

# APGF0606SEEKCGKCTTC2

0.65 x 0.65 x 0.2 mm Bi-Color Surface Mount LED



# DESCRIPTIONS

- The Hyper-Red source color devices are made with AIGaInP on GaAs substrate Light Emitting Diode
- The Green source color devices are made with AIGaInP on GaAs substrate 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

## **FEATURES**

- 0.65 mm x 0.65 mm SMD LED, 0.2 mm thickness
- · Low power consumption
- Package: 4000 pcs / reel
- · Moisture sensitivity level: 3
- · Halogen-free
- · RoHS compliant

## **APPLICATIONS**

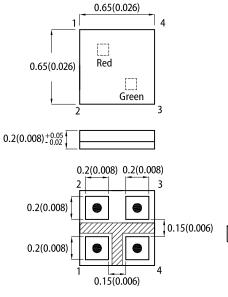
- Backlight
- Status indicator
- · Home and smart appliances
- · Wearable and portable devices
- · Healthcare applications

## **ATTENTION**

Observe precautions for handling electrostatic discharge sensitive devices

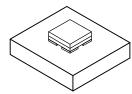


# PACKAGE DIMENSIONS

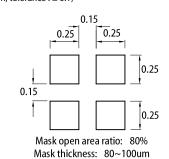








#### **RECOMMENDED SOLDERING PATTERN** (units : mm; tolerance : $\pm 0.1$ )





1. All dimensions are in millimeters (inches).

- Tolerance is ±0.1(0.004") unless otherwise noted.
  The specifications, characteristics and technical data described in the datasheet are subject to

change without prior notice. The device has a single mounting surface. The device must be mounted according to the specifications 4.

## **SELECTION GUIDE**

Part Number	Emitting Color (Material)	Lens Type	lv (mcd) @ 5mA <sup>[2]</sup>		Viewing Angle [1]
			Min.	Тур.	201/2
APGF0606SEEKCGKCTTC2	Hyper Red (AlGaInP)	Water Clear	30	80	- 140°
	Green (AlGaInP)		4	8	140

Notes

- 1. 61/2 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.

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# ELECTRICAL / OPTICAL CHARACTERISTICS at T<sub>A</sub>=25°C

Parameter	Symbol	Emitting Color	Value		l Incid
Parameter		Emitting Color	Тур.	Max.	Unit
Wavelength at Peak Emission $I_F$ = 5mA	$\lambda_{peak}$	Hyper Red Green	632 572	-	nm
Dominant Wavelength $I_F = 5mA$	$\lambda_{dom}$ <sup>[1]</sup>	Hyper Red Green	624 571	-	nm
Spectral Bandwidth at 50% $\Phi$ REL MAX I <sub>F</sub> = 5mA	Δλ	Hyper Red Green	20 20	-	nm
Capacitance	С	Hyper Red Green	25 15	-	pF
Forward Voltage $I_F = 5mA$	V <sub>F</sub> <sup>[2]</sup>	Hyper Red Green	1.95 1.92	2.3 2.3	V
Reverse Current ( $V_R = 5V$ )	I <sub>R</sub>	Hyper Red Green	-	10 10	μA

Notes:

The dominant wavelength (λd) above is the setup value of the sorting machine. (Tolerance λd: ±1nm.)
 Forward voltage: ±0.1V.
 Wavelength value is traceable to CIE127-2007 standards.
 Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

# ABSOLUTE MAXIMUM RATINGS at T<sub>A</sub>=25°C

Demonster	Symbol	Va	1114	
Parameter		Hyper Red	Green	Unit
Power Dissipation	P <sub>D</sub> <sup>[1]</sup>	3	mW	
Reverse Voltage	V <sub>R</sub>	5 5		V
Junction Temperature	Tj	115	115	°C
Operating Temperature	T <sub>op</sub>	-40 to +85		°C
Storage Temperature	T <sub>stg</sub>	-40 to +100		°C
DC Forward Current	I <sub>F</sub> <sup>[2]</sup>	10	10	mA
Peak Forward Current	I <sub>FM</sub> <sup>[3]</sup>	50	50	mA
Electrostatic Discharge Threshold (HBM)	-	3000	3000	V

Notes

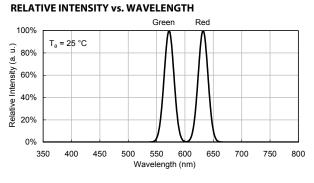
Notes: 1. Within 35mW when multiple chips are lightened 2. The maximum ratings are valid for the case of lighting a single chip When two chips are lit at the same time, each chip should be driven at a current lower than 50% of the absolute maximum ratings 3. Duty Cycle 5 / 1 20, Pulse Width = 1ms. 4. 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.

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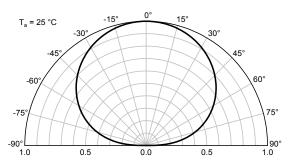
Forward voltage (V)

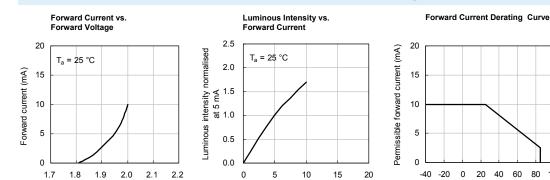
# APGF0606SEEKCGKCTTC2

# **TECHNICAL DATA**



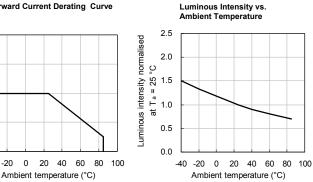
### SPATIAL DISTRIBUTION

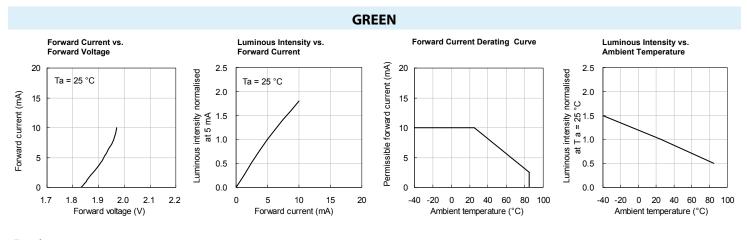




Forward current (mA)

### **HYPER RED**



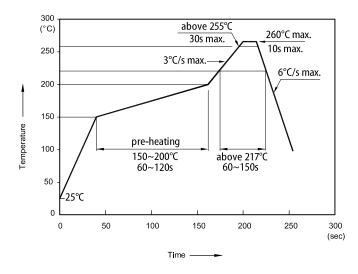


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### **REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS**

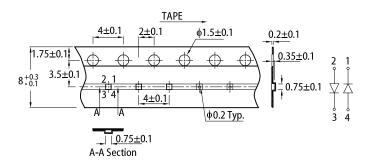
#### TAPE SPECIFICATIONS (units : mm)



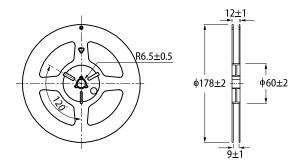
Notes

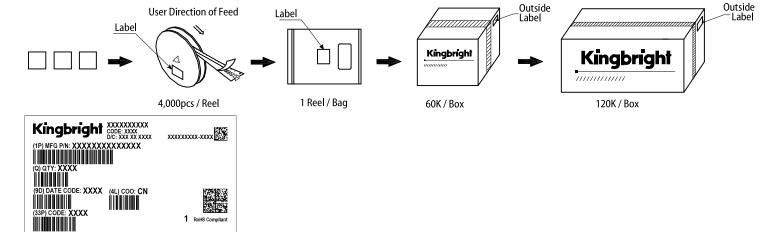
 Don't cause stress to the LEDs while it is exposed to high temperature.
 The maximum number of reflow soldering passes is 2 times.
 Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

## **PACKING & LABEL SPECIFICATIONS**



**REEL DIMENSION** (units : mm)





#### **PRECAUTIONARY NOTES**

- The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications. 2
- 3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits. Kingbright will not be responsible for any subsequent issues. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening
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- 6 Notes