

3.0x1.0mm RIGHT ANGLE SMD CHIP LED **LAMP**



ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING **ELECTROSTATIC** DISCHARGE SENSITIVE **DEVICES**

Part Number: APFA3010SURKCGKQBDC

Hyper Red Green Blue

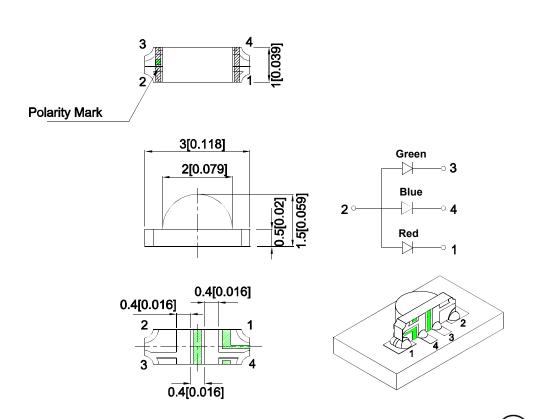
Features

- 3.0x1.5x1.0mm 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.

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

Package Dimensions



SPEC NO: DSAI5391

APPROVED: Wynec

- 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.

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Selection Guide

Part No.	Emitting Color (Material)	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
	Hyper Red (AlGaInP)	Water Clear	120	220	- 120°
			*55	*80	
APFA3010SURKCGKQBDC	Croon (AlColnD)		20	45	
AFFA3010SURKCGKQBDC	Green (AlGaInP)		*20	*45	
	Plue (InCoN)		40	70	
	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%.

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

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Green Blue	645 574 460		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Green Blue	630 570 465		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Green Blue	28 20 25		nm	IF=20mA
С	Capacitance	Hyper Red Green Blue	35 15 100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Green Blue	1.95 2.1 3.3	2.5 2.5 4	V	IF=20mA
lr	Reverse Current	Hyper Red Green Blue		10 10 50	uA	VR=5V

Notes:

- Wavelength: +/-1nm.
 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.

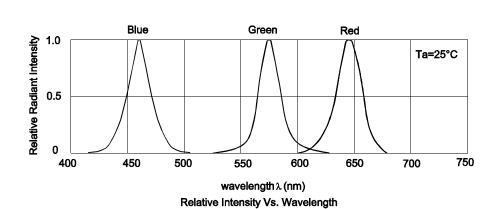
Absolute Maximum Ratings at TA=25°C

Parameter	Hyper Red	Green	Blue	Units	
Power dissipation	75	75	120	mW	
DC Forward Current	30	30	30	mA	
Peak Forward Current [1]	185	150	150	mA	
Electrostatic Discharge Threshold (HBM)	3000	3000	250	V	
Reverse Voltage	5				
Operating Temperature	-40°C To +85°C				
Storage Temperature	-40°C To +85°C				

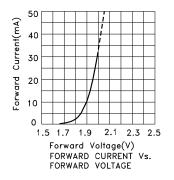
Notes:

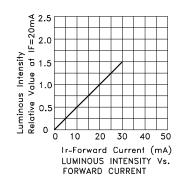
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

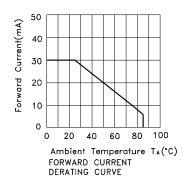
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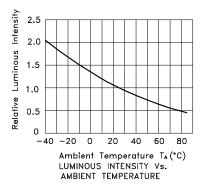


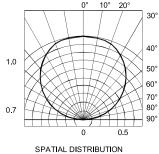
APFA3010SURKCGKQBDC Hyper Red





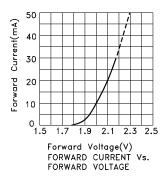


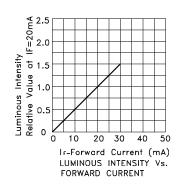


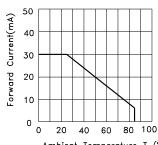


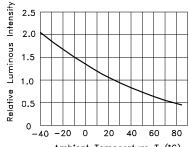
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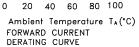
Green



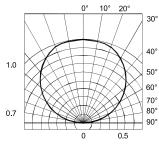








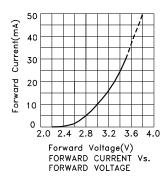


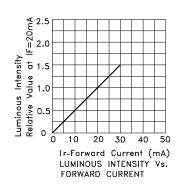


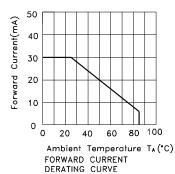
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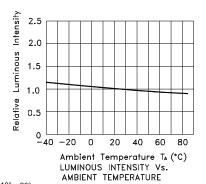
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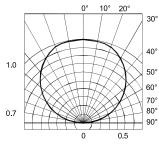
Blue











SPATIAL DISTRIBUTION

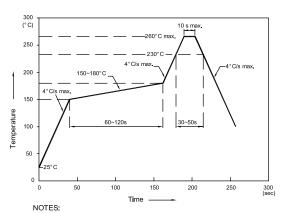
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Reflow soldering is recommended and the soldering profile is shown below. Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.

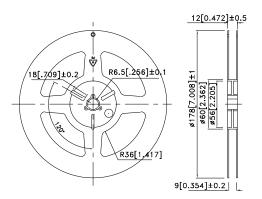


- 1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
- 2.Don't cause stress to the epoxy resin while it is exposed
- to high temperature.
 3.Number of reflow process shall be 2 times or less.

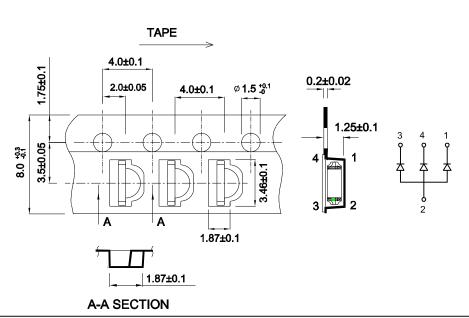
Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)

0.4 0.4

Reel Dimension



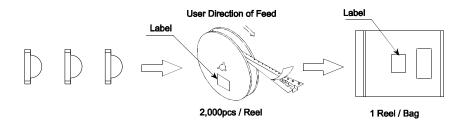
Tape Dimensions (Units : mm)

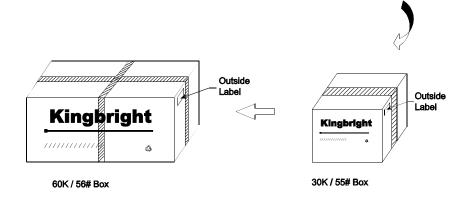


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PACKING & LABEL SPECIFICATIONS

APFA3010SURKCGKQBDC







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