

Part Number: KP-1608F3C

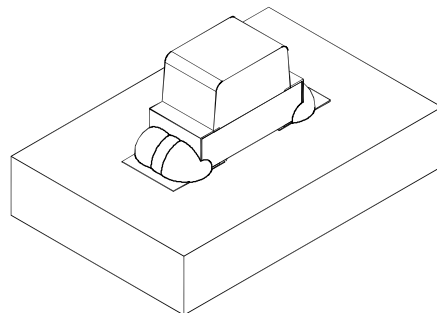
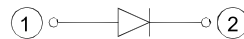
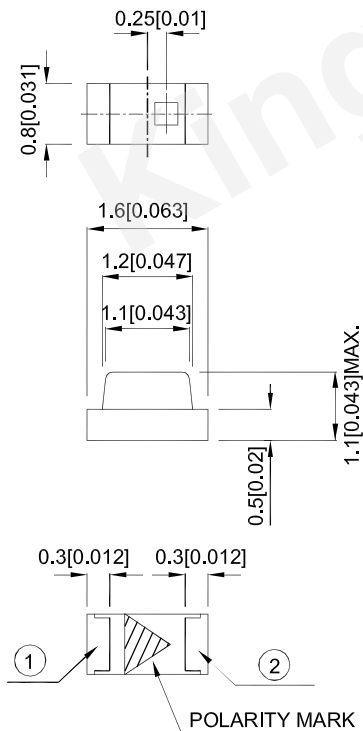
### Features

- 1.6mmX0.8mm SMD LED, 1.1mm thickness.
- Mechanically and spectrally matched to the phototransistor.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

### 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	Po (mW/sr) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KP-1608F3C	Infrared (GaAs)	Water Clear	1.2	3	150°
			*0.8	*2	

**Notes:**

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Radiant Intensity/ luminous flux: +/-15%.
- \* Radiant intensity value is traceable to CIE127-2007 standards.

## Electrical / Optical Characteristics at TA=25°C

Parameter	P/N	Symbol	Typ.	Max.	Units	Test Conditions
Forward Voltage [1]	F3	V <sub>F</sub>	1.2	1.6	V	I <sub>F</sub> =20mA
Reverse Current	F3	I <sub>R</sub>		10	uA	V <sub>R</sub> = 5V
Capacitance	F3	C	90		pF	V <sub>F</sub> =0V;f=1MHz
Peak Spectral Wavelength	F3	λ <sub>P</sub>	940		nm	I <sub>F</sub> =20mA
Spectral Bandwidth	F3	Δλ1/2	50		nm	I <sub>F</sub> =20mA

**Note:**

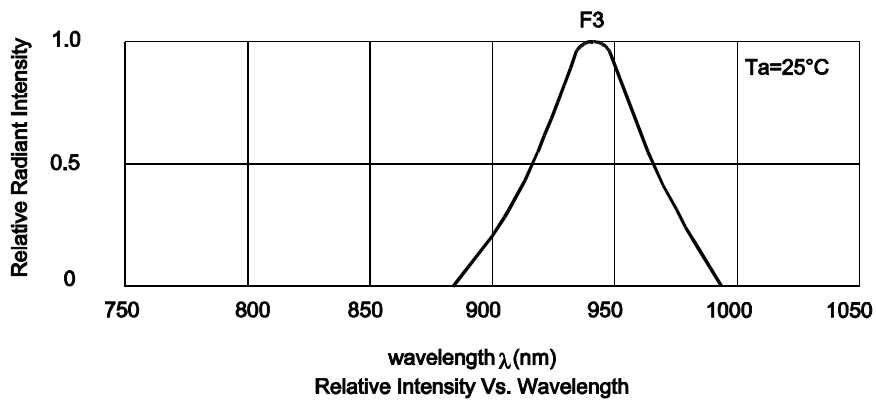
- 1.Forward Voltage: +/-0.1V.
- 2.Wavelength value is traceable to CIE127-2007 standards.
- 3.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

