

PRELIMINARY SPEC

Part Number: AAAF5060QBDZGSEEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

BLUE
GREEN
HYPER ORANGE

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 AlInGaN on Sapphire Light Emitting Diode.

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

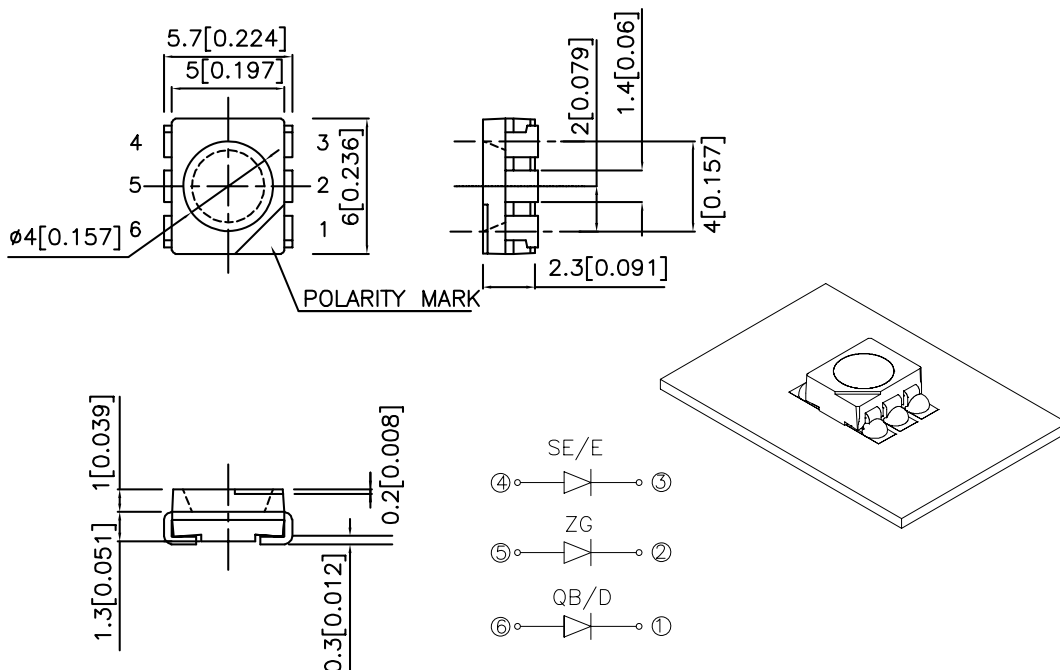
The Hyper Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

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 ± 0.25 (0.01") 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] @30mA *50mA | | Viewing Angle [2] |
|-------------------|------------------------|-------------|-----------------------------|-------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| AAAF5060QBDZGSEEC | BLUE (AlInGaN) | WATER CLEAR | 110 | 250 | 100° |
| | GREEN (AlInGaN) | | 280 | 650 | |
| | HYPER ORANGE (InGaAlP) | | *650 | *1000 | |

Notes:

1. 01/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline 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_{peak} | Peak Wavelength | Blue Green Hyper Orange | 468 515 630 | | nm | IF=20mA |
| λ_D [1] | Dominant Wavelength | Blue Green Hyper Orange | 470 525 621 | | nm | IF=20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Blue Green Hyper Orange | 25 30 20 | | nm | IF=20mA |
| C | Capacitance | Blue Green Hyper Orange | 100 45 25 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Blue Green Hyper Orange | 3.5 3.3 2.0 | 4.0 4.1 2.5 | V | IF=20mA |
| IR | Reverse Current | Blue Green Hyper Orange | | 10 10 10 | uA | VR= 5V |

Notes:

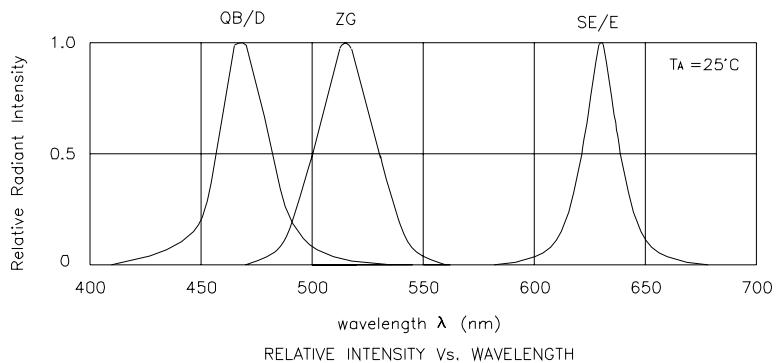
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

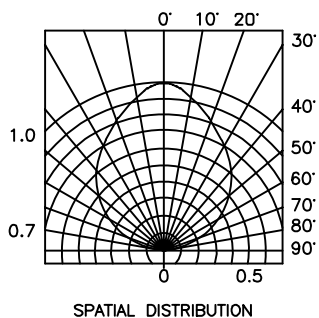
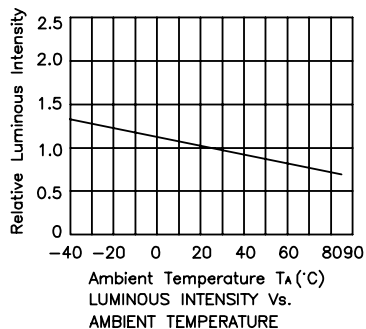
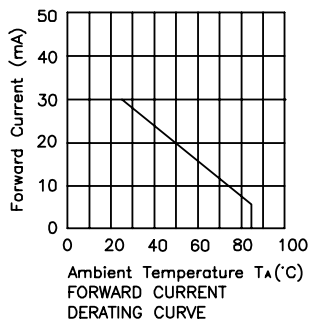
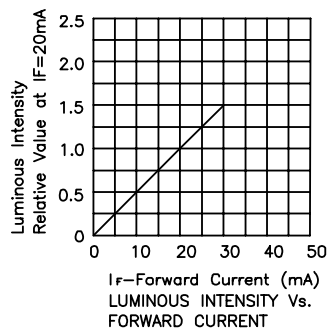
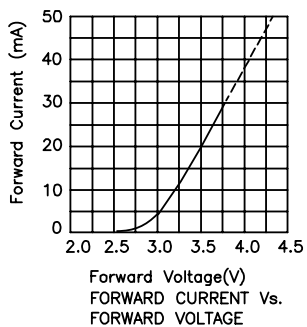
| Parameter | Blue | Green | Hyper Orange | Units |
|---------------------------------|----------------|-------|--------------|-------|
| Power dissipation [2] | 350 | | | mW |
| DC Forward Current | 30 | 30 | 50 | mA |
| Peak Forward Current [1] | 180 | 150 | 195 | mA |
| Reverse Voltage | 5 | | | V |
| Operating / Storage Temperature | -40°C TO +85°C | | | |

Notes:

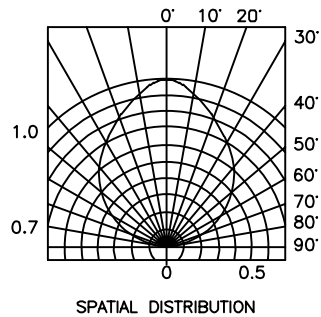
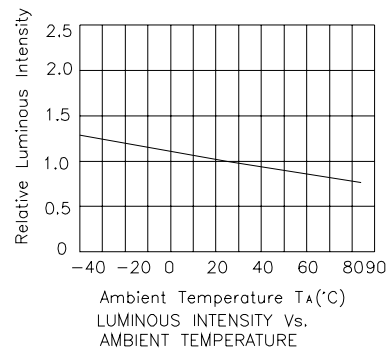
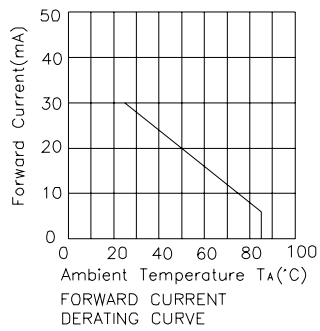
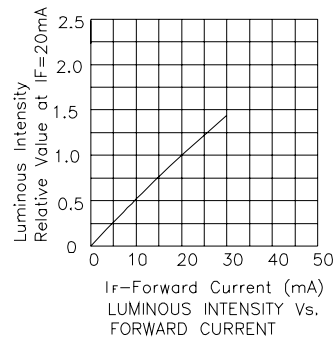
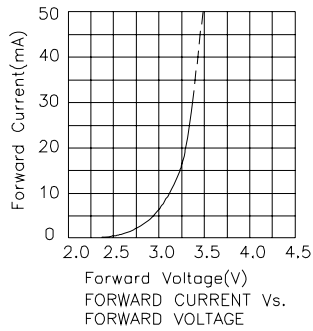
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Within 350mW at all chips are lightened.



