



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APF3236SEEZGKQBKC

Hyper Red
Green
Blue

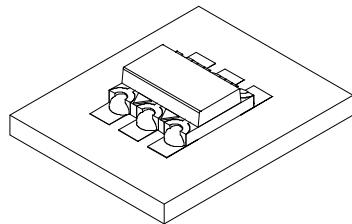
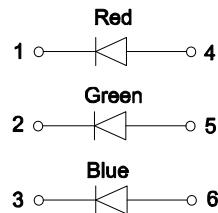
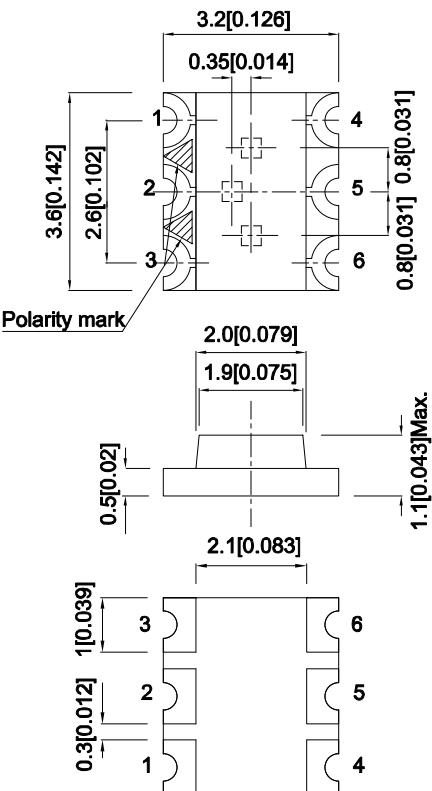
Features

- 3.2mmx3.6mm SMD LED, 1.1mm thickness.
- Low power consumption.
- One red, one green and one blue chips in one package.
- Package : 1000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Descriptions

- The Hyper Red source color devices are made with AlGaNp on GaAs substrate Light Emitting Diode.
- The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.
- The Blue 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 ± 0.2 (0.008") 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	I _v (mcd) [2] @ 20mA		Viewing Angle [1] 201/2
			Min.	Typ.	
APF3236SEEZGKQBKC	Hyper Red (AlGaNp)	Water Clear	80	140	150°
	Green (InGaN)		200	330	
	Blue (InGaN)		40	70	

Notes:

1. 01/2 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 CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green Blue	630 515 460		nm	I _f =20mA
λD [1]	Dominant Wavelength	Hyper Red Green Blue	621 525 465		nm	I _f =20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green Blue	20 35 25		nm	I _f =20mA
C	Capacitance	Hyper Red Green Blue	25 45 100		pF	V _f =0V;f=1MHz
V _f [2]	Forward Voltage	Hyper Red Green Blue	2 3.3 3.3	2.5 4.1 4	V	I _f =20mA
I _R	Reverse Current	Hyper Red Green Blue		10 50 50	uA	V _R =5V

Notes:

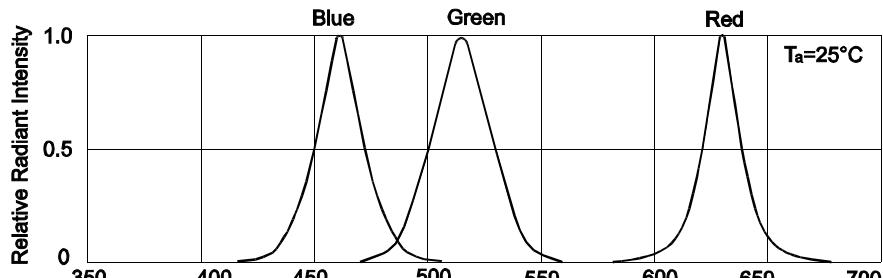
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