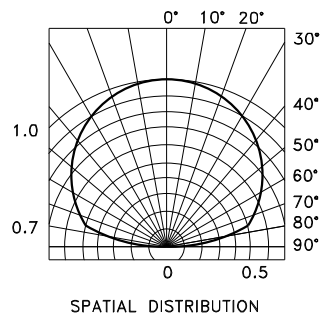
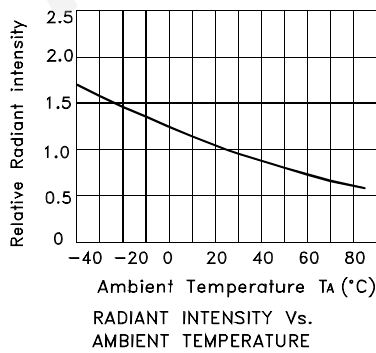
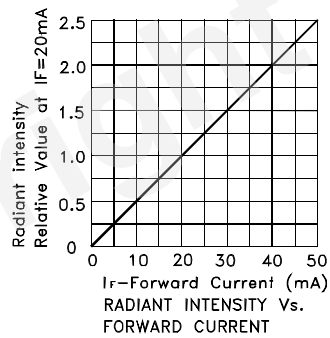
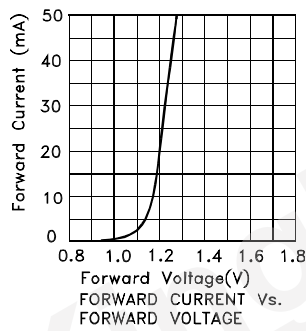
Parameter	Symbol	Values	Units
Power dissipation	P <sub>D</sub>	80	mW
DC Forward Current	I <sub>F</sub>	50	mA
Peak Forward Current [1]	i <sub>FS</sub>	1.2	A
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>A</sub>	-40 To +85	°C
Storage Temperature	T <sub>STG</sub>	-40 To +85	°C

**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.



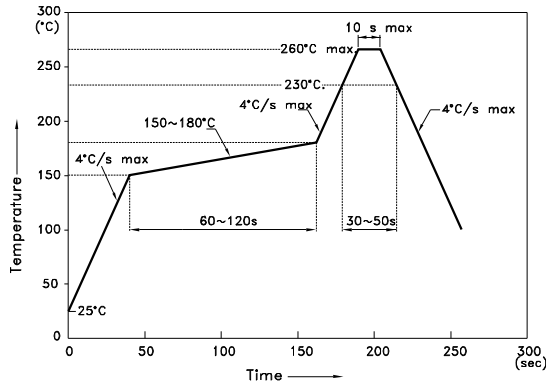
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Reflow soldering is recommended and the soldering profile is shown below.  
Other soldering methods are not recommended as they might cause damage to the product.

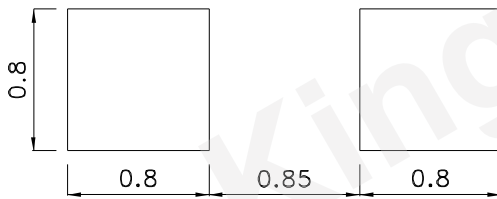
Reflow Soldering Profile For Lead-free SMT Process.



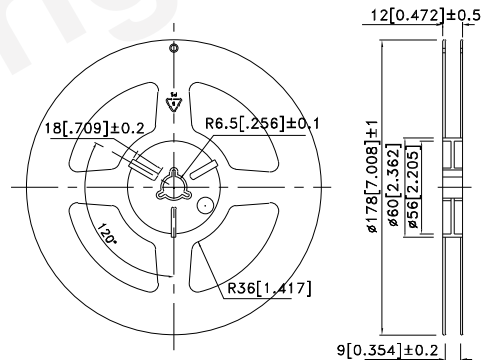
NOTES:

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.

