



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APFA3010SEEZGKQBKC

Hyper Red
Green
Blue

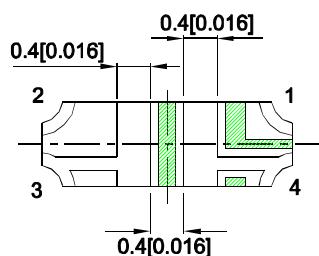
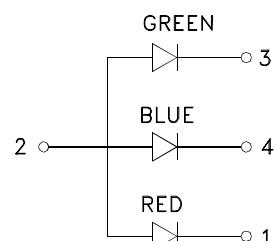
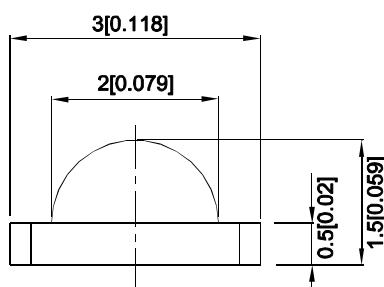
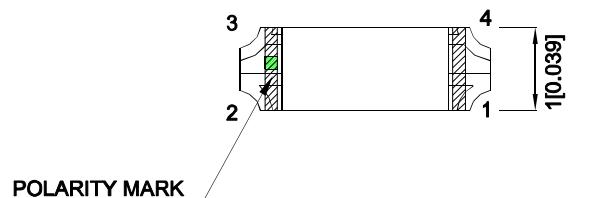
Features

- 3.0mmx1.5mmx1.0mm right angle SMD LED, 1.0mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- RoHS compliant.

Package Dimensions

Descriptions

- 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.
- The Blue source color devices are made with InGaN 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.



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008")$ 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]
			Min.	Typ.	
APFA3010SEEZGKQBKC	Hyper Red (AlGaNp)	Water Clear	80	140	120°
	Green (InGaN)		300	500	
	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 the CIE127-2007 compliant national 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 30 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:

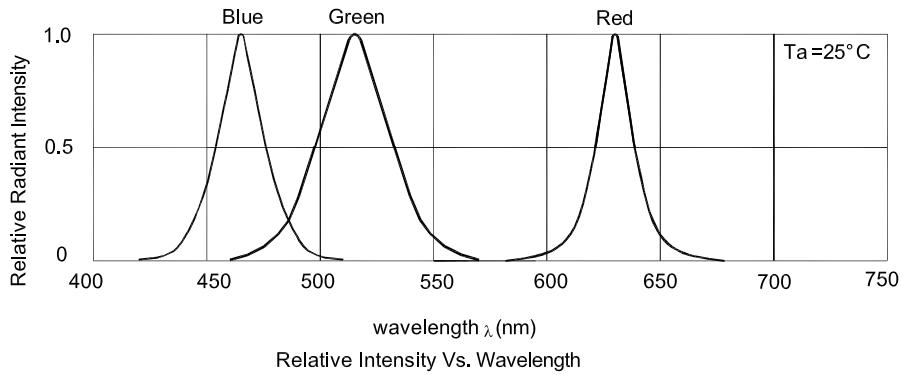
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

Parameter	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		

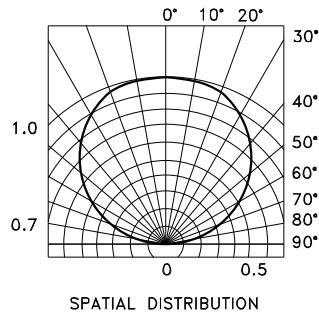
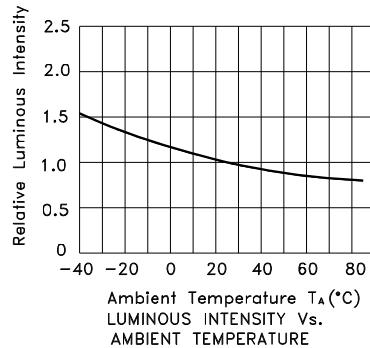
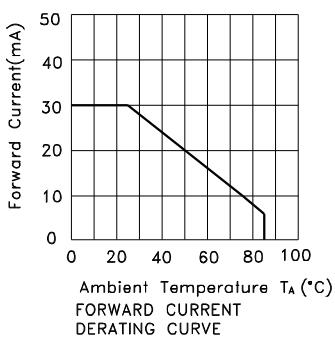
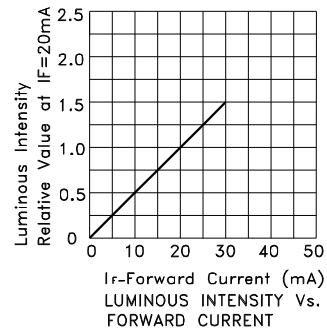
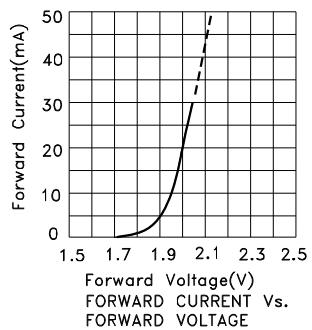
Notes:

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



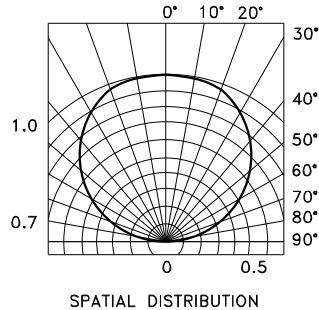
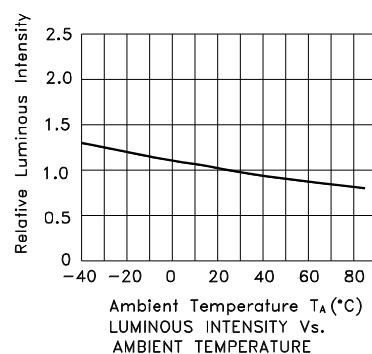
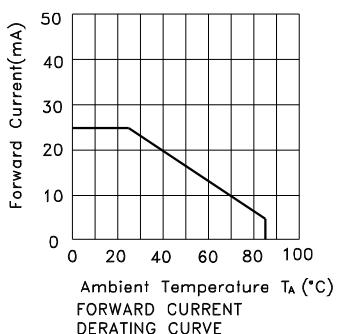
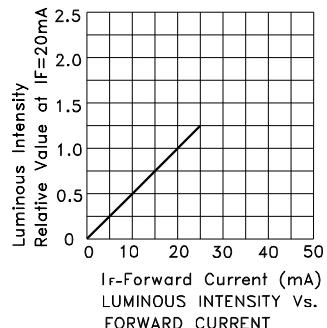
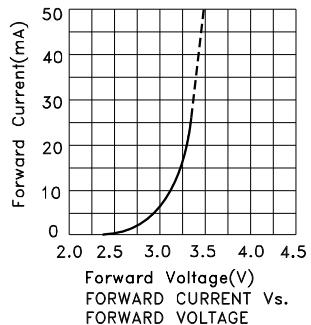
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Hyper Red

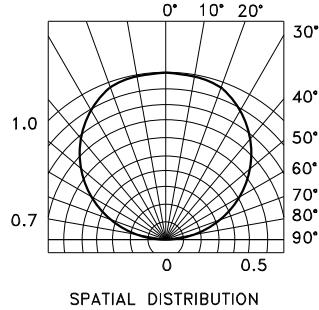
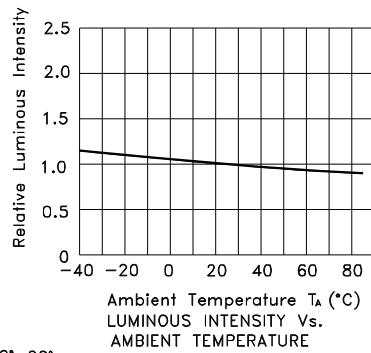
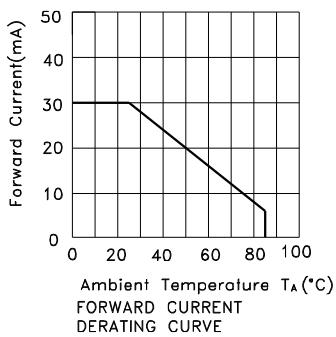
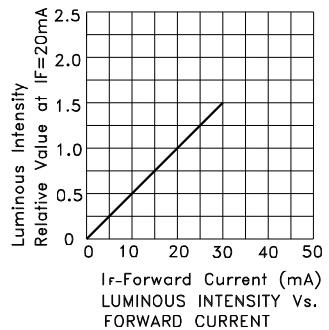
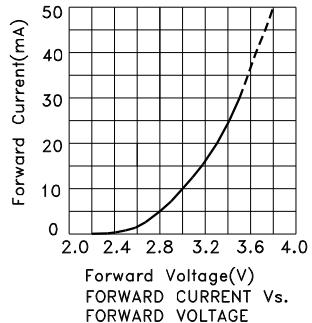