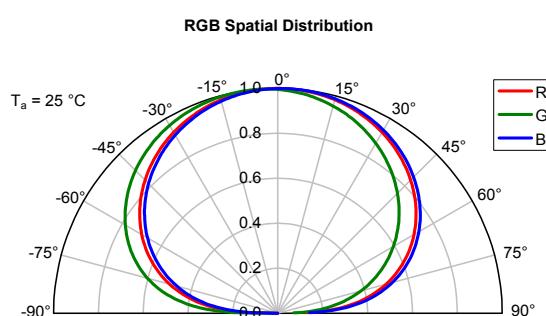
Parameter	Hyper Red	Green	Blue	Units
Power dissipation	75	102.5	120	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	195	150	150	mA
Electrostatic Discharge Threshold (HBM)	3000	450	250	V
Reverse Voltage		5		V
Operating Temperature		-40°C To +85°C		
Storage Temperature		-40°C To +85°C		

Notes:

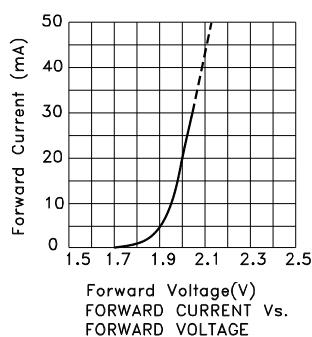
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



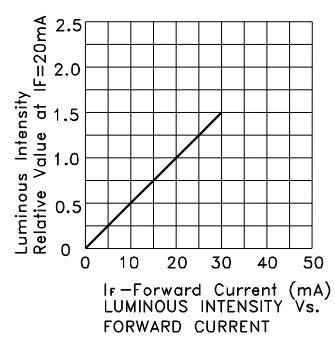
Relative Intensity Vs. Wavelength



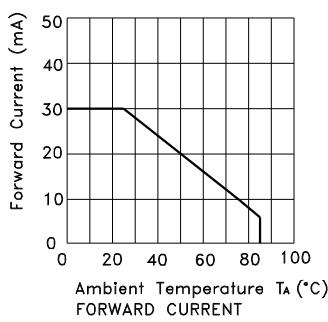
APF3236SEEZGKQBKC Hyper Red



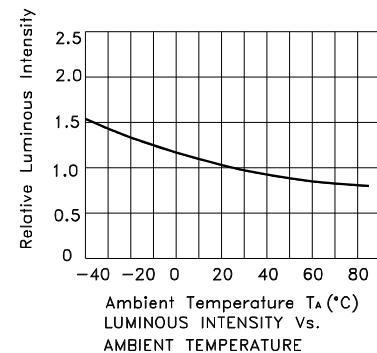
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



$I_F = 20\text{mA}$
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



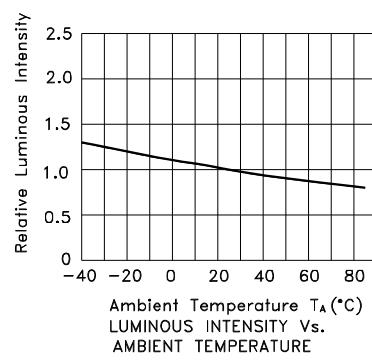
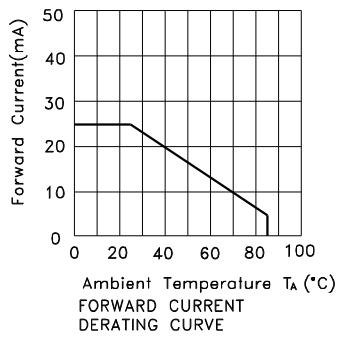
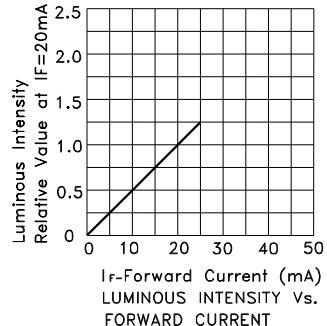
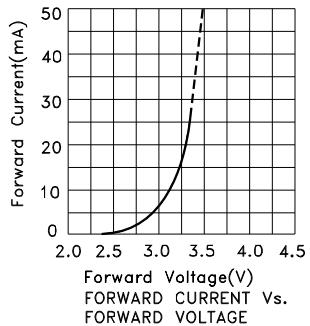
Ambient Temperature T_a ($^\circ\text{C}$)
FORWARD CURRENT
DERATING CURVE



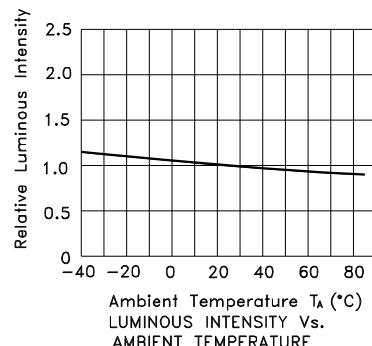
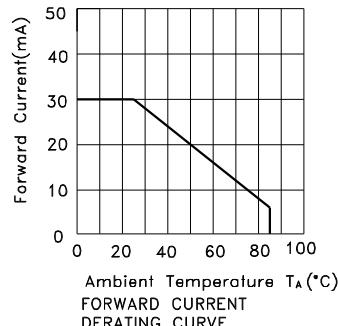
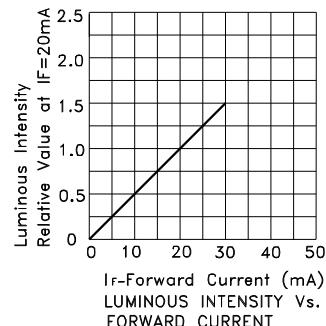
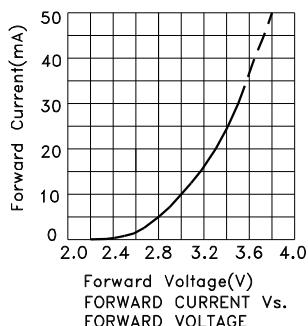
Ambient Temperature T_a ($^\circ\text{C}$)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

