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[Kingbright](#)
[APBVDA3020SURKCGKC](#)

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3.0x2.0mm RIGHT ANGLE SMD LED

Part Number: APBVDA3020SURKCGKC

Hyper Red
Green

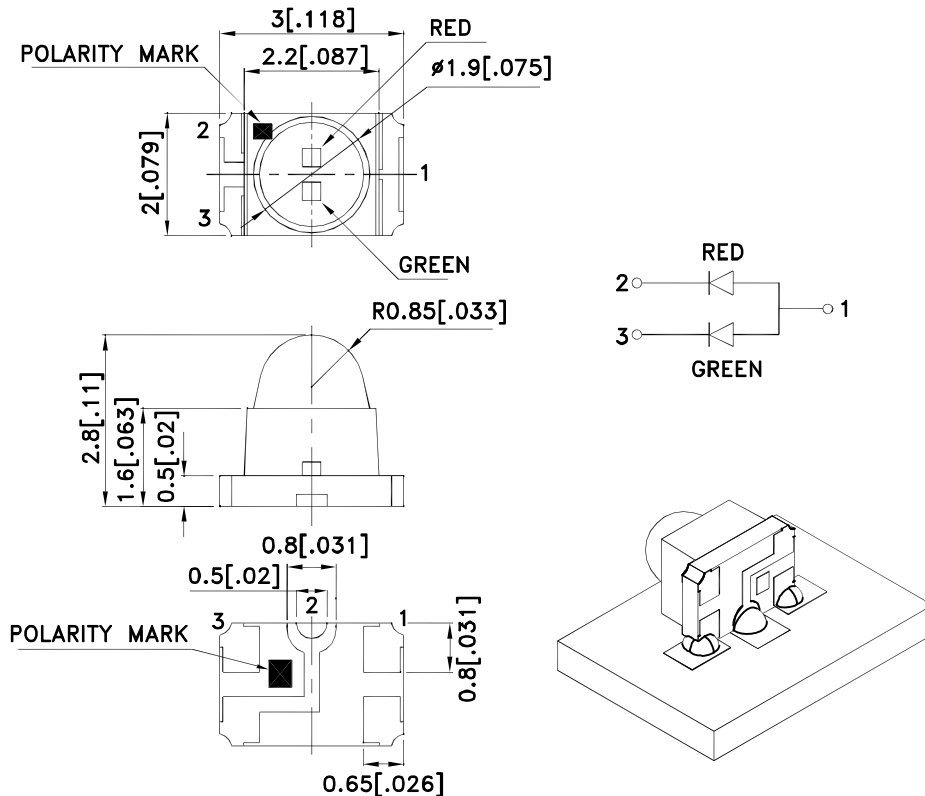
Features

- 3.0mmx2.0mm SMT LED, 2.8mm thickness.
- Low power consumption.
- Various colors and lens types available.
- Ideal for back light and indicator
- Package : 2000pcs / reel.
- When soldered in the sideview configuration, the maximum shear tolerance of the epoxy lens is 300g.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Hyper Red source color devices are made with AlGaInP 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 ± 0.2 (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.



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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APBVDA3020SURKCGKC	Hyper Red (AlGaInP)	WATER CLEAR	650	900	15°
	Green (AlGaInP)		180	320	

Notes:

- θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
- 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 Green	650 574		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Hyper Red Green	28 20		nm	I _F =20mA
C	Capacitance	Hyper Red Green	35 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Hyper Red Green	1.95 2.1	2.5 2.5	V	I _F =20mA
I _R	Reverse Current	Hyper Red Green		10 10	uA	V _R = 5V

Notes:

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

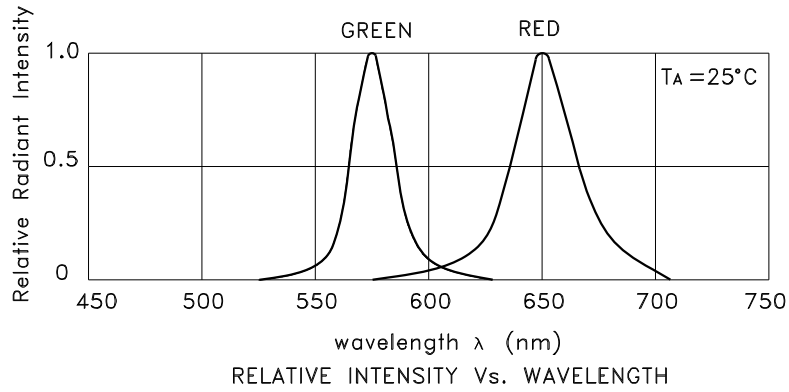
Absolute Maximum Ratings at TA=25°C

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		

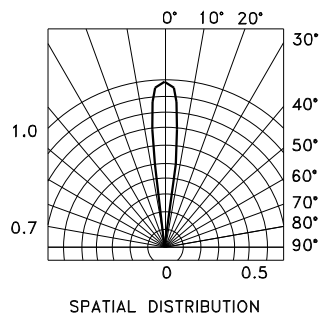
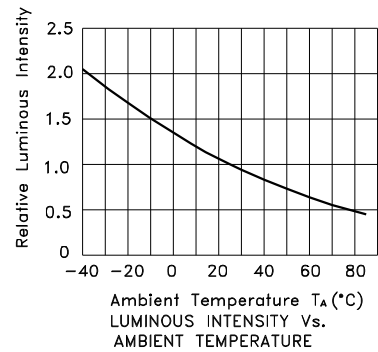
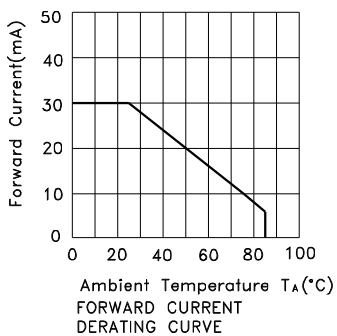
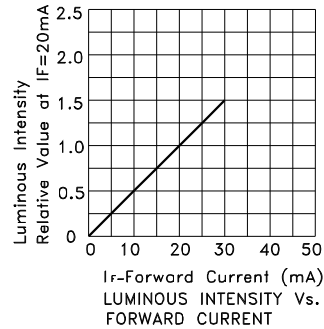
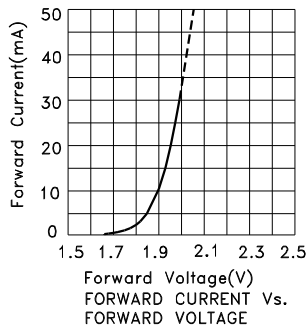
Note:

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

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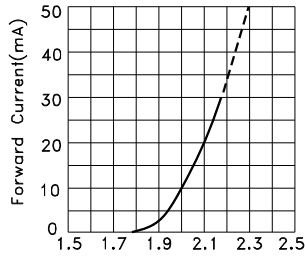


APBVDA3020SURKCGKC Hyper Red

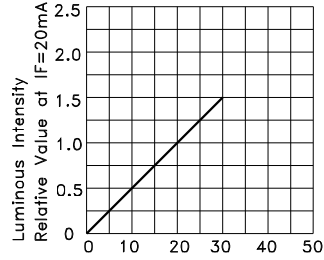


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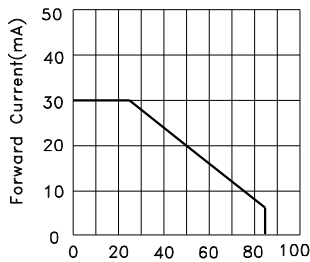
Green



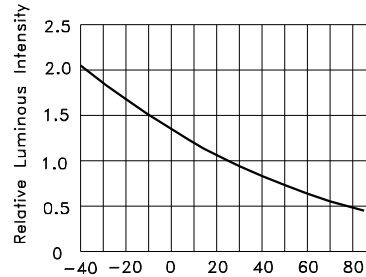
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



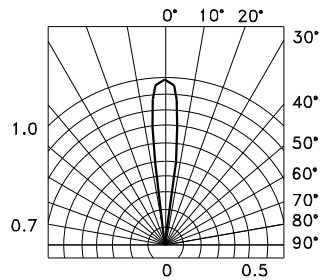
IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



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



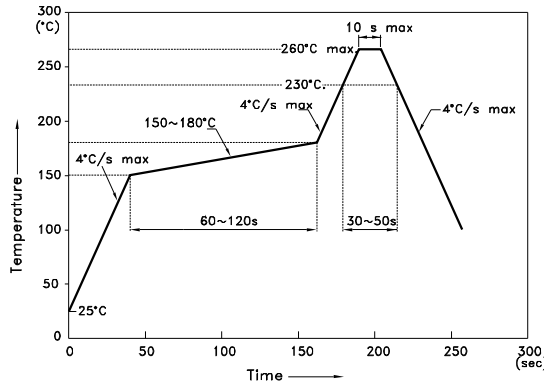
SPATIAL DISTRIBUTION

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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.

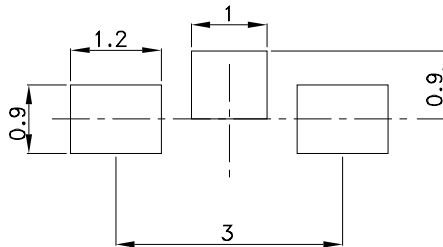
Reflow Soldering Profile For Lead-free SMT Process.



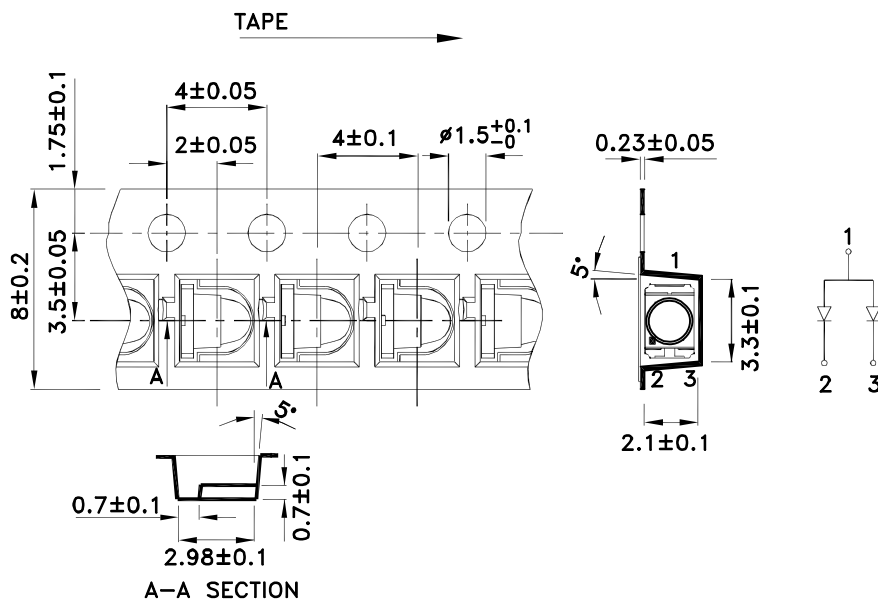
NOTES:

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)



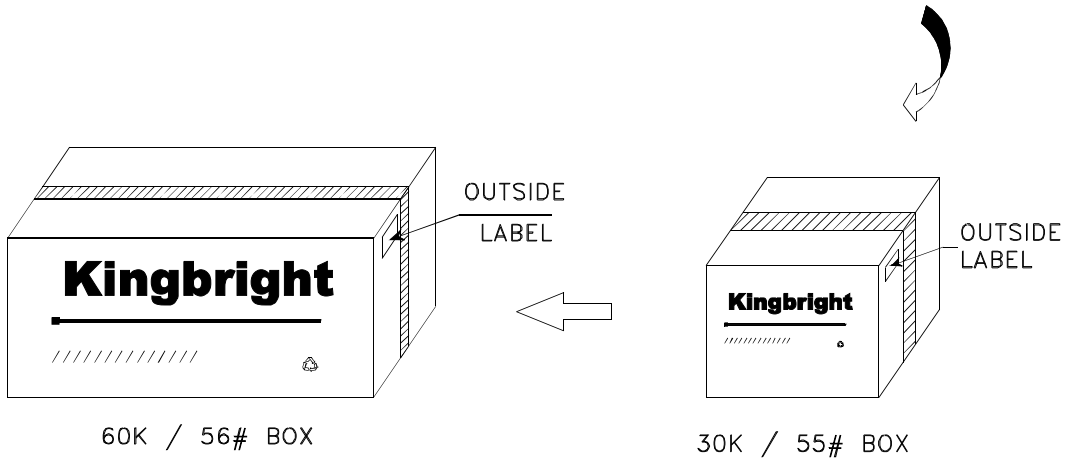
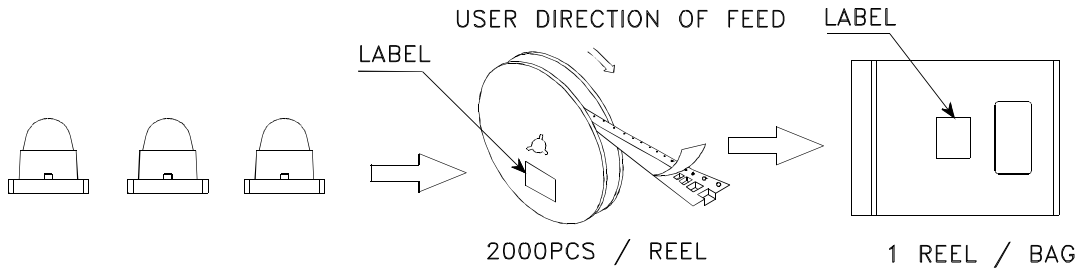
Tape Dimensions (Units : mm)



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PACKING & LABEL SPECIFICATIONS

APBVDA3020SURKCGKC



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P/NO: APBVDA3020xxx

QTY: 2000 pcs	Q.C.
S/N: XXXX	<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> Q C xx xx xxxx PASSED </div>
CODE: XXX	

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant