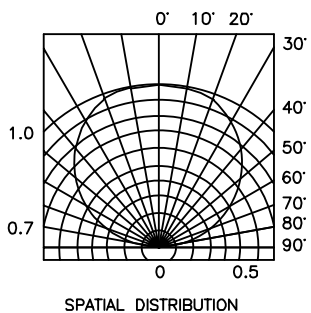
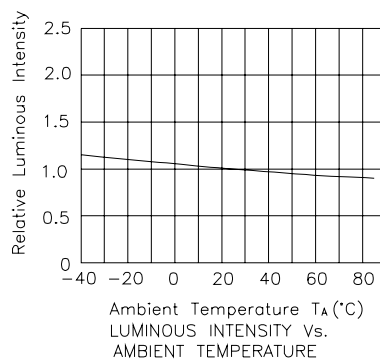
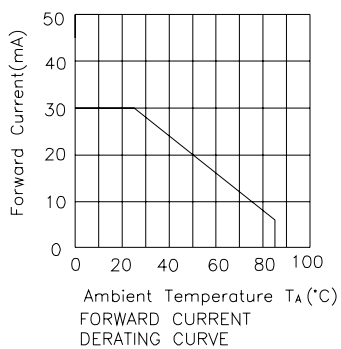
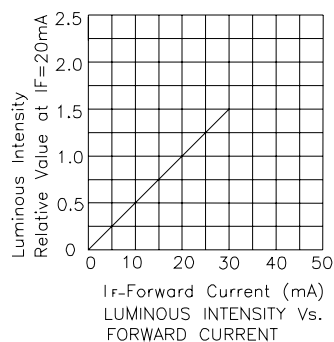
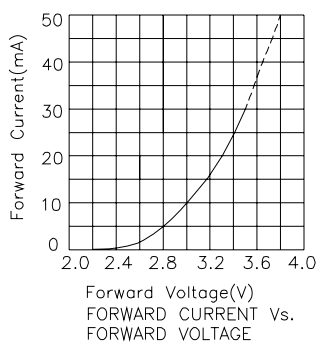


AAA3528SURKQBKCGKC09 Hyper Red



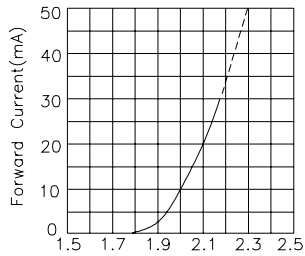
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Blue

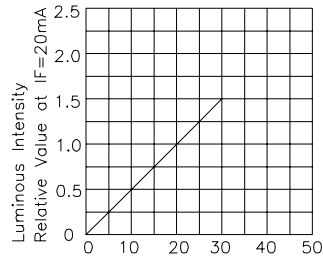


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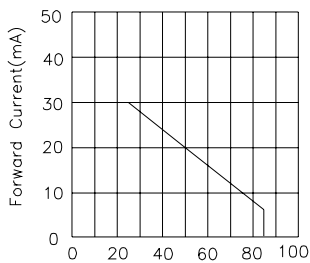
Green



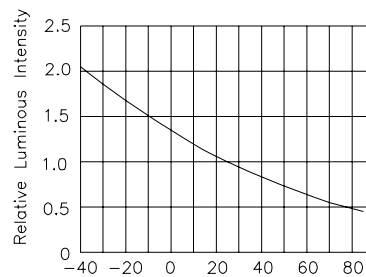
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



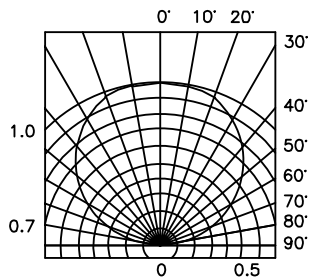
IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



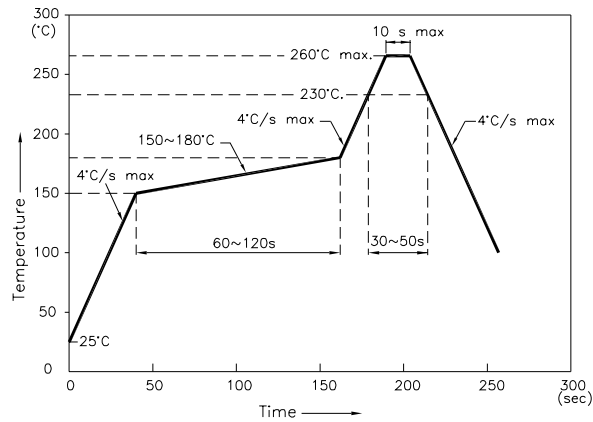
Ambient Temperature T_A (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

AAA3528SURKQBKCGKC09

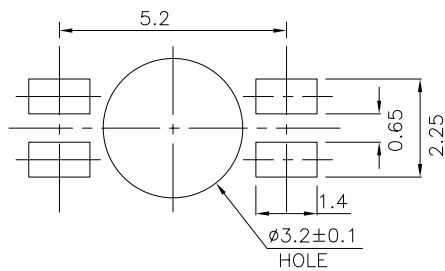
Reflow Soldering Profile For Lead-free SMT Process.



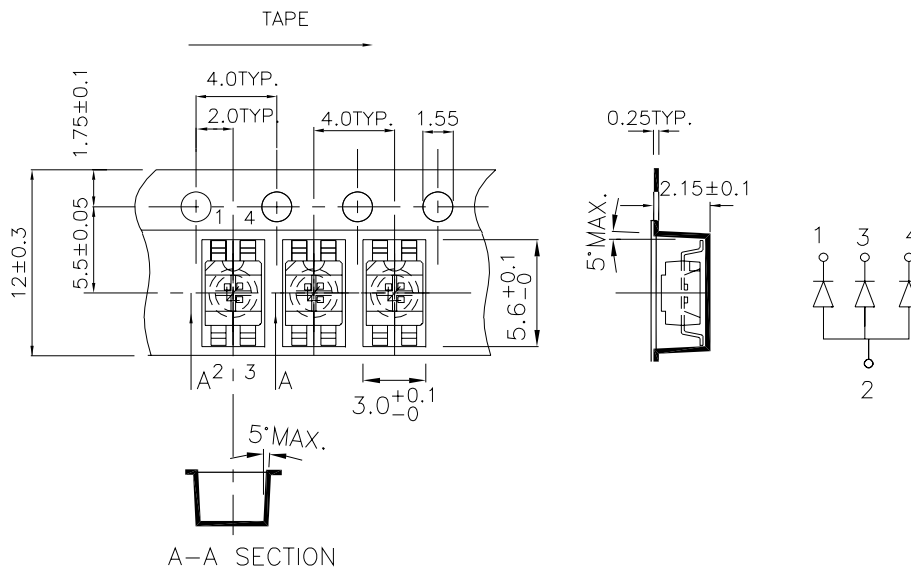
NOTES:

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)



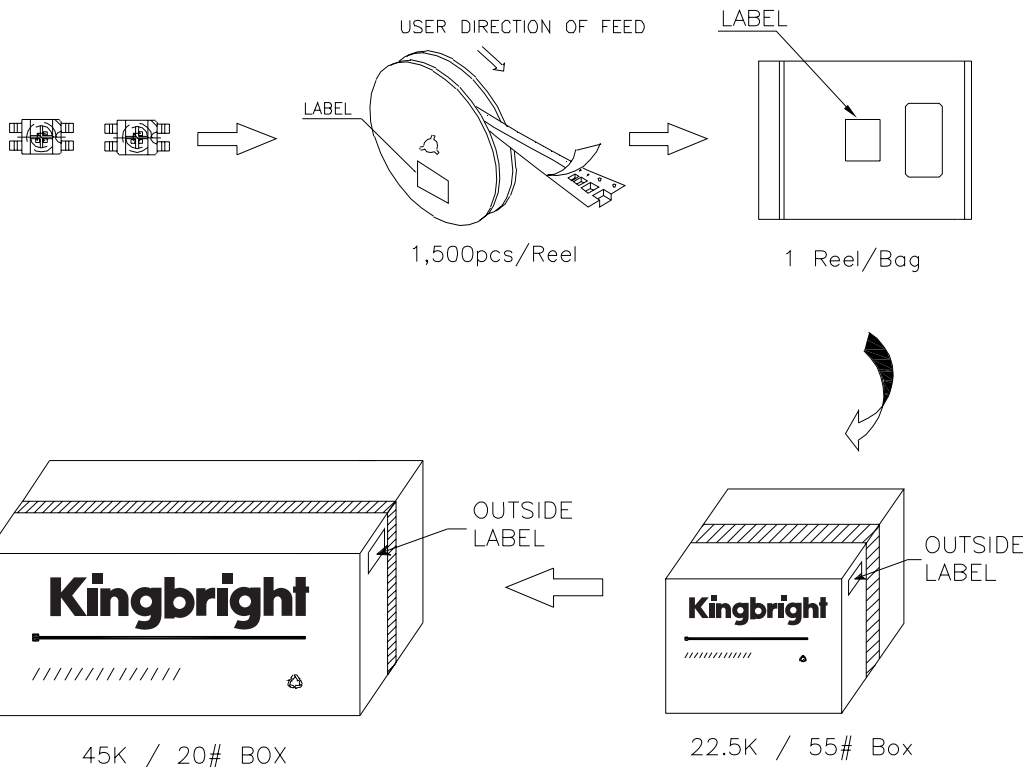
Tape Specifications (Units : mm)



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PACKING & LABEL SPECIFICATIONS

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Q.C.	<table border="1"> <tr> <td style="text-align: center;">QC</td> </tr> <tr> <td style="text-align: center;">xx xx xxxx</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table>	QC	xx xx xxxx	PASSED
QC				
xx xx xxxx				
PASSED				
TYPE NO :AAA3528XXX09				
QUANTITY : 1,500 pcs				
S/N : XXX	CODE: XXX			
LOT NO: 				
MADE IN CHINA	RoHS Compliant			