



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KAAF-5060QBDSURKZGCT

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 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.

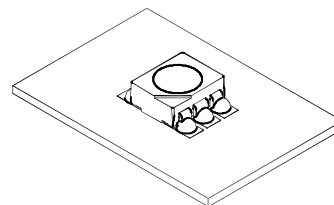
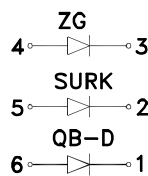
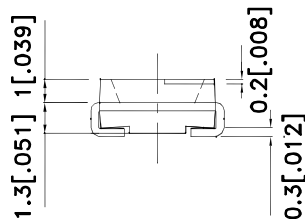
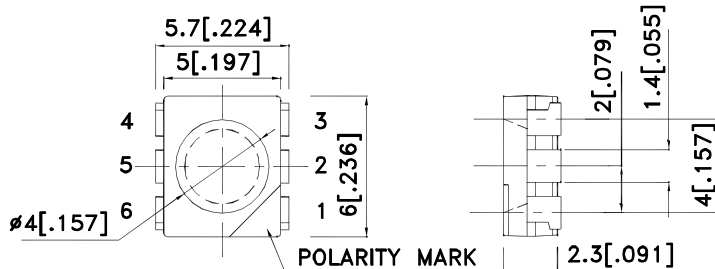
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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. 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.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 30mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KAAF-5060QBDSURKZGCT	Blue (InGaN)	WATER CLEAR	110	250	100°
	Hyper Red (AlGaInP)		180	350	
	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/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Blue Hyper Red Green	468 650 515		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Blue Hyper Red Green	470 630 525		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Blue Hyper Red Green	25 28 30		nm	I _F =20mA
C	Capacitance	Blue Hyper Red Green	100 35 45		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Blue Hyper Red Green	3.3 1.95 3.3	4 2.5 4.1	V	I _F =20mA
I _R	Reverse Current	Blue Hyper Red Green		50 10 50	uA	V _R =5V

Notes:

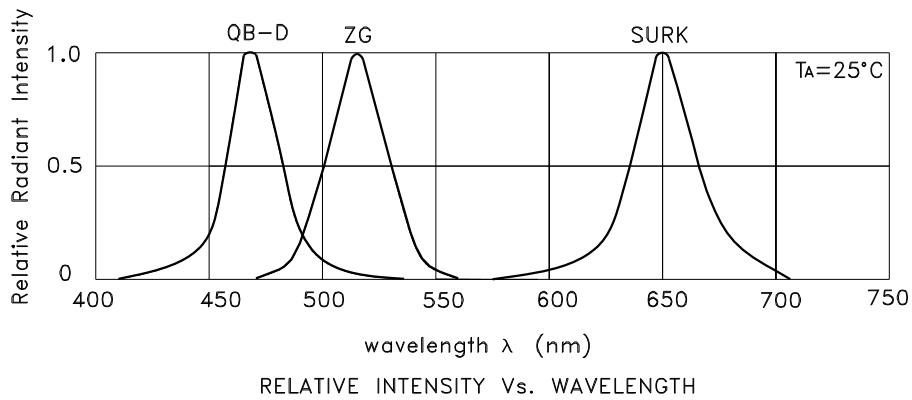
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

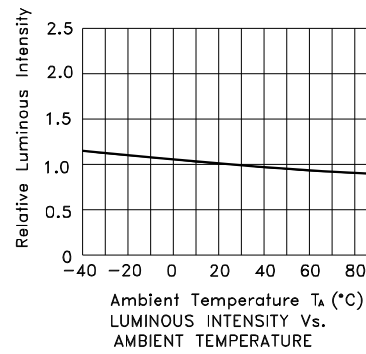
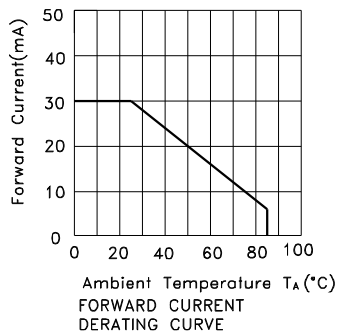
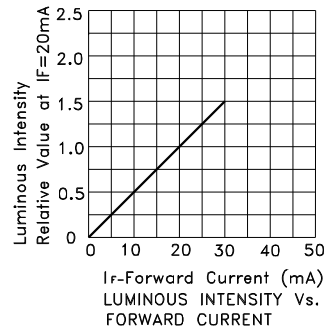
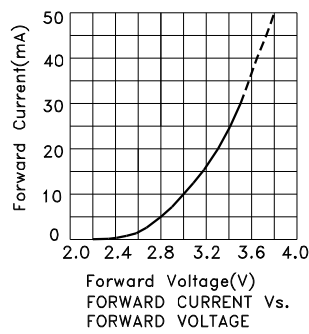
Parameter	Blue	Hyper Red	Green	Units
Power dissipation[2]	350			mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	150	185	150	mA
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Notes:

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

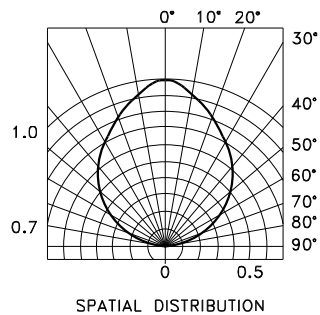
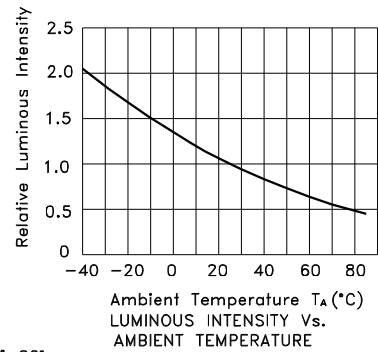
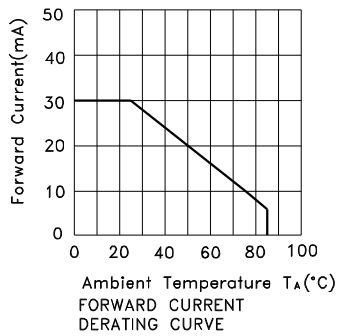
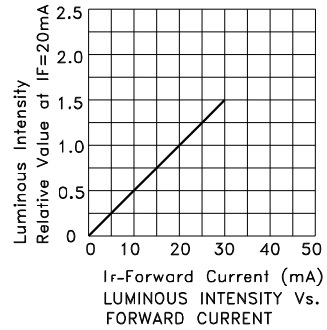
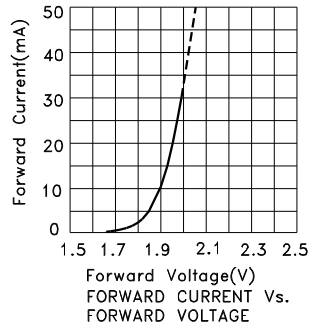


KAAF-5060QBDSURKZGCT Blue



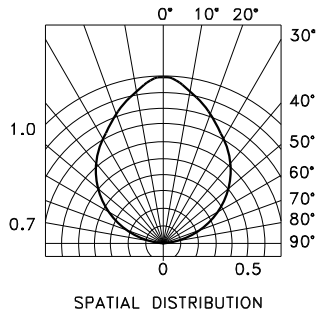
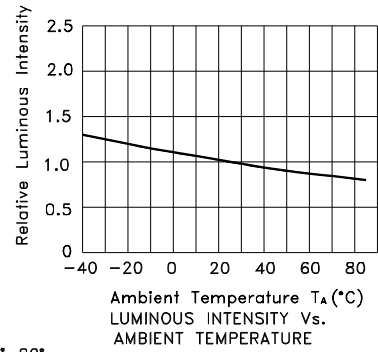
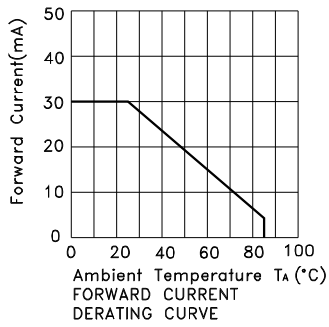
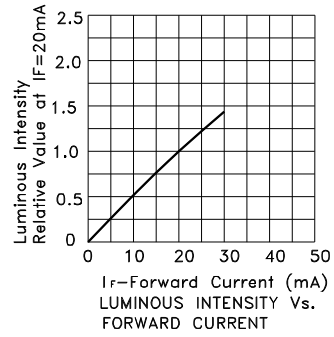
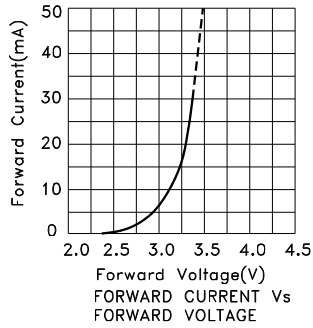
Kingbright

Hyper Red



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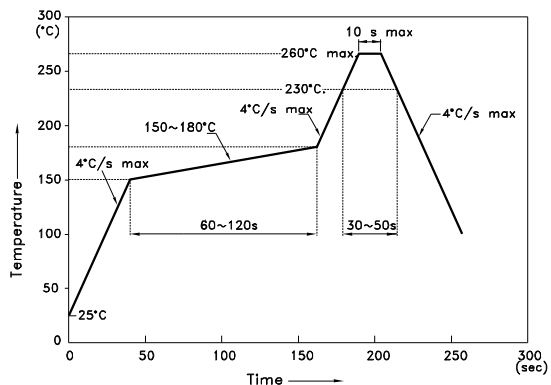
Green



KAAF-5060QBDSURKZGCT

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.

