

Part Number: APG0603SEC-E-TT

Hyper-Red

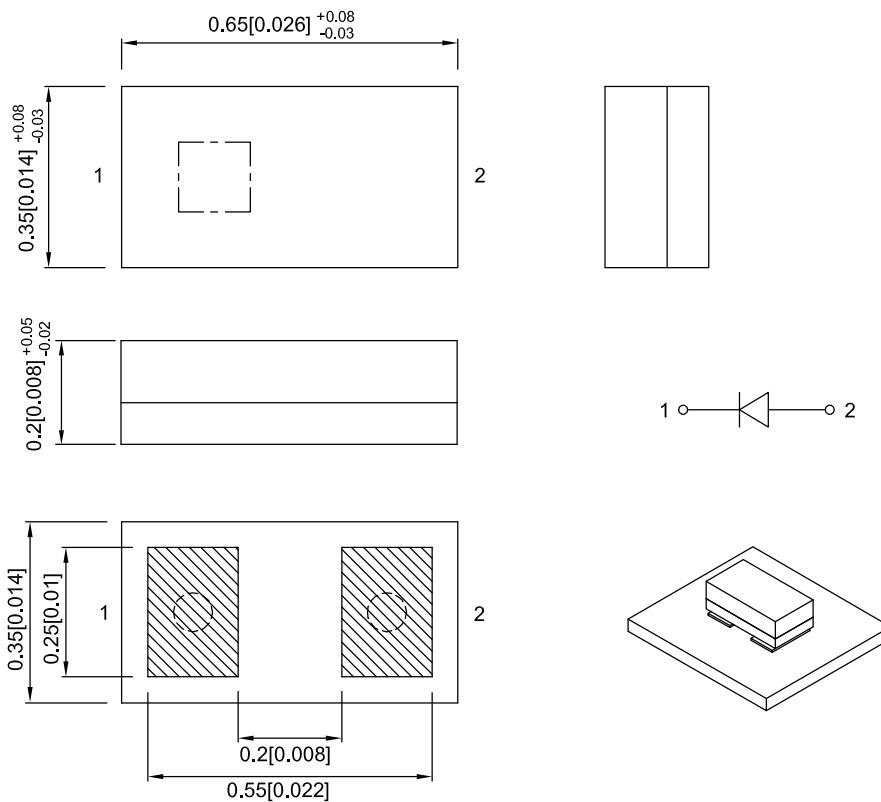
### Features

- 0.65mmX0.35mm SMD LED,0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Package:4000pcs/reel.
- Moisture sensitivity level : level 2.
- RoHS compliant.

### Description

The Hyper-Red source color devices are made with Al-GaNp on GaAs substrate Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1$  (0.004") 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] @ 10mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APG0603SEC-E-TT	Hyper-Red(AlGaInP)	Water Clear	45	120	140°
			*15	*40	

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%.
- \* 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
$\lambda_{peak}$	Peak Wavelength	Hyper-Red	632		nm	IF=10mA
$\lambda_D$ [1]	Dominant Wavelength	Hyper-Red	624		nm	IF=10mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper-Red	20		nm	IF=10mA
V <sub>F</sub> [2]	Forward Voltage	Hyper-Red	1.93	2.4	V	IF=10mA
I <sub>R</sub>	Reverse Current	Hyper-Red		10	uA	V <sub>R</sub> =5V

Notes:

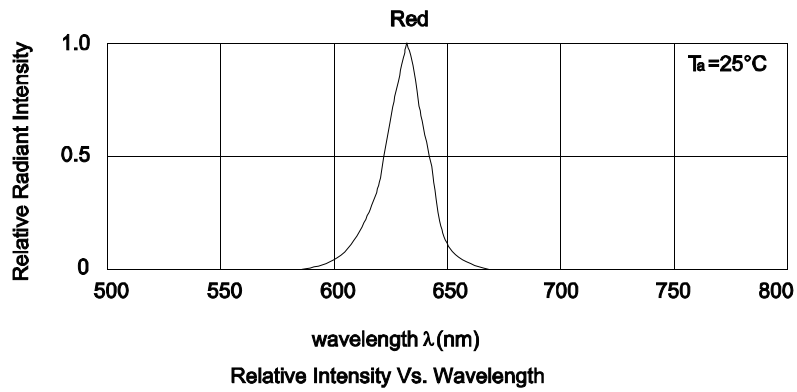
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

Parameter	Values	Units
Power dissipation	48	mW
DC Forward Current	20	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

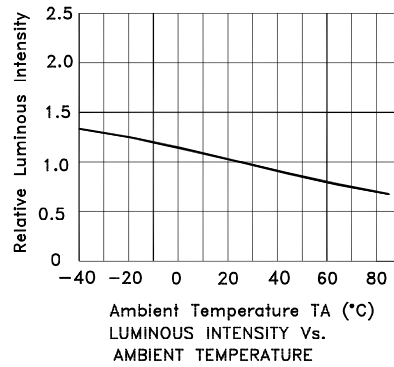
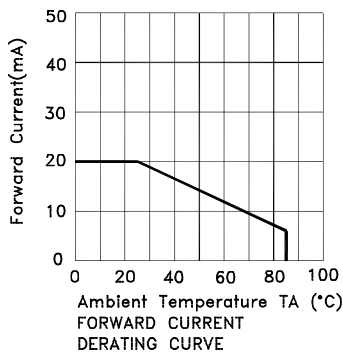
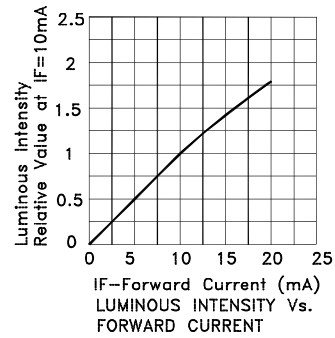
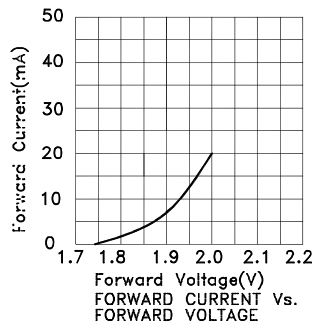
Notes:

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.

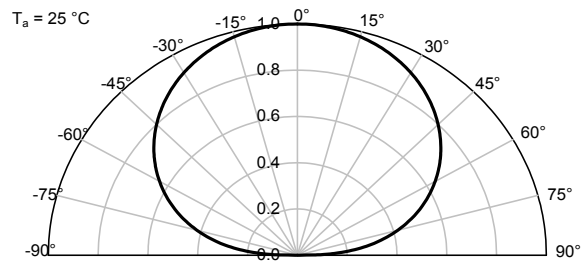


**Hyper-Red**

**APG0603SEC-E-TT**



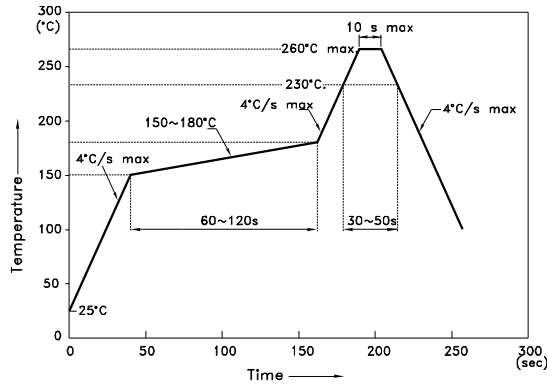
**Spatial Distribution**



## APG0603SEC-E-TT

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.

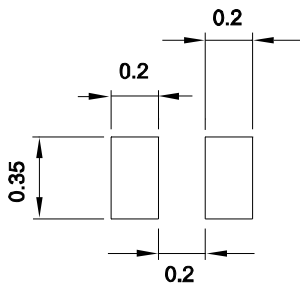
Reflow Soldering Profile For Lead-free SMT Process.



NOTES:

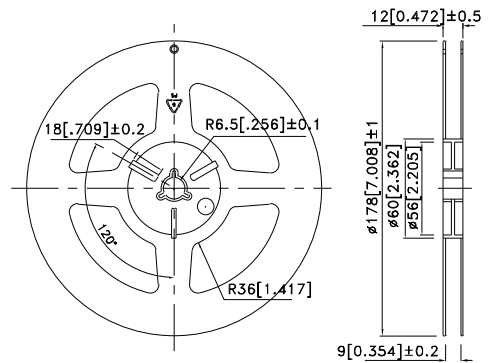
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

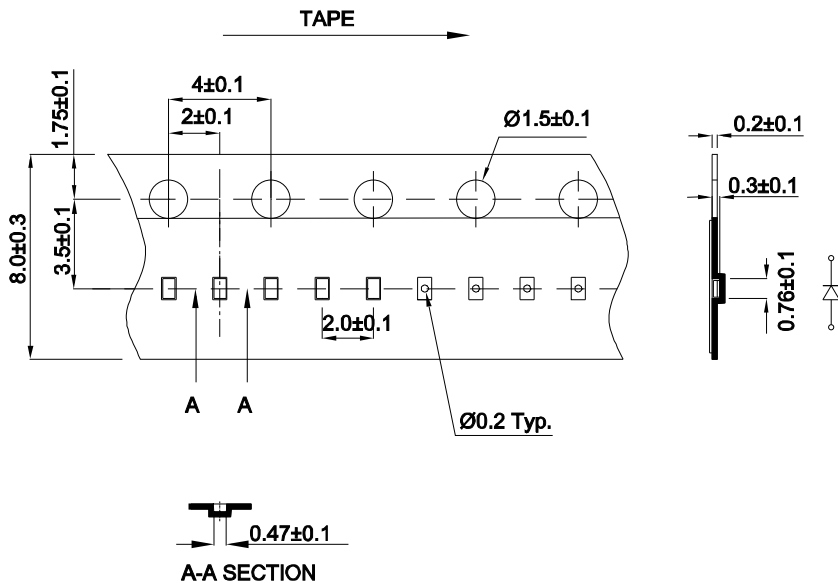


Mask open area ratio: 80%  
Mask thickness: 80~100um

### Reel Dimension

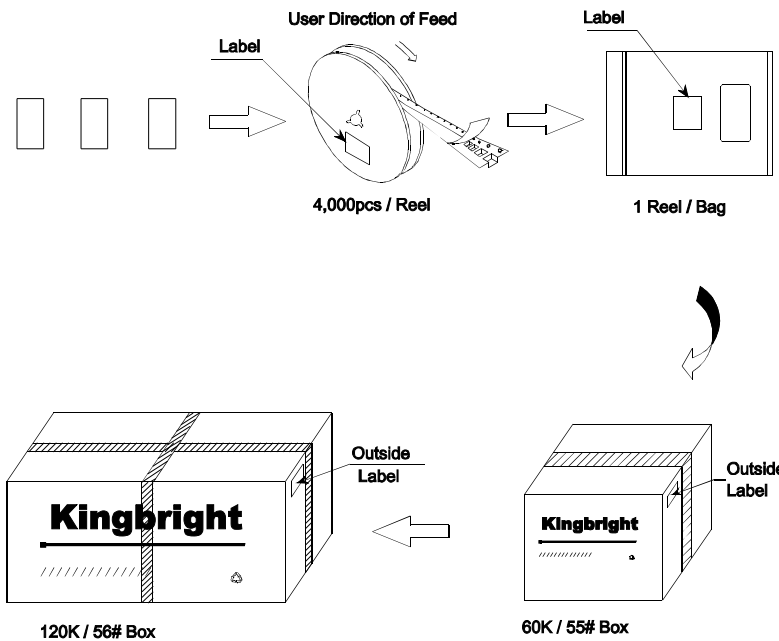


### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

APG0603SEC-E-TT



<b>Kingbright</b>				
P/NO: APG0603xxx				
QTY: 4000 pcs	Q.C.			
S/N: XXXX	<table border="1"> <tr> <td>Q C</td> </tr> <tr> <td>XX XX XXXX</td> </tr> <tr> <td>PASSED</td> </tr> </table>	Q C	XX XX XXXX	PASSED
Q C				
XX XX XXXX				
PASSED				
CODE: XXX				
LOT NO:				
RoHS Compliant				

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