

Kingbright

3.5X2.8mm SURFACE MOUNT SMD CHIP LED

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: AAAF3528QBFSEJZGW

BLUE
HYPER ORANGE
GREEN

Features

- OUTSTANDING MATERIAL EFFICIENCY.
- LOW POWER CONSUMPTION.
- ONE BLUE, ONE ORANGE AND ONE GREEN CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.

Description

The Blue source color devices are made with AlInGaN on Al_2O_3 substrate Light Emitting Diode.

The Super Bright de vice is based on a light emitting diode chip made from AlGaInP and bonded on silicon substrate.

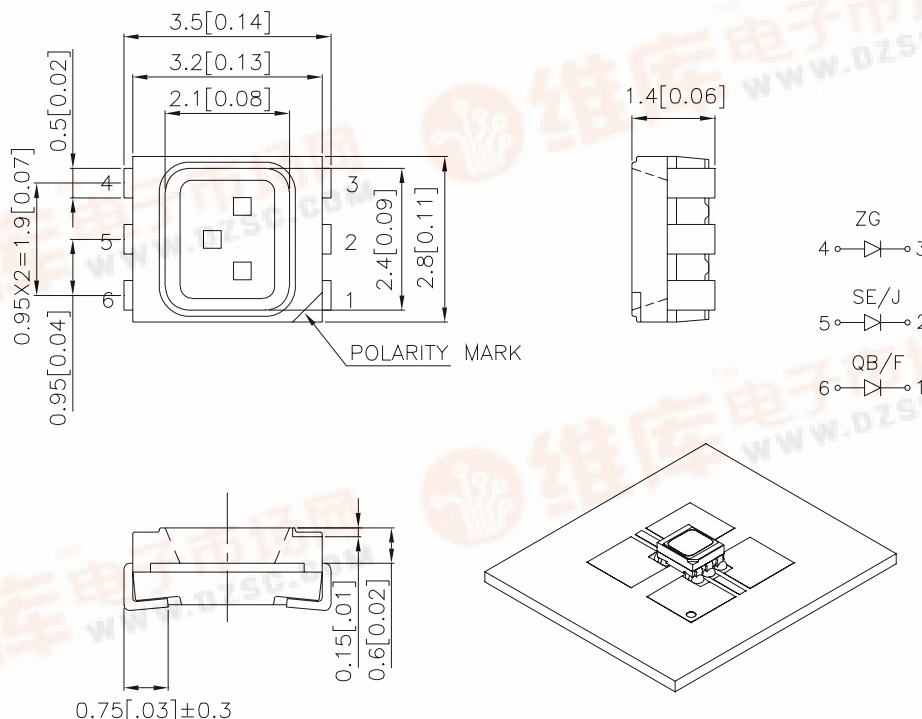
The Green source color devices are made with AlInGaN on Sapphire Light Emitting Diode.

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
AAAF3528QBFSEJZGW	BLUE (AlInGaN)	WHITE DIFFUSED	110	250	120°
	HYPER ORANGE (AlGaInP)		900	1700	
	GREEN (AlInGaN)		480	900	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline 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 Orange Green	461 640 515		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue Hyper Orange Green	465 630 525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue Hyper Orange Green	25 25 30		nm	IF=20mA
C	Capacitance	Blue Hyper Orange Green	100 27 45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue Hyper Orange Green	3.3 2.0 3.3	4.0 2.8 4.1	V	IF=20mA
IR	Reverse Current	Blue Hyper Orange Green		10 10 10	uA	VR= 5V

Notes:

1. Wavelength: +/-1nm.

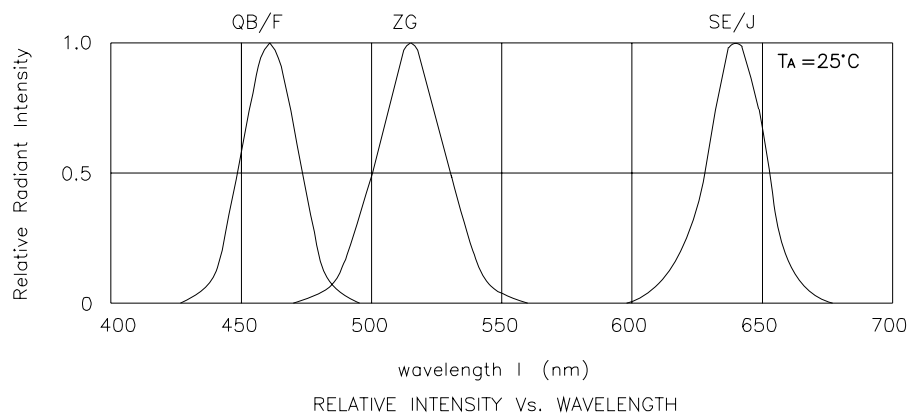
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

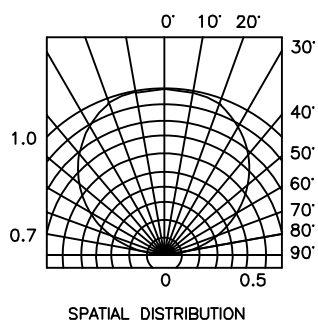
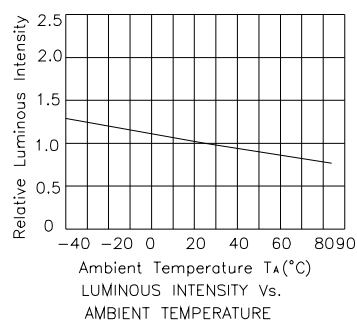
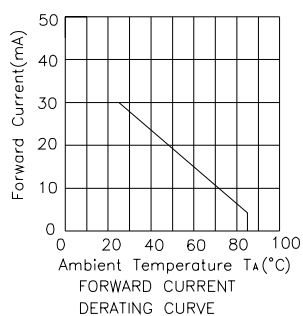
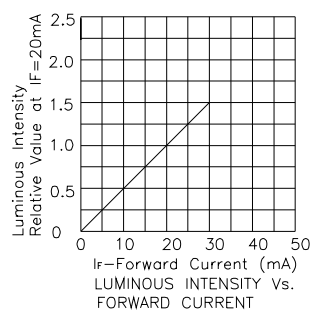
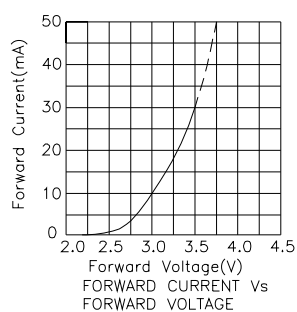
Parameter	Blue	Hyper Orange	Green	Units
Power dissipation	120	140	123	mW
DC Forward Current	30	50	30	mA
Peak Forward Current [1]	150	150	150	mA
Reverse Voltage	5			V
Operating / Storage Temperature	-40°C TO +85°C			

Note:

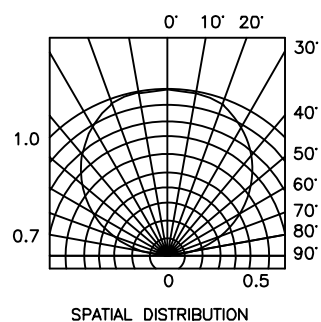
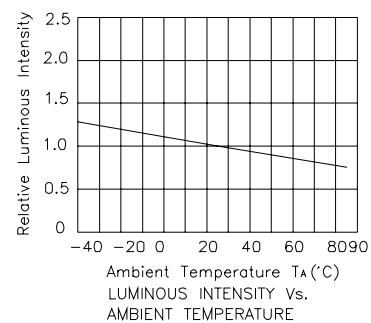
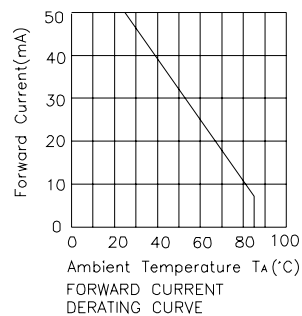
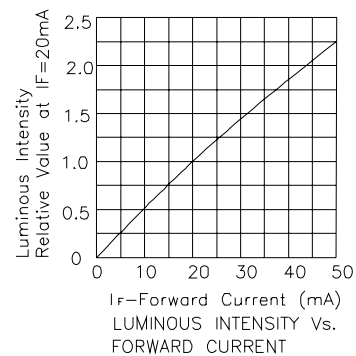
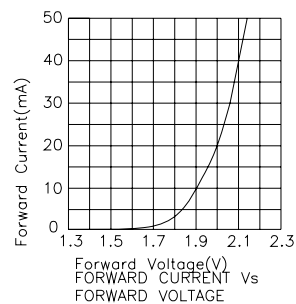
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



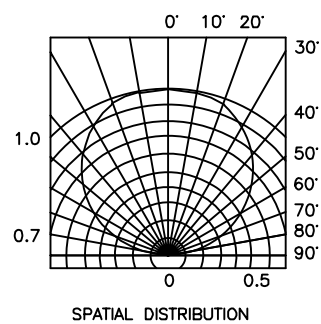
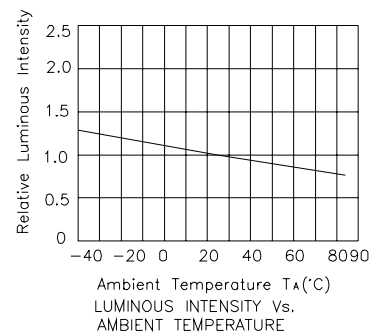
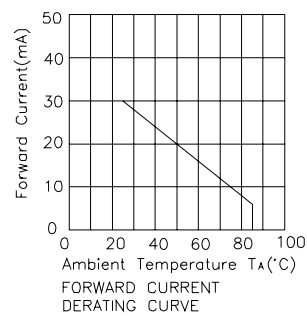
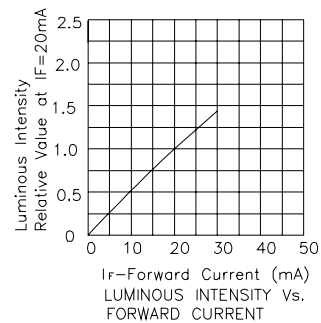
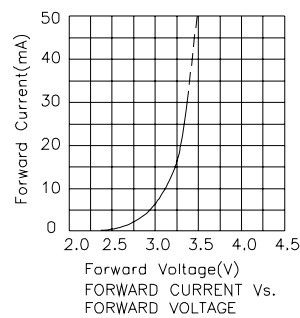
AAAF3528QBFSEJZGW Blue



Hyper Orange

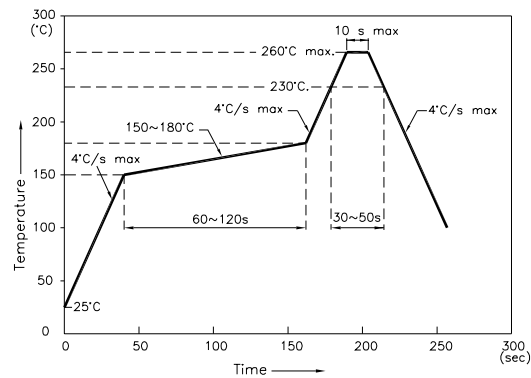


Green



AAAF3528QBFSEJZGW

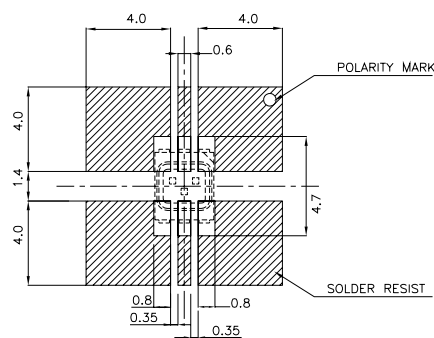
Reflow Soldering Profile For Lead-free SMT Process.



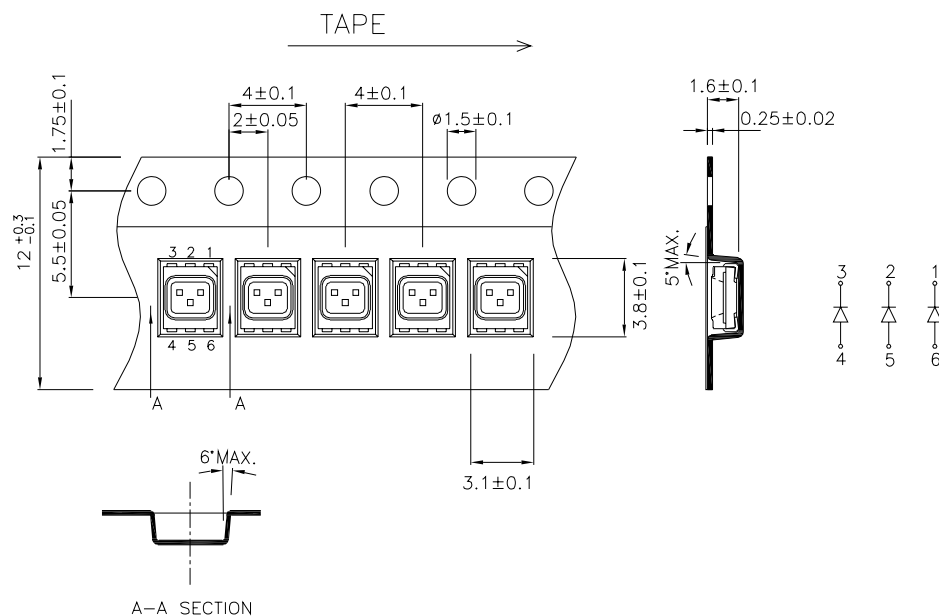
NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$. 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)

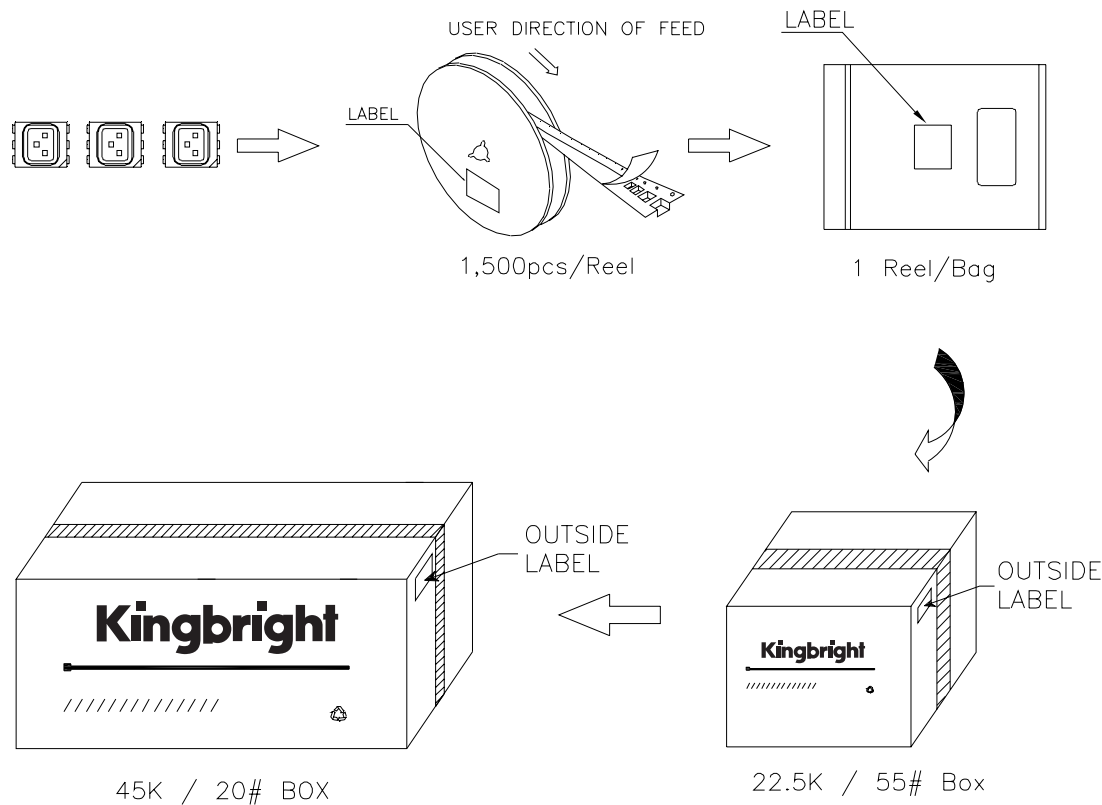


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

AAAF3528QBFSEJZGW



Kingbright	
P/N : AAAF3528xxx	
QTY: 1,500 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
MADE IN CHINA	RoHS Compliant