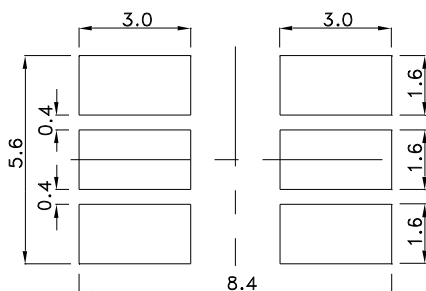
Reflow Soldering Profile For Lead-free SMT Process.



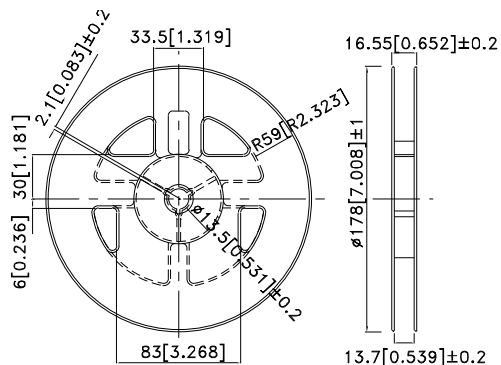
NOTES:

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.

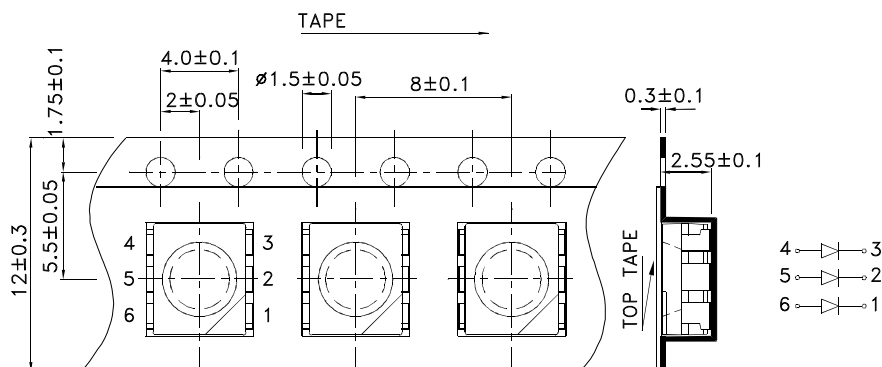
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



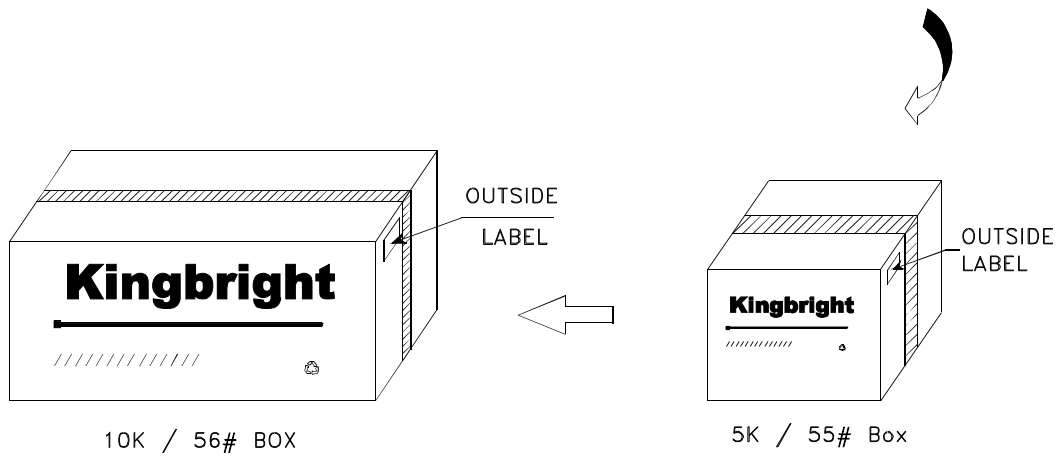
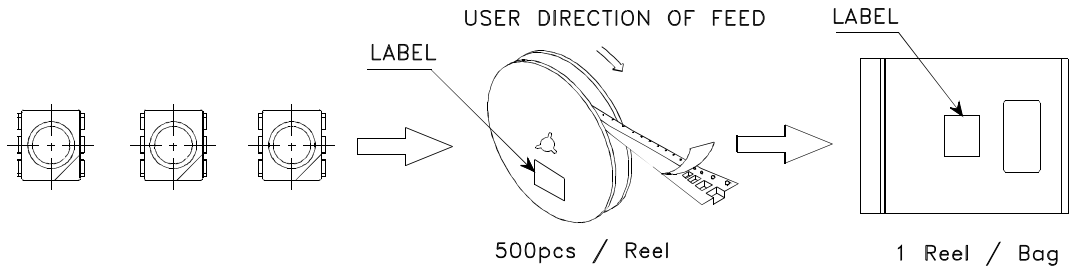
Tape Dimensions (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

KAAF-5060QBDSURKZGCT



Kingbright	
P/NO: KAAF-5060xxx	
QTY: 500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	