Kingbright

Green



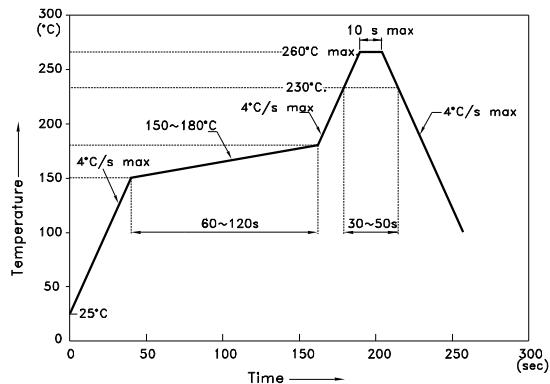
Blue



APFA3010SEEZGKQBKC

**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.

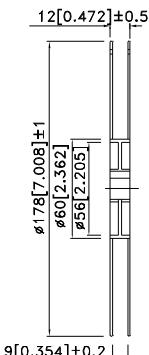
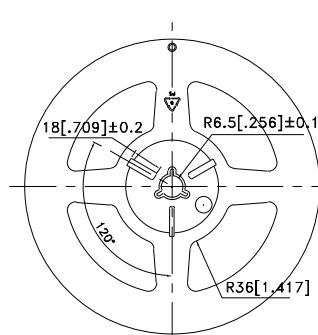
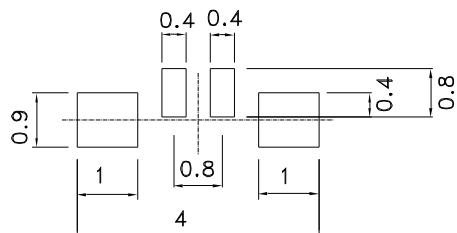


NOTES:

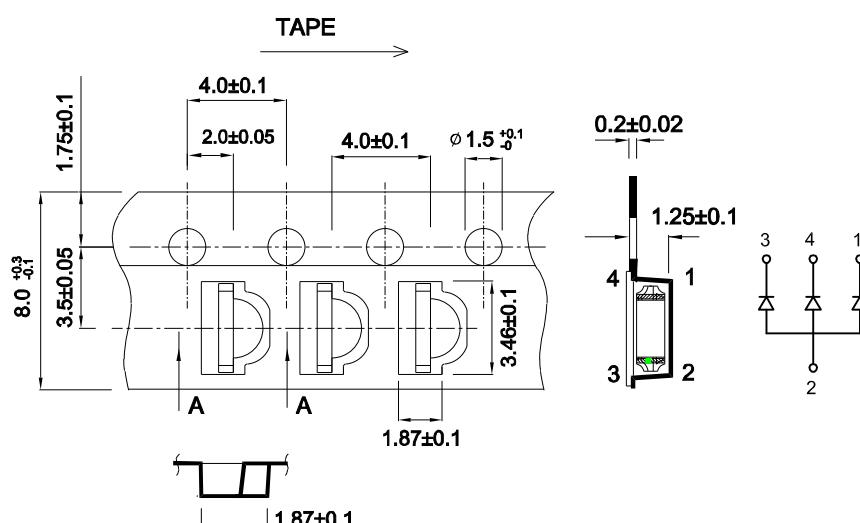
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

Reel Dimension



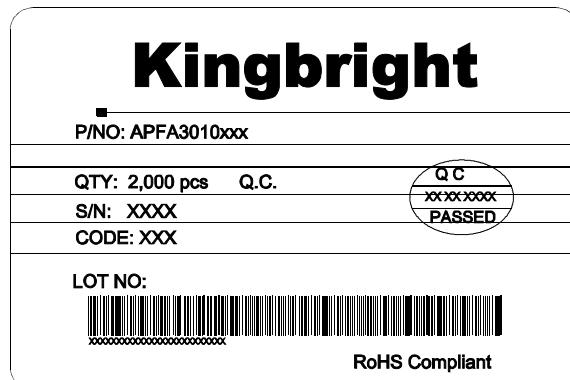
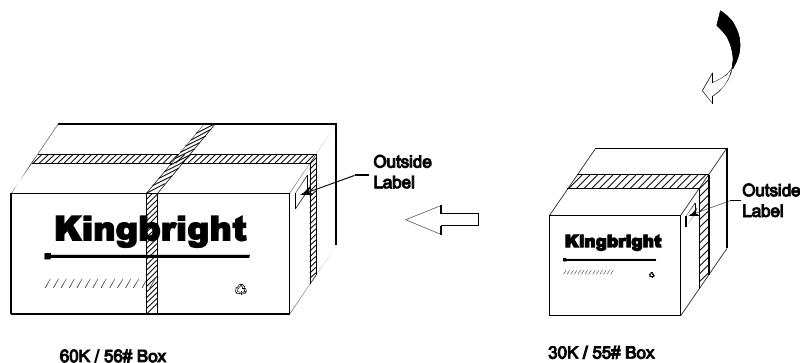
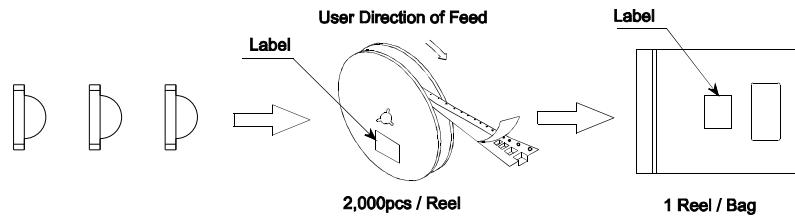
Tape Dimensions (Units : mm)



A-A SECTION

PACKING & LABEL SPECIFICATIONS

APFA3010SEEZGKQBKC



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