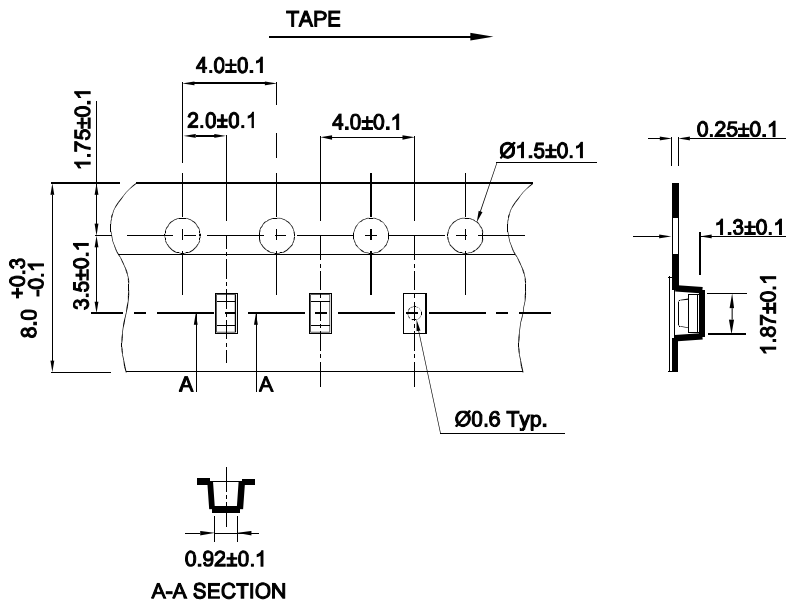
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

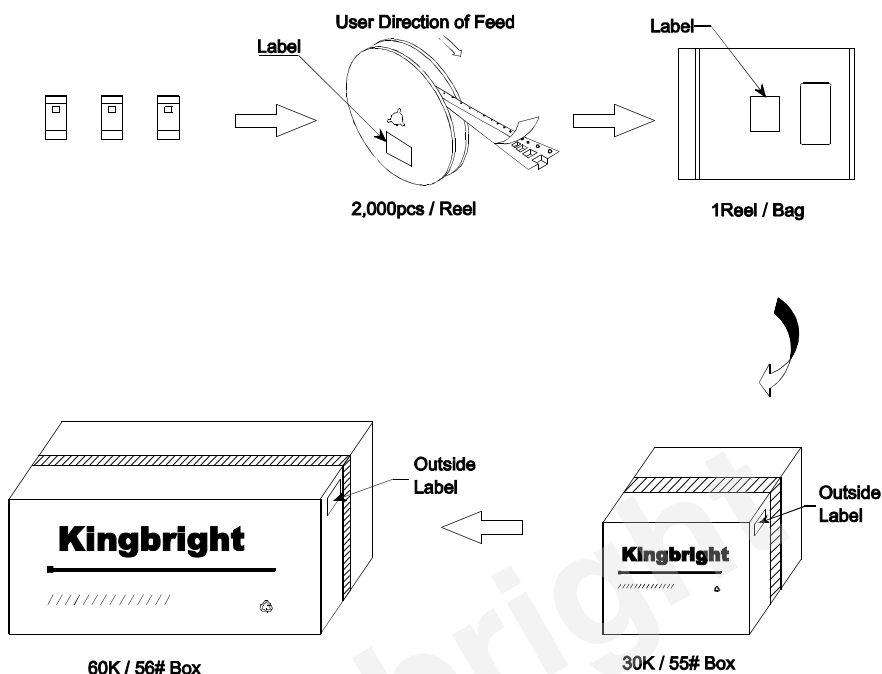



### Tape Specifications (Units : mm)



## PACKING & LABEL SPECIFICATIONS

KP-1608F3C



<b>Kingbright</b>		
P/NO: KP-1608XXX		
QTY: 2,000 pcs	Q.C.	Q C XXXXXXXXXX PASSED
S/N: XXXX		
CODE: XXX		
LOT NO:		
 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx		
RoHS Compliant		

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1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. 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.
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