



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

Part Number: AAAF5060QBFSURZGS

Blue  
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.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

The Blue source color devices are made with InGaN Light Emitting Diode.

The Hyper Red source color devices are made with Al-GaN on GaAs substrate Light Emitting Diode.

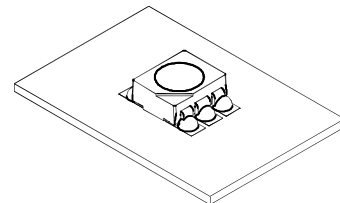
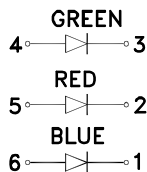
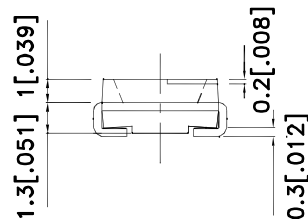
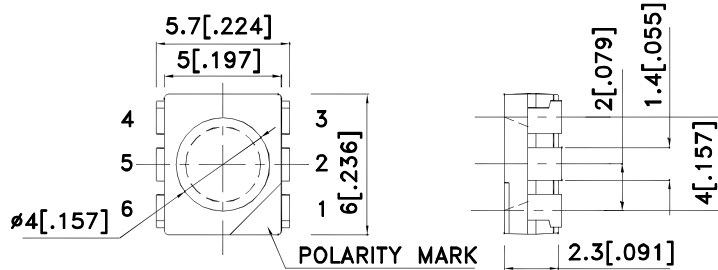
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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. 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.

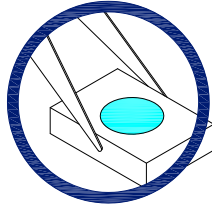


## Handling Precautions

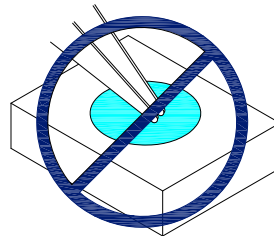
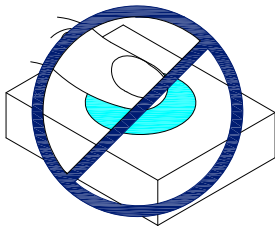
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

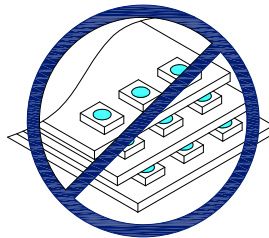
1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



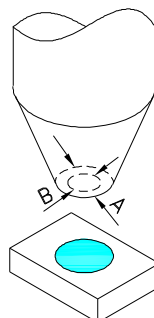
3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.

5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 30mA *50mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
AAAF5060QBFSURZGS	Blue (InGaN)	Water Clear	280	400	100°
	Hyper Red (AlGaInP)		*500	*800	
	Green (InGaN)		500	1000	

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 with asterisk is measured at 50mA; Luminous intensity/ luminous Flux: +/-15%.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Blue Hyper Red Green	461 650 515		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	Blue Hyper Red Green	465 630 525		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Blue Hyper Red Green	25 27 30		nm	I <sub>F</sub> =20mA
C	Capacitance	Blue Hyper Red Green	100 45 45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Blue Hyper Red Green	3.3 1.9 3.3	4 2.5 4.1	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Blue Hyper Red Green		50 10 50	μA	V <sub>R</sub> =5V

Notes:

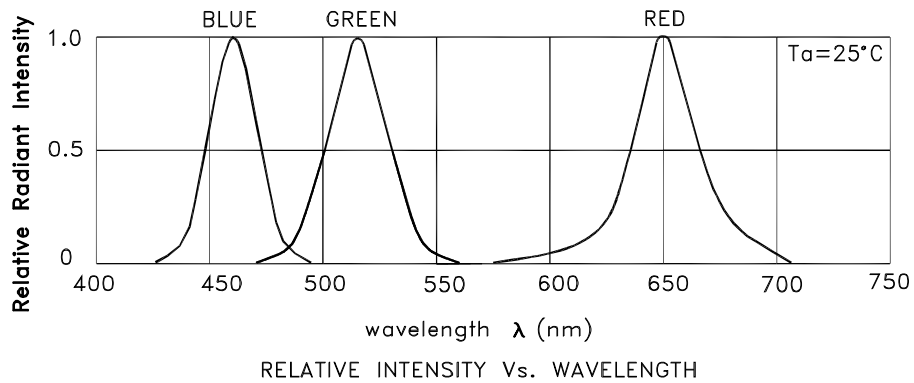
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

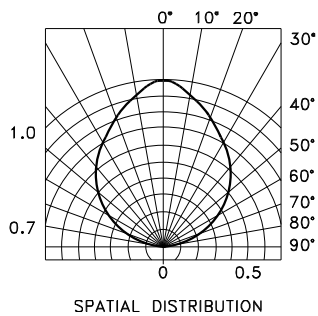
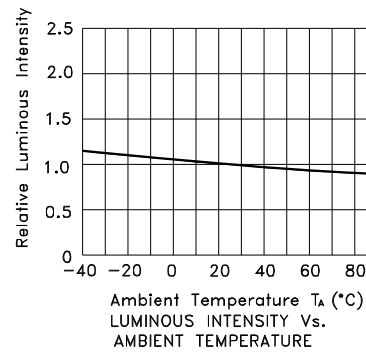
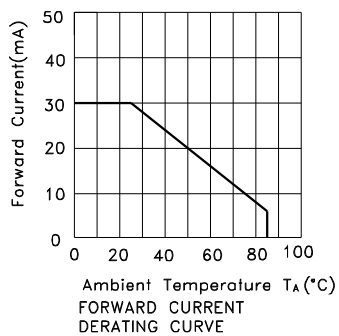
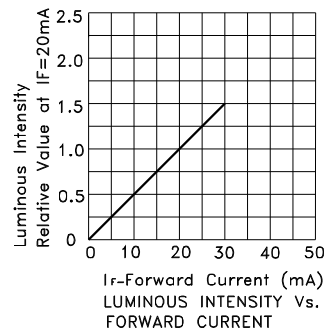
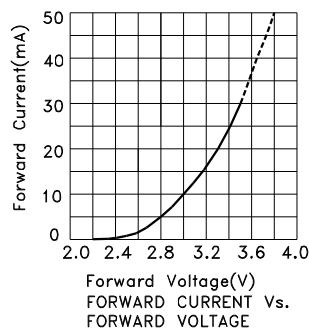
Parameter	Blue	Hyper Red	Green	Units
Power dissipation[2]	350			mW
DC Forward Current	30	50	30	mA
Peak Forward Current [1]	150	185	150	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Within 350mW at all chips are lightened.

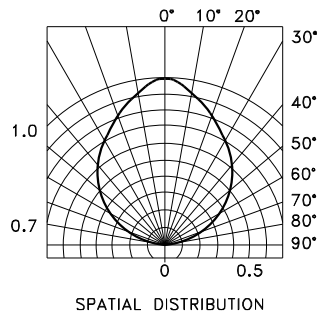
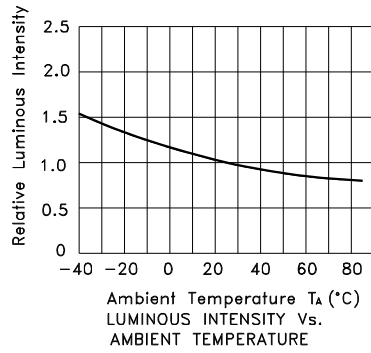
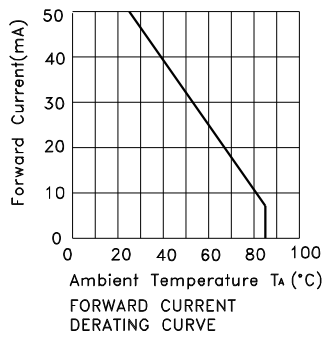
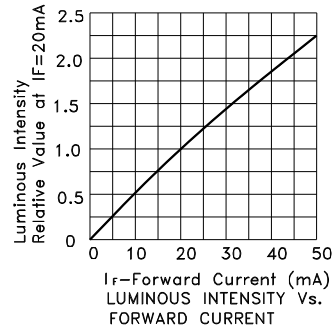
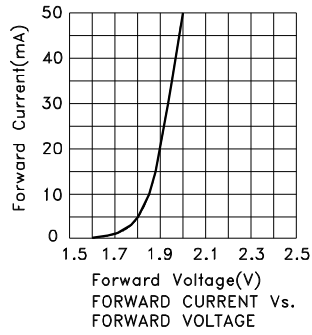


## AAAF5060QBFSURZGS Blue



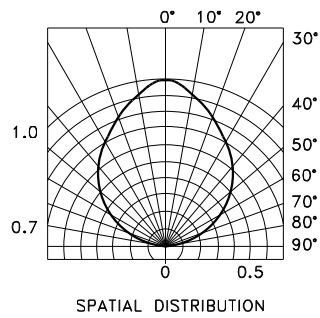
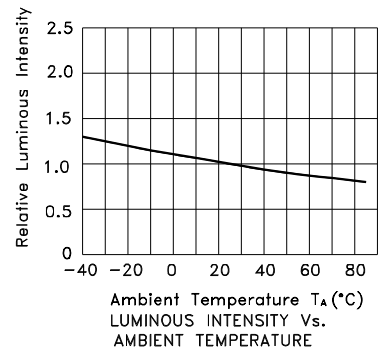
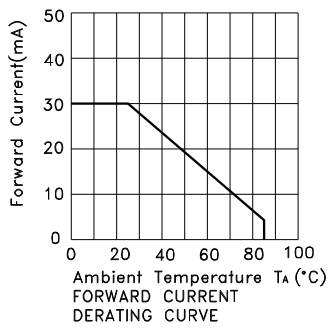
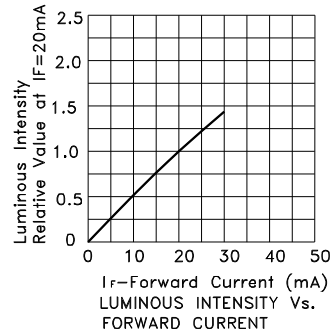
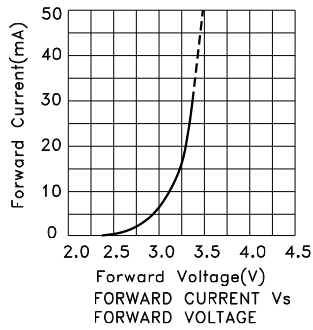
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## Hyper Red



# Kingbright

## Green

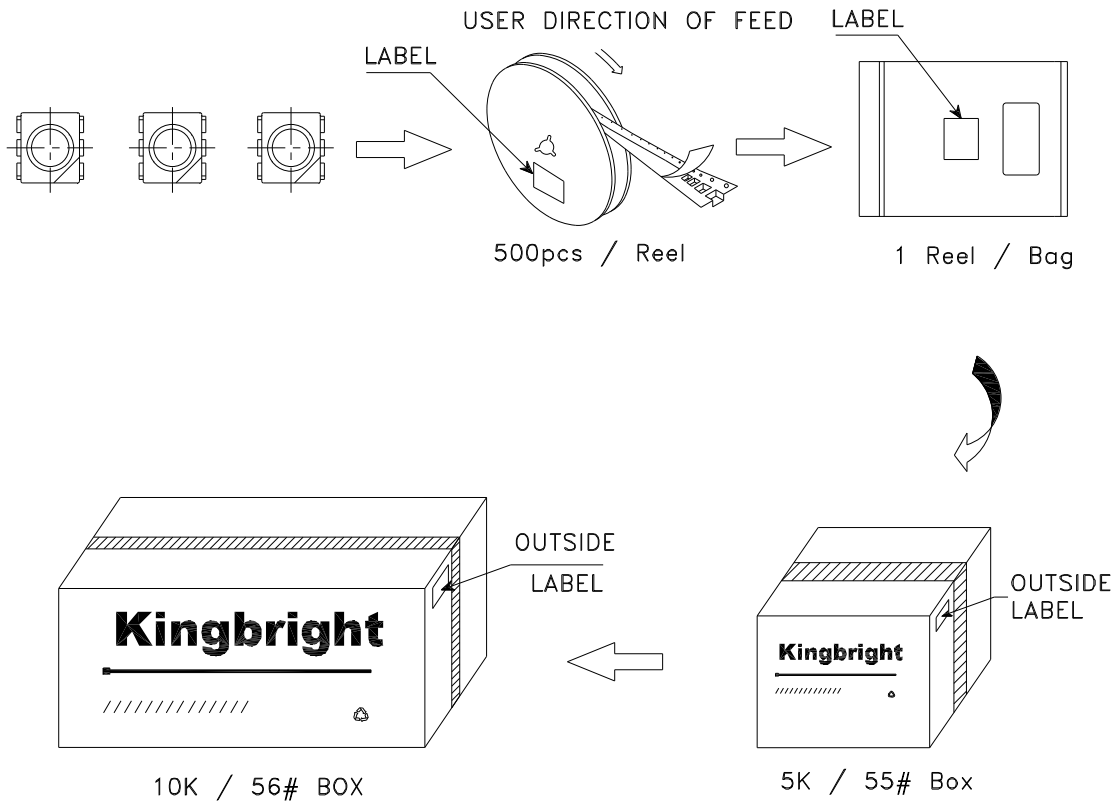




# Kingbright

## PACKING & LABEL SPECIFICATIONS

## AAAF5060QBFSURZGS



<h1 style="margin: 0;">Kingbright</h1>	
P/NO: AAAF5060xxx	
QTY: 500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 <small>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx</small>	
RoHS Compliant	



## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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