Kingbright

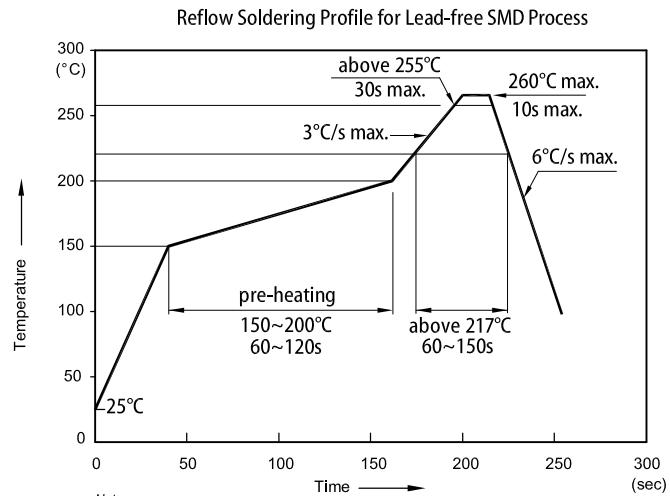
Green



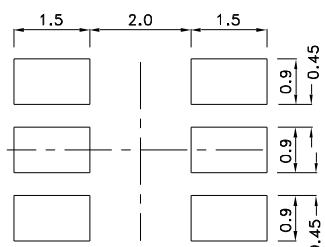
Blue



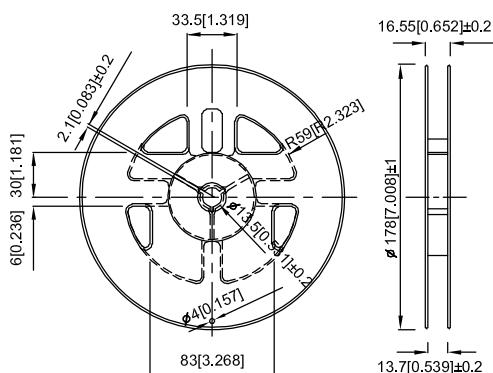
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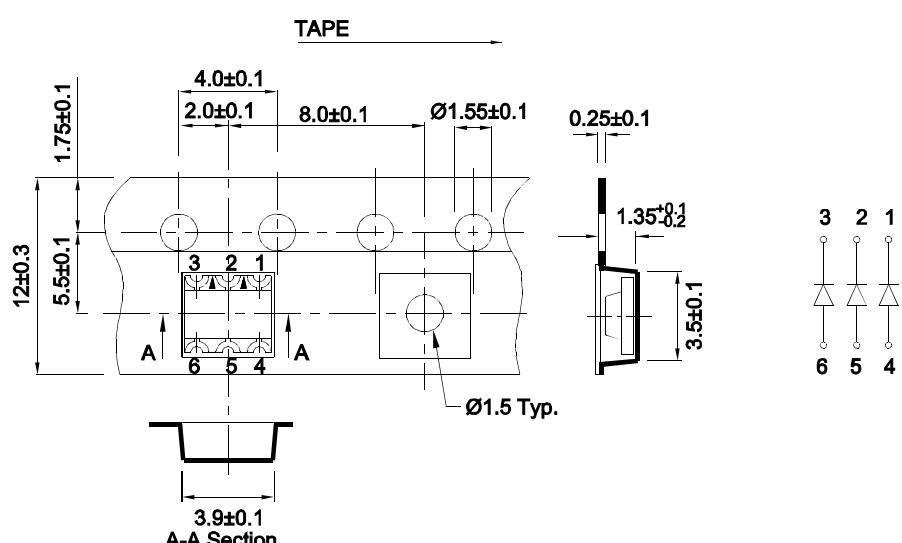
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

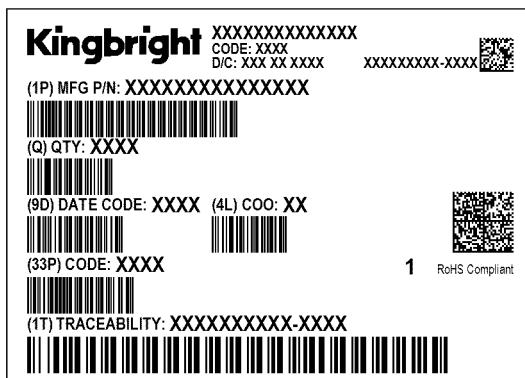
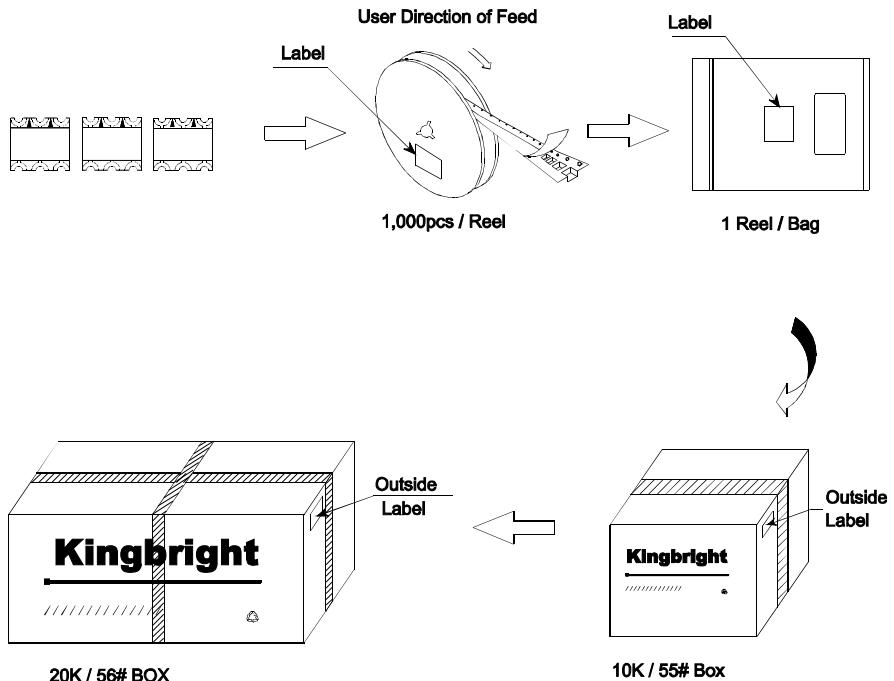


Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APF3236SEEZGKQBKC



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