



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APFA2507QBDSEEZGKC

Blue
Hyper Red
Green

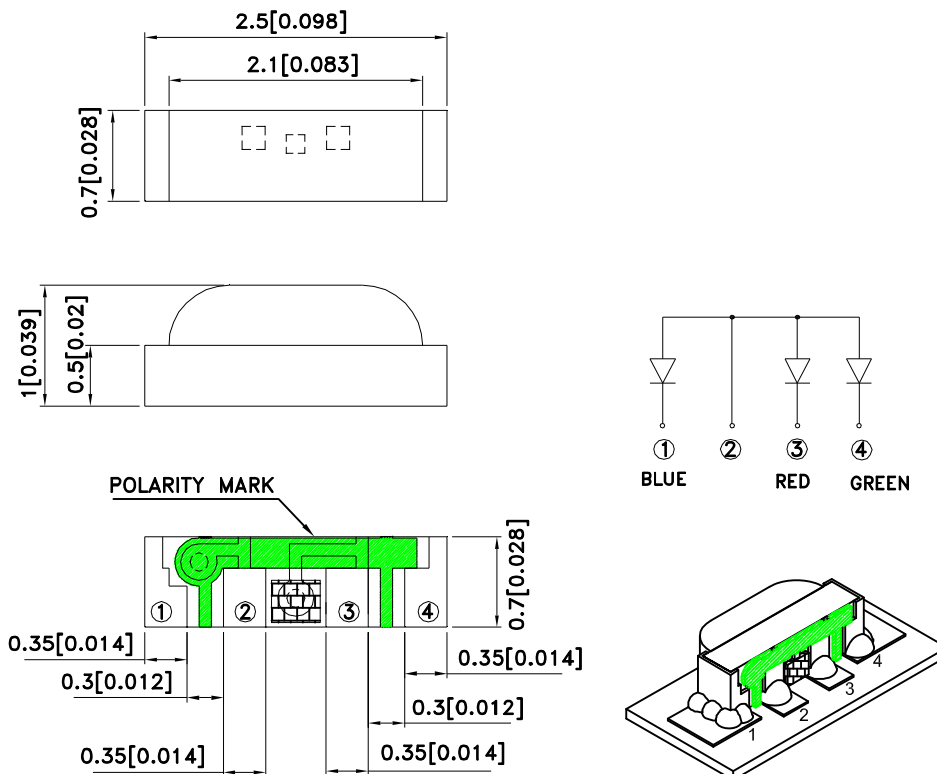
Features

- 2.5x1.0x0.7mm right angle SMD LED, 0.7mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 3000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Descriptions

- The Blue source color devices are made with InGaN on Sapphire Light Emitting Diode.
- The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.15(0.006)$ 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.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APFA2507QBDSEEZGKC	Blue (InGaN)	Water Clear	40	65	140°
	Hyper Red (AlGaInP)		80	110	110°
	Green (InGaN)		200	400	130°

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%.
3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Blue Hyper Red Green	460 630 515		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Blue Hyper Red Green	465 621 525		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue Hyper Red Green	25 20 35		nm	I _F =20mA
C	Capacitance	Blue Hyper Red Green	100 25 45		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Blue Hyper Red Green	3.3 2 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:

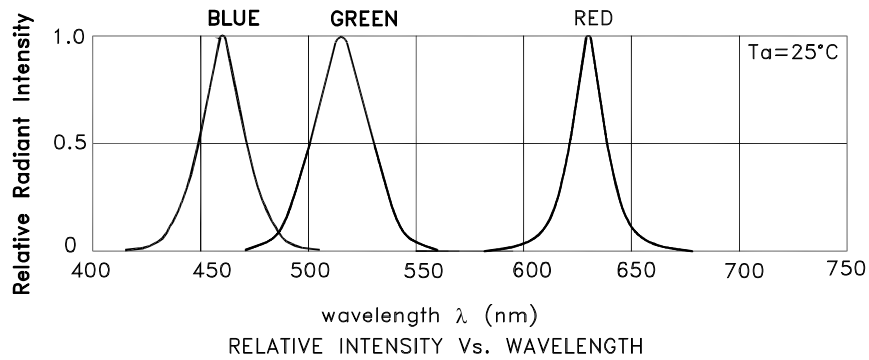
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3.Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

