

### PRELIMINARY SPEC



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

Part Number: AAF5060QBFSURZGC

Blue  
Hyper Red  
Green

### Features

- Outstanding material efficiency.
- Reliable and rugged.
- Low power consumption.
- Can produce any color in visible spectrum, including white light.
- Moisture sensitivity level : level 4.
- 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.

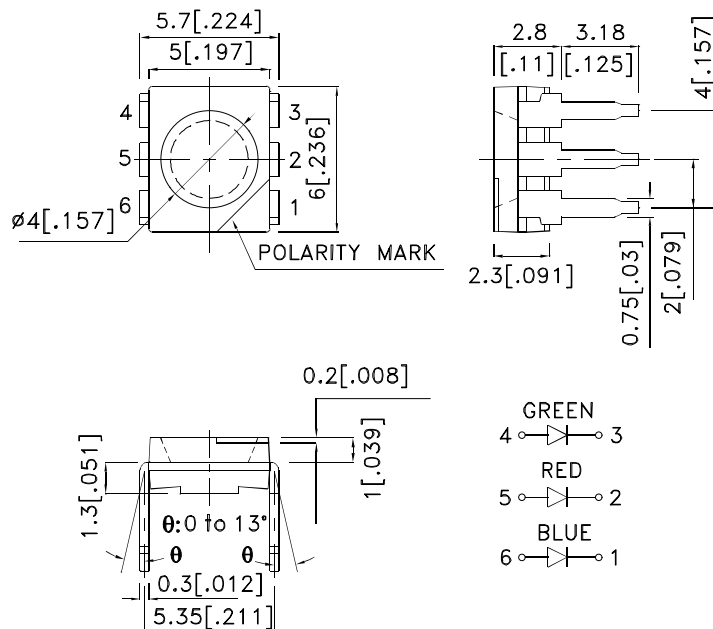
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 30mA *50mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
AAF5060QBFSURZGC	Blue (InGaN)	WATER CLEAR	180	350	100°
	Hyper Red (AlGaInP)		*380	*500	
	Green (InGaN)		280	650	

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
λpeak	Peak Wavelength	Blue Hyper Red Green	461 650 515		nm	If=20mA
λD [1]	Dominant Wavelength	Blue Hyper Red Green	465 630 525		nm	If=20mA
Δλ1/2	Spectral Line Half-width	Blue Hyper Red Green	25 27 30		nm	If=20mA
C	Capacitance	Blue Hyper Red Green	100 45 45		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Blue Hyper Red Green	3.3 1.9 3.3	4 2.5 4.1	V	If=20mA
IR	Reverse Current	Blue Hyper Red Green		10 10 10	uA	VR=5V

Notes:

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

## Absolute Maximum Ratings at TA=25°C

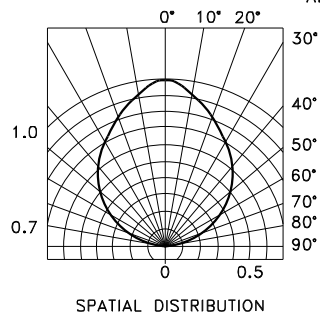
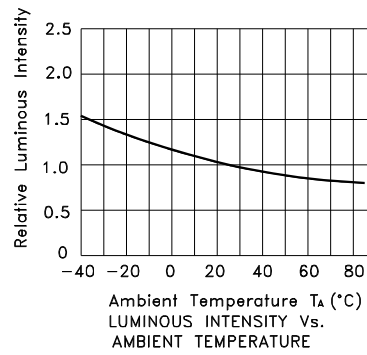
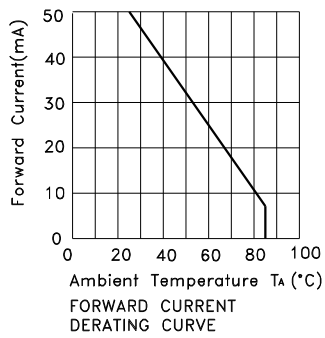
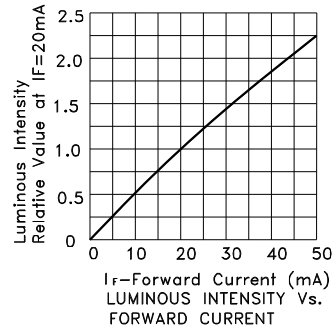
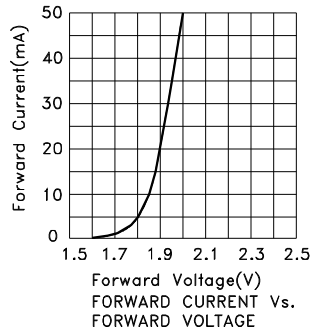
Parameter	Blue	Hyper Red	Green	Units
Power dissipation[2]	350			mW
DC Forward Current	30	50	30	mA
Peak Forward Current [1]	150	185	150	mA
Reverse Voltage	5			V
Operating / Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [3]	260°C For 3 Seconds			
Lead Solder Temperature [4]	260°C For 5 Seconds			

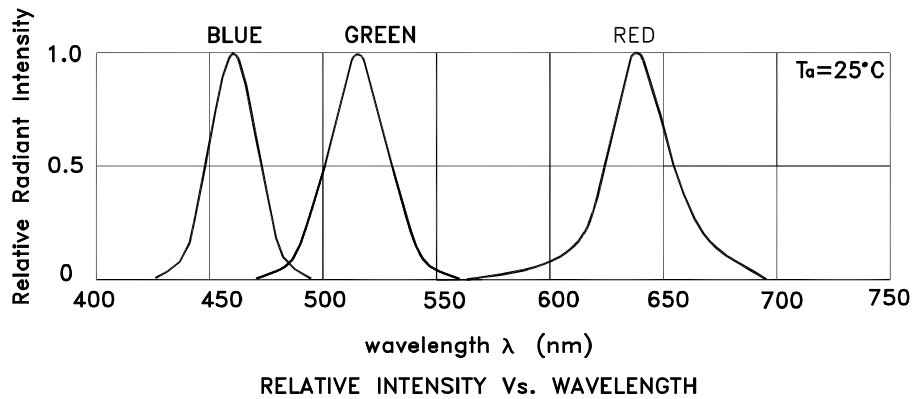
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Within 350mW at all chips are lightened.
3. 2mm below package base.
4. 5mm below package base.

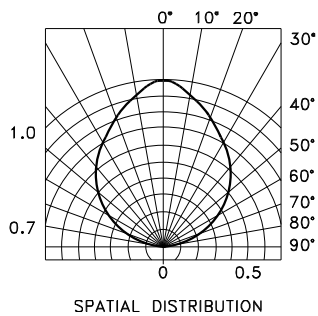
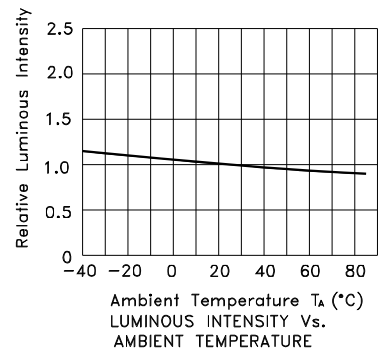
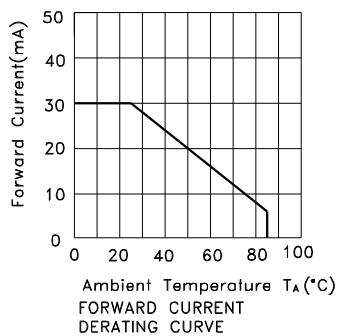
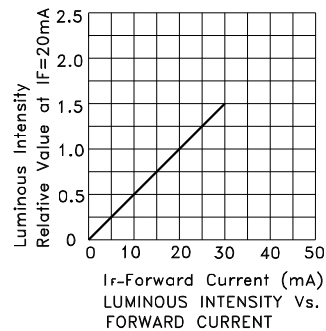
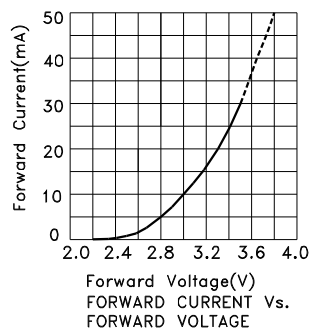
# Kingbright

## Hyper Red



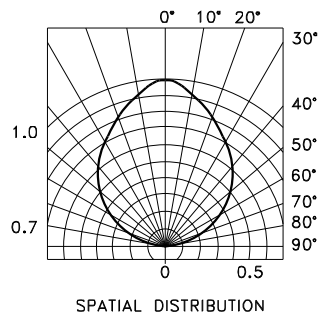
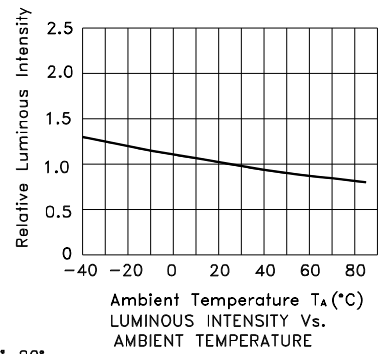
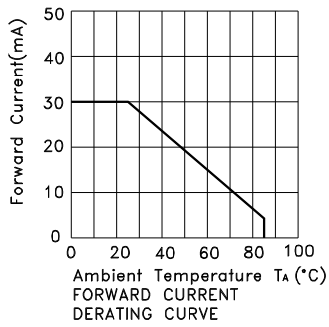
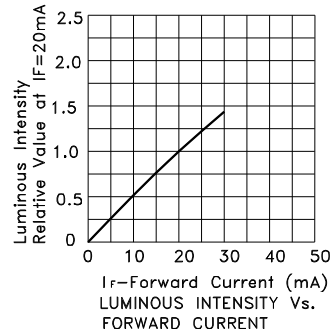
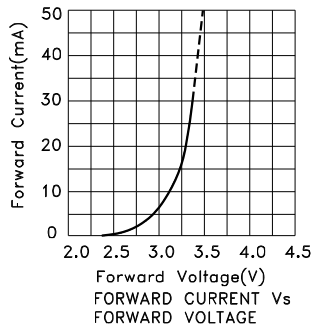


## AAF5060QBFSURZGC Blue



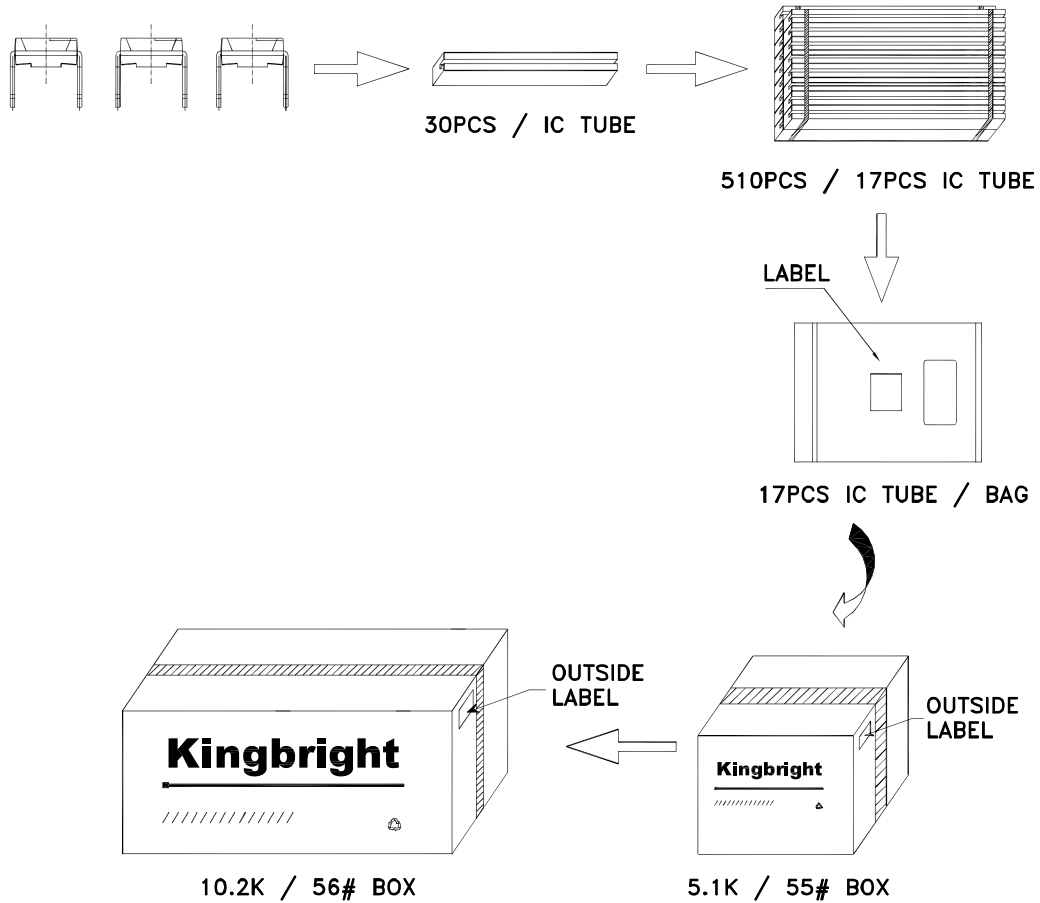
# Kingbright

## Green



**PACKING & LABEL SPECIFICATIONS**

**AAF5060QBFSURZGC**



<h2 style="margin: 0;">Kingbright</h2>	
P/NO: AAF5060XXX	
QTY: 510 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">QC XX-XX-XXXX PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
RoHS Compliant	