

Part Number: KP-2012SF4C

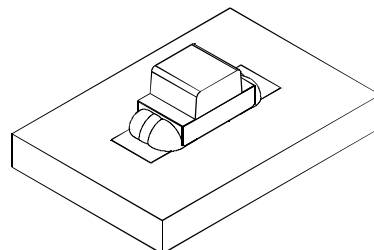
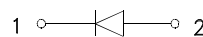
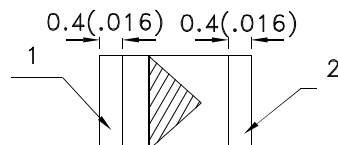
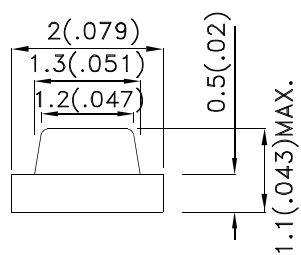
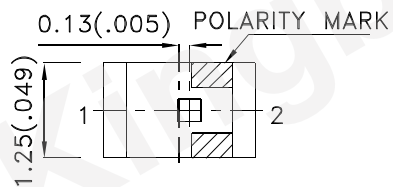
Features

- 2.0mmx1.25mm SMT LED, 1.1mm thickness.
- Mechanically and spectrally matched to the phototransistor.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

SF4 Made with Gallium Aluminum Arsenide Infrared Emitting diodes.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 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.	Dice	Lens Type	Po (mW/sr) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KP-2012SF4C	SF4 (GaAlAs)	Water Clear	0.8	1.5	120°

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%.
3. Radiant Intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Parameter	P/N	Symbol	Typ.	Max.	Units	Test Conditions
Forward Voltage [1]	SF4	V _F	1.3	1.6	V	I _F =20mA
Reverse Current	SF4	I _R		10	μA	V _R = 5V
Capacitance	SF4	C	90		pF	V _F =0V;f=1MHz
Peak Spectral Wavelength	SF4	λ _P	880		nm	I _F =20mA
Spectral Bandwidth	SF4	Δλ1/2	50		nm	I _F =20mA

Note:

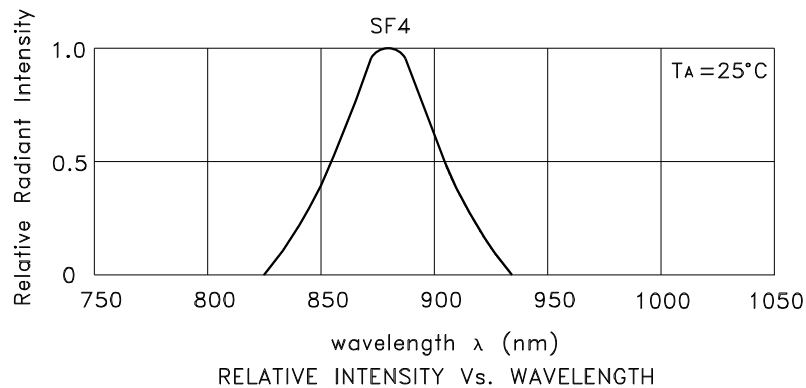
1. Forward Voltage: +/-0.1V.
2. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

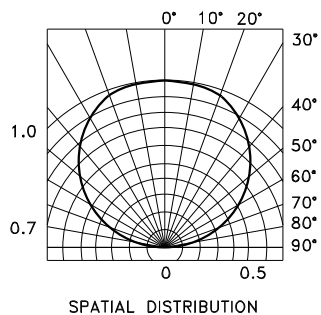
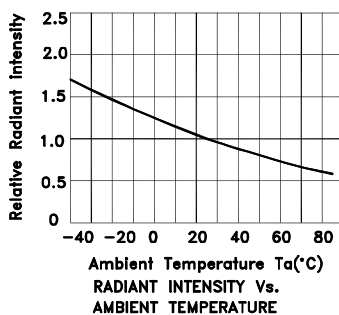
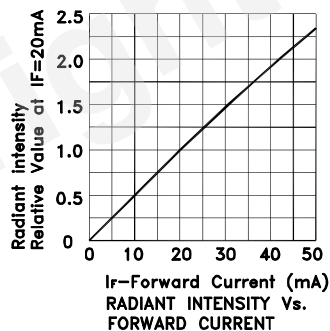
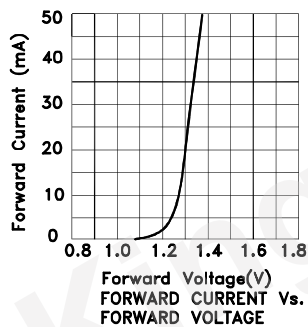
Parameter	Symbol	SF4	Units
Power dissipation	P _D	80	mW
DC Forward Current	I _F	50	mA
Peak Forward Current [1]	i _{FS}	1.2	A
Reverse Voltage	V _R	5	V
Operating Temperature	T _A	-40 To +85	°C
Storage Temperature	T _{STG}	-40 To +85	°C

Note:

1. 1/100 Duty Cycle, 10μs Pulse Width.



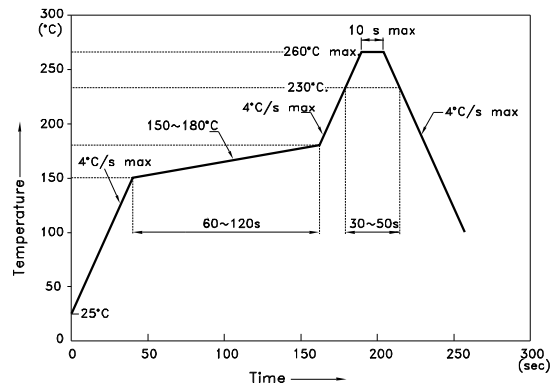
KP-2012SF4C



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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.

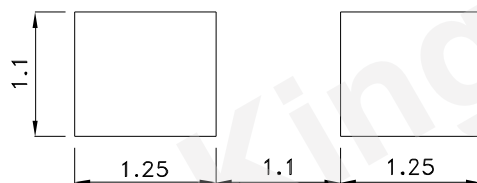
Reflow Soldering Profile For Lead-free SMT Process.



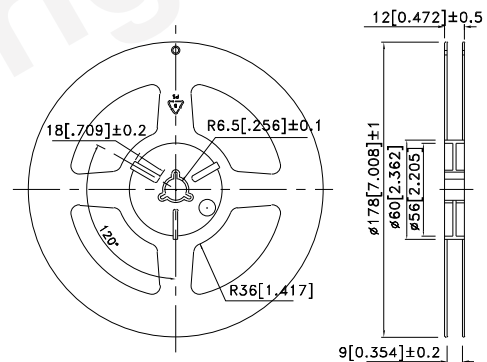
NOTES:

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.