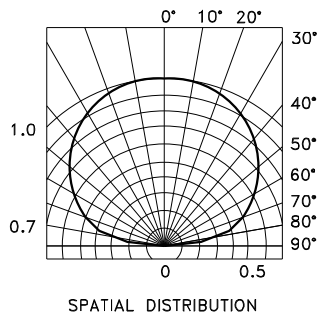
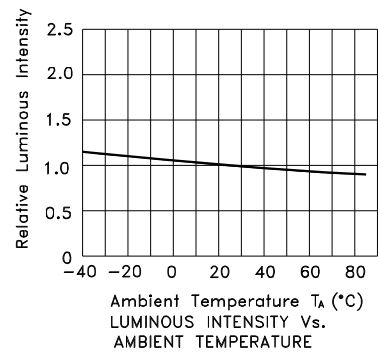
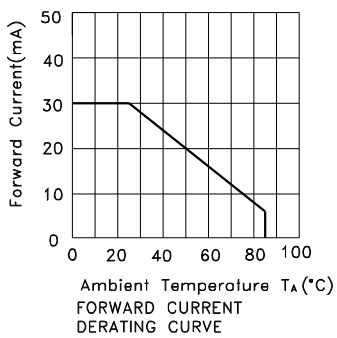
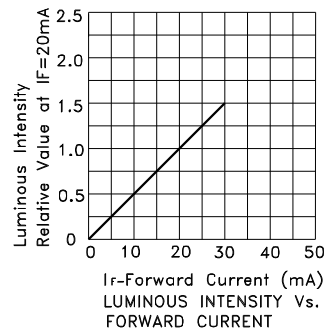
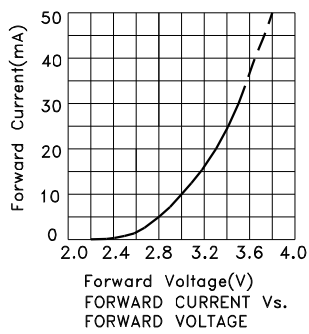
Parameter	Blue	Hyper Red	Green	Units
Power dissipation	120	75	102.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	150	195	150	mA
Electrostatic Discharge Threshold (HBM)	250	-	450	V
Reverse Voltage	5			V
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

Notes:

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

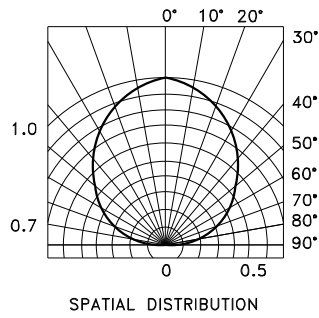
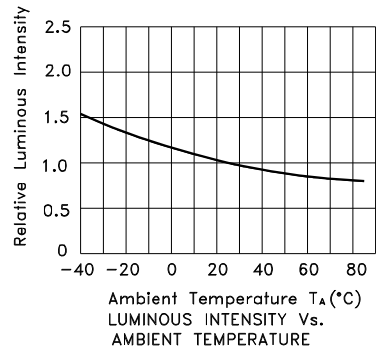
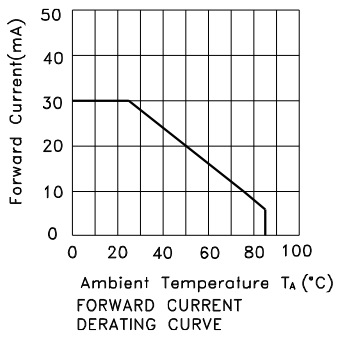
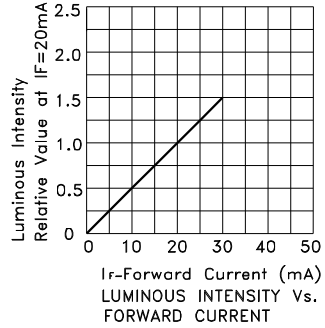
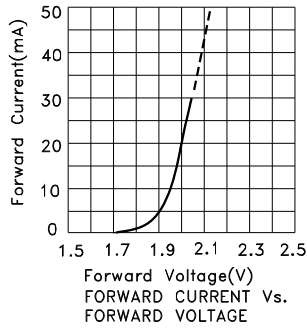