AAAF5060QBDZGSEEC Blue

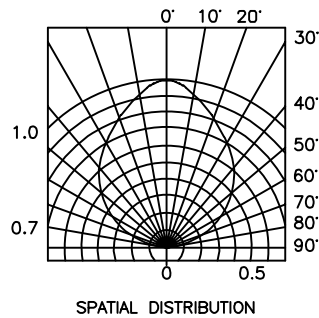
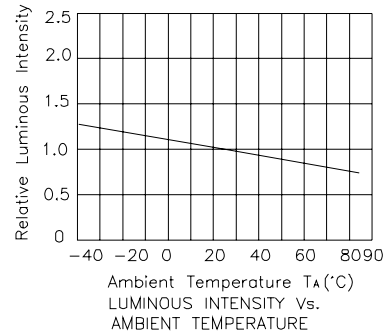
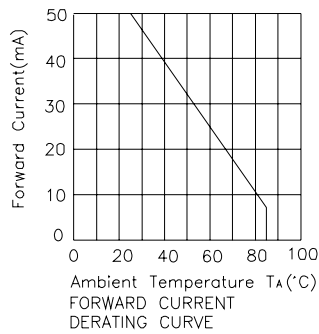
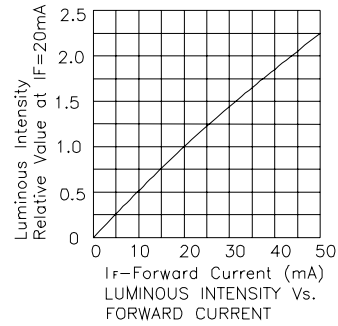
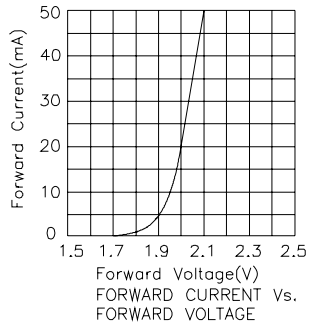


Green



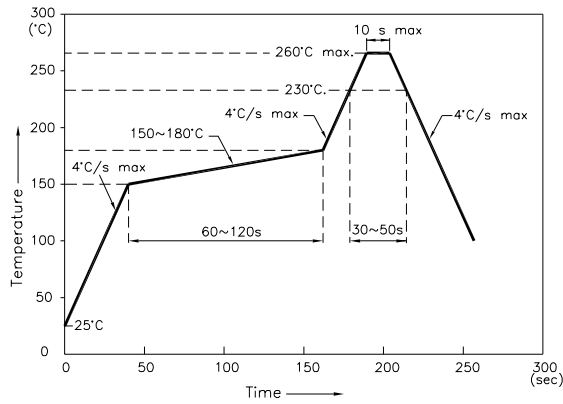
Kingbright

Hyper Orange



AAAF5060QBDZGSEEC

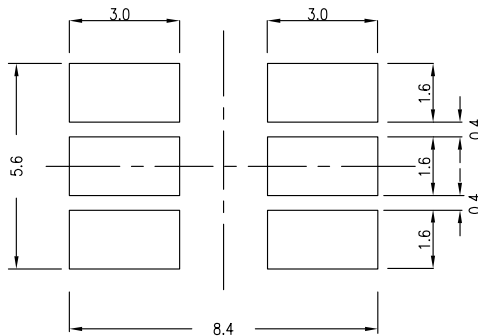
Reflow Soldering Profile For Lead-free SMT Process.



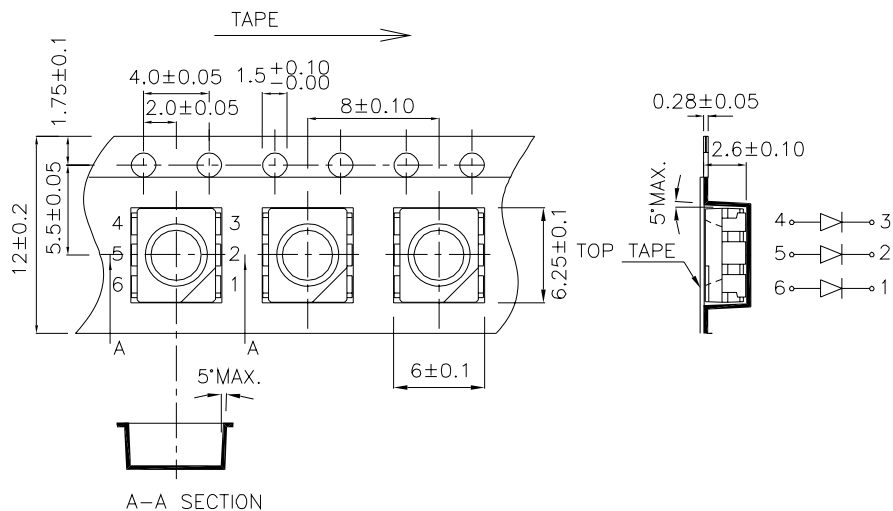
NOTES:

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)

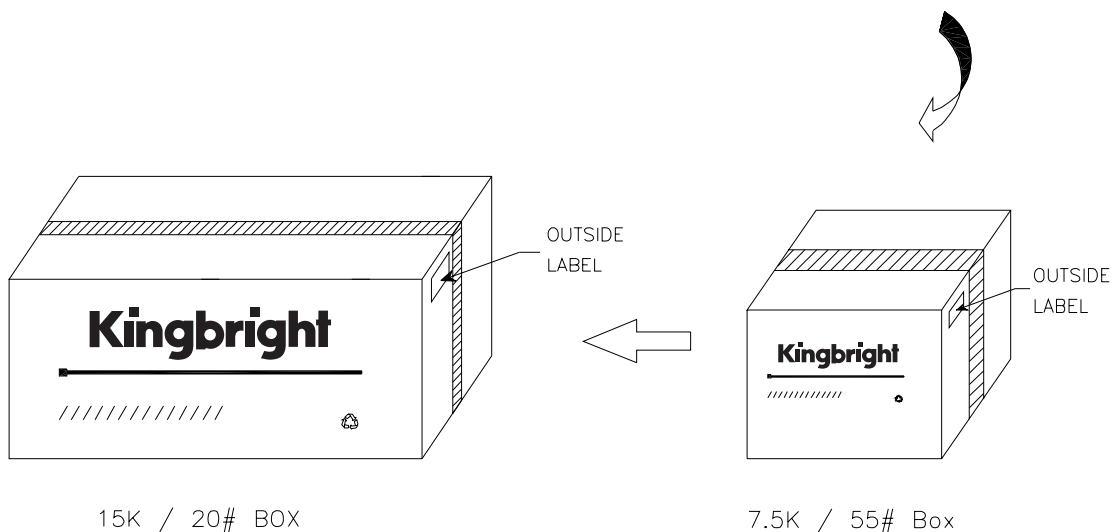
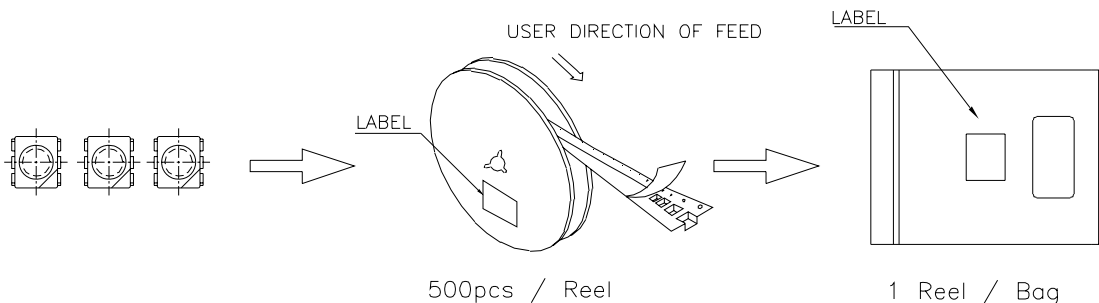



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

AAAF5060QBDZGSEEC



| | |
|--|--|
| Kingbright | |
| P/NO: AAAF5060xxx | |
| QTY: 500 pcs | Q.C. Q C xx xx. xxx PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  xxxxxxxxxxxxxxxxxxxxxxxxxxxx | |
| MADE IN CHINA | RoHS Compliant |