

### 5.0mm x 6.0mm BI-COLOR SURFACE MOUNT LED LAMP



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE

**DEVICES** 

AAA5060SUREVGEC

HYPER RED/GREEN

#### **Features**

- •CHIPS CAN BE CONTROLLED SEPARATELY.
- •SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- •AVAILABLE ON TAPE AND REEL.
- •PACKAGE: 500PCS / REEL.
- •RoHS COMPLIANT.

#### **Description**

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

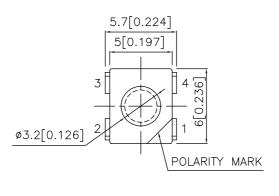
The Green source color devices are made with InGaN on SiC Light Emitting Diode.

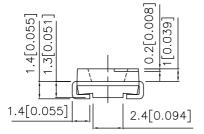
Static electricity and surge damage the LEDS.

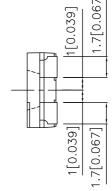
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

### **Package Dimensions**







#### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.25 (0.01")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

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#### **Selection Guide**

	Part No.	Dice	Lens Type	lv (mcd) @50mA*30 mA		Viewing Angle
				Min.	Тур.	2 θ 1/2
		HYPER RED (InGaAIP)	WATER CLEAR	380	700	100°
AAA	5060SUREVGEC	GREEN (InGaN)	WATER CLEAR	*280	*600	

- 1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value. 2. \* Luminous intensity with asterisk is measured at 30mA.

#### Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green	640 518		nm	IF=20mA
λD	Dominant Wavelength	Hyper Red Green	630 525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green	25 36		nm	IF=20mA
С	Capacitance	Hyper Red Green	45 50		pF	VF=0V;f=1MHz
VF	Forward Voltage	Hyper Red Green	1.9 3.5	2.5 4.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	V <sub>R</sub> = 5V

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Hyper Red	Green	Units	
Power dissipation	125	135	mW	
DC Forward Current	50	30	mA	
Peak Forward Current [1]	200	150	mA	
Reverse Voltage	5	5	V	
Operating / Storage Temperature	-40°C To +85°C			

#### Note:

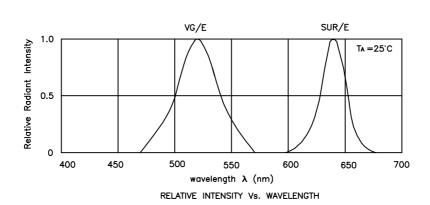
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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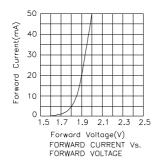
**REV NO: V.5 CHECKED: Allen Liu** 

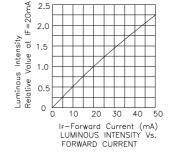
DATE: MAR/14/005 DRAWN: B.H.LI

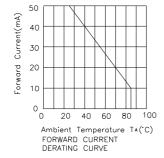
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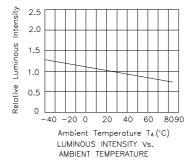


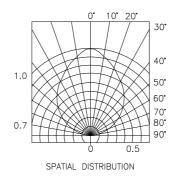
### AAA5060SUREVGEC Hyper Red





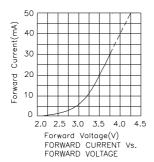


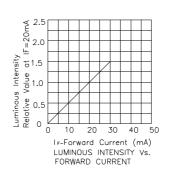


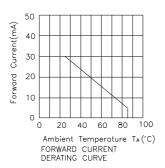


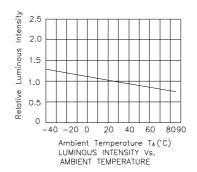
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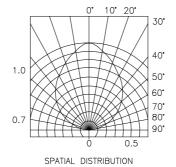
#### Green







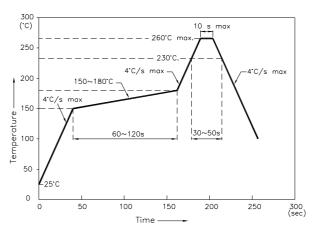




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#### **AAA5060SUREVGEC**

Reflow Soldering Profile For Lead-free SMT Process.

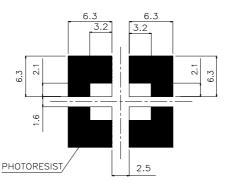


NOTES:

- 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.

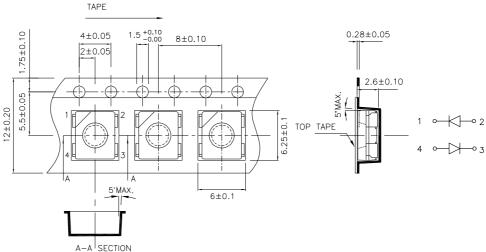
#### **Recommended Soldering Pattern**

(Units: mm)



### **Tape Specifications**

(Units: mm)



If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

- 1. Wavelength: +/-1nm
- 2. Luminous Intensity: +/-15%
- 3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

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