APFA2507QBDSEEZGKC Blue

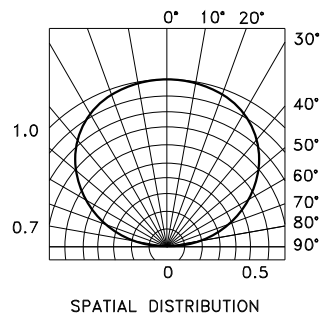
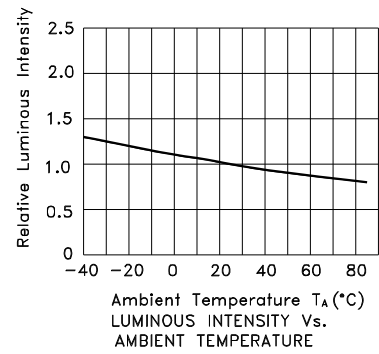
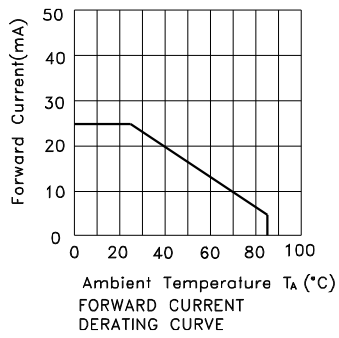
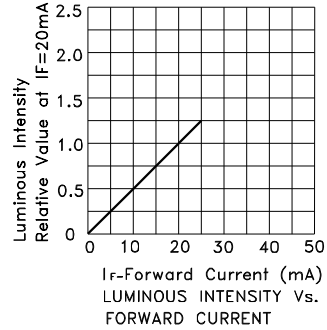
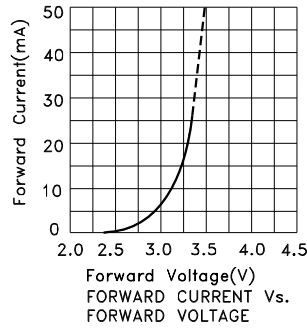


Kingbright

Hyper Red



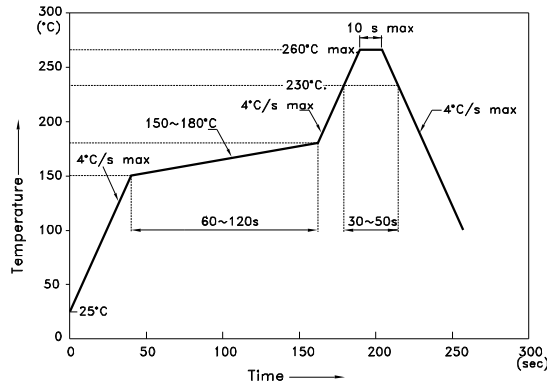
Green



APFA2507QBDSEEZGKC

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.

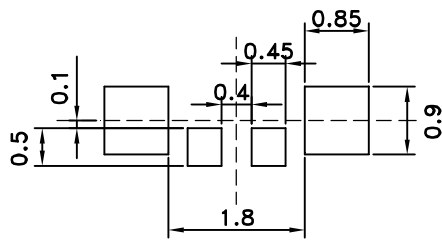
Reflow Soldering Profile For Lead-free SMT Process.



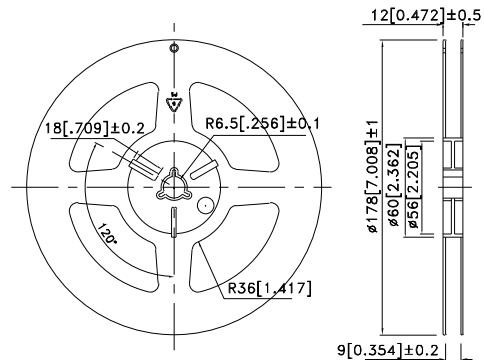
NOTES:

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.

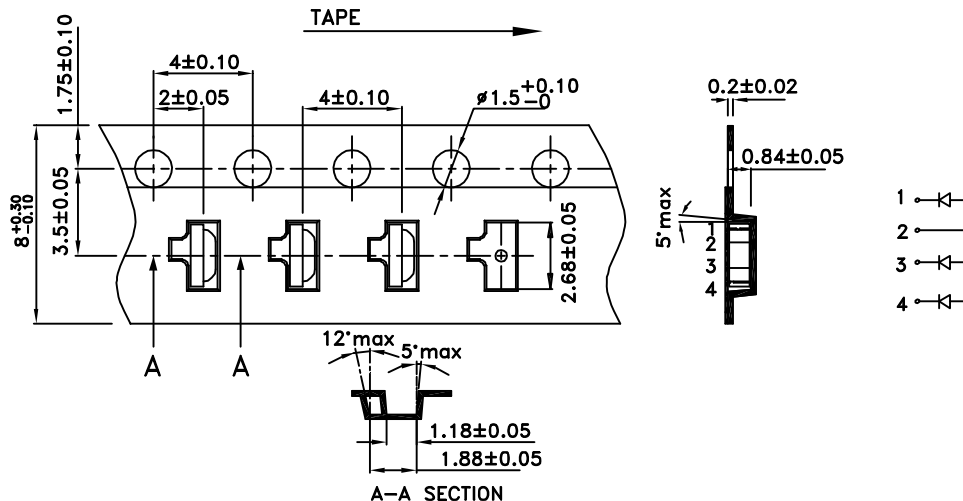
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

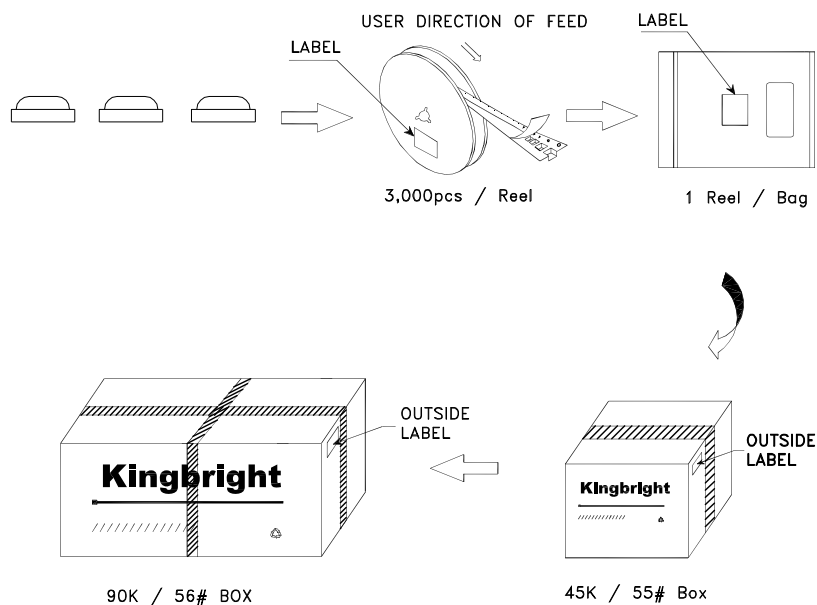



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APFA2507QBDSEEZGKC



Kingbright	
P/NO: APFA2507xxx	
QTY: 3,000 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

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