

### PRELIMINARY SPEC

Part Number: AAAF3528QBFSEJ3ZGW



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

Blue  
Hyper Red  
Green

### Features

- Outstanding material efficiency.
- Low power consumption.
- Can produce any color in visible spectrum, including white light.
- 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 Blue source color devices are made with InGaN Light Emitting Diode.

The Hyper Red device is based on light emitting diode chip made from AlGaInP.

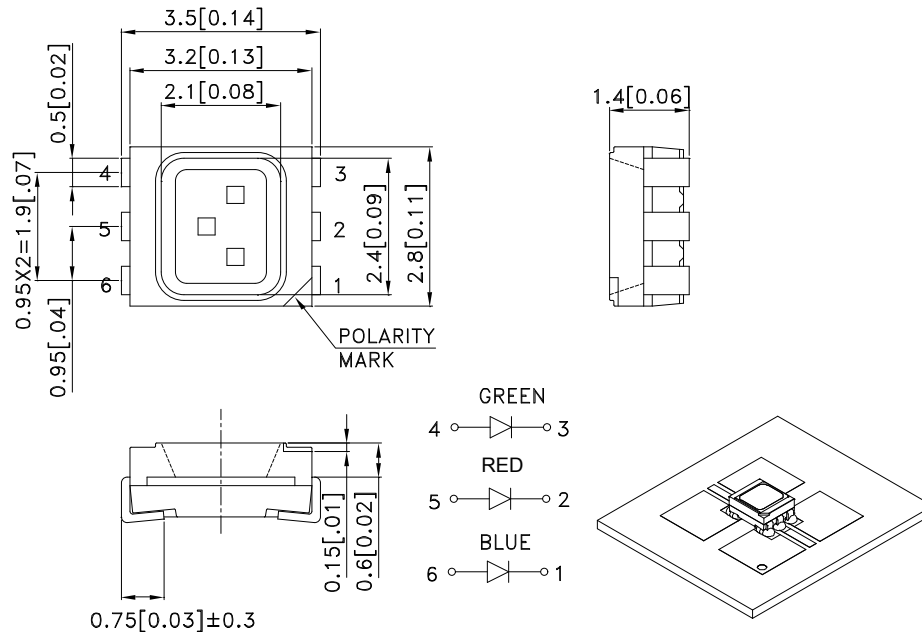
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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  $\pm 0.2$  (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
AAAF3528QBFSEJ3ZGW	Blue (InGaN)	WHITE DIFFUSED	110	200	120°
	Hyper Red (AlGaInP)		900	1700	
	Green (InGaN)		480	900	

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/ 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	461 640 515		nm	If=20mA
λD [1]	Dominant Wavelength	Blue Hyper Red Green	465 625 525		nm	If=20mA
Δλ1/2	Spectral Line Half-width	Blue Hyper Red Green	25 25 30		nm	If=20mA
C	Capacitance	Blue Hyper Red Green	100 27 45		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Blue Hyper Red Green	3.3 2.2 3.3	4 2.8 4.1	V	If=20mA
IR	Reverse Current	Blue Hyper Red Green		10 10 10	uA	VR=5V

Notes:

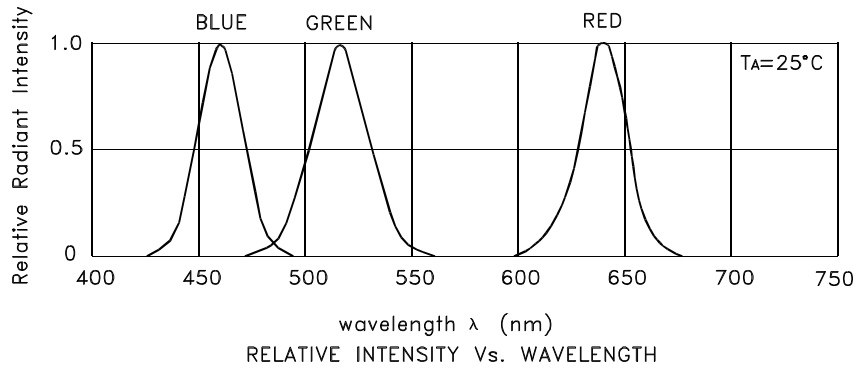
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

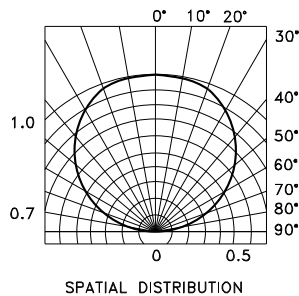
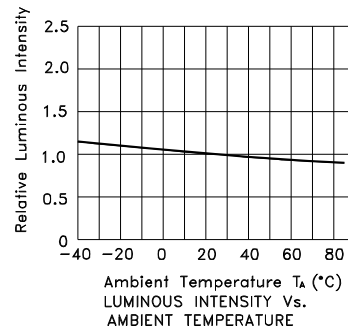
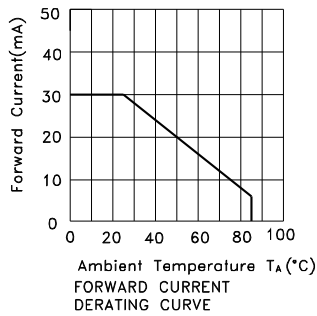
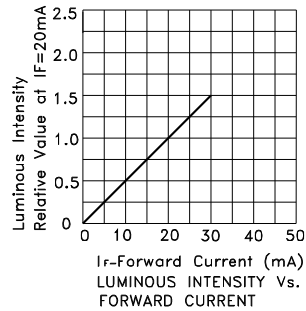
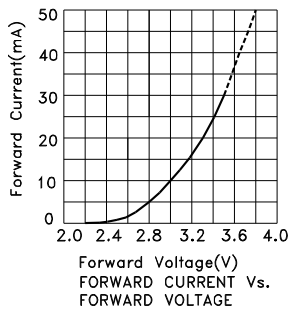
Parameter	Blue	Hyper Red	Green	Units
Power dissipation	120	140	123	mW
DC Forward Current	30	50	30	mA
Peak Forward Current [1]	150	150	150	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Notes:

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

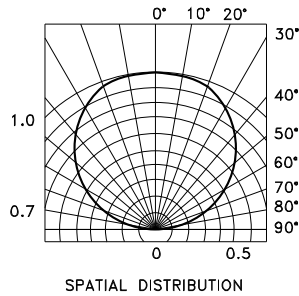
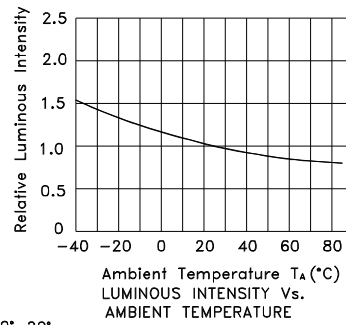
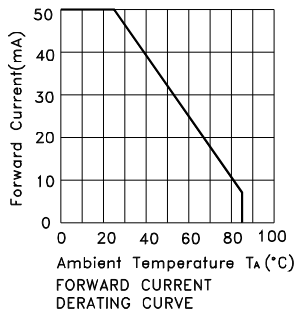
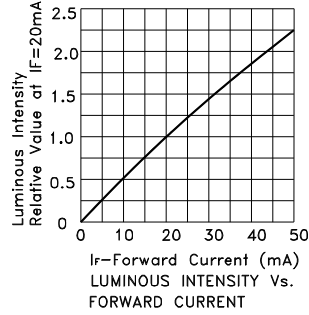
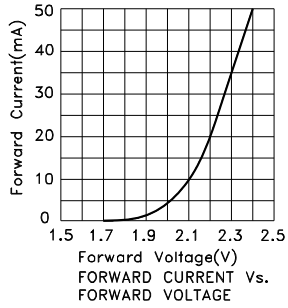


## AAAF3528QBFSEJ3ZGW Blue



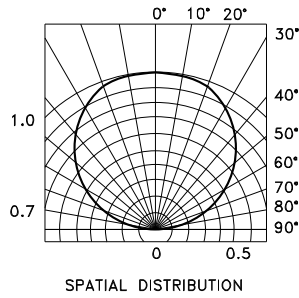
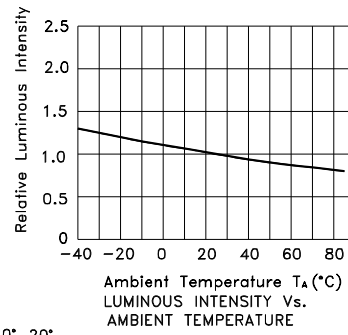
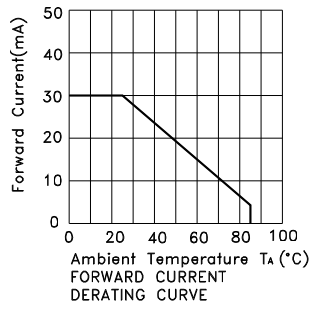
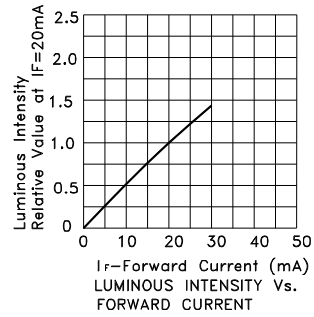
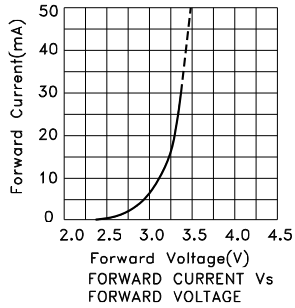
# Kingbright

## Hyper Red



# Kingbright

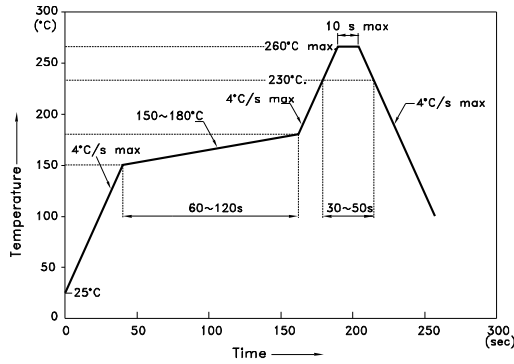
## Green



## AAAF3528QBFSEJ3ZGW

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.

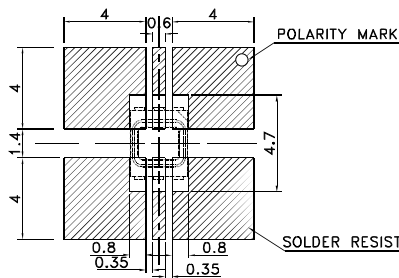
Reflow Soldering Profile For Lead-free SMT Process.



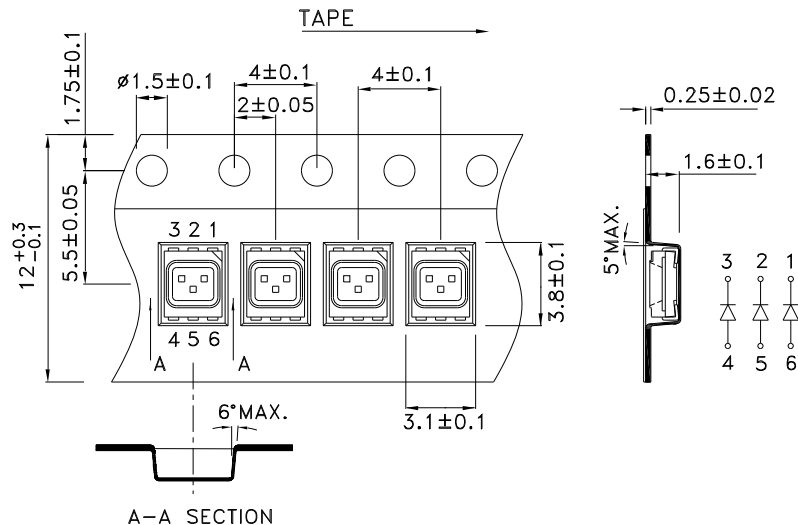
NOTES:

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)



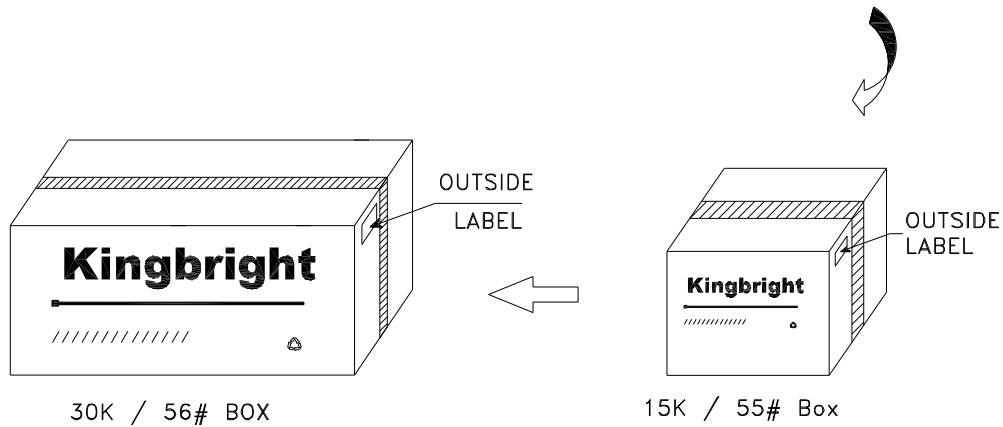
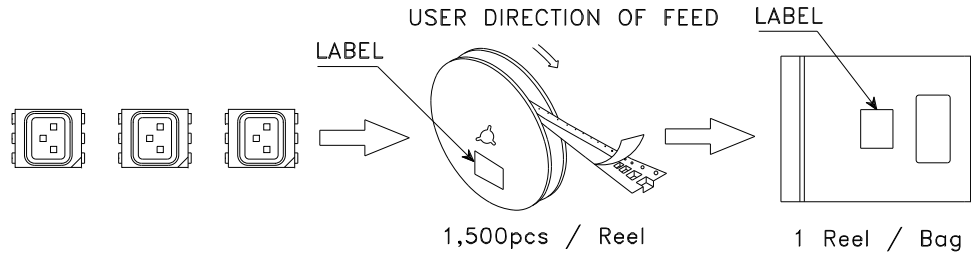
### Tape Dimensions (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

AAAF3528QBFSEJ3ZGW



<b>Kingbright</b>	
P/NO: AAAF3528xxx	
QTY: 1,500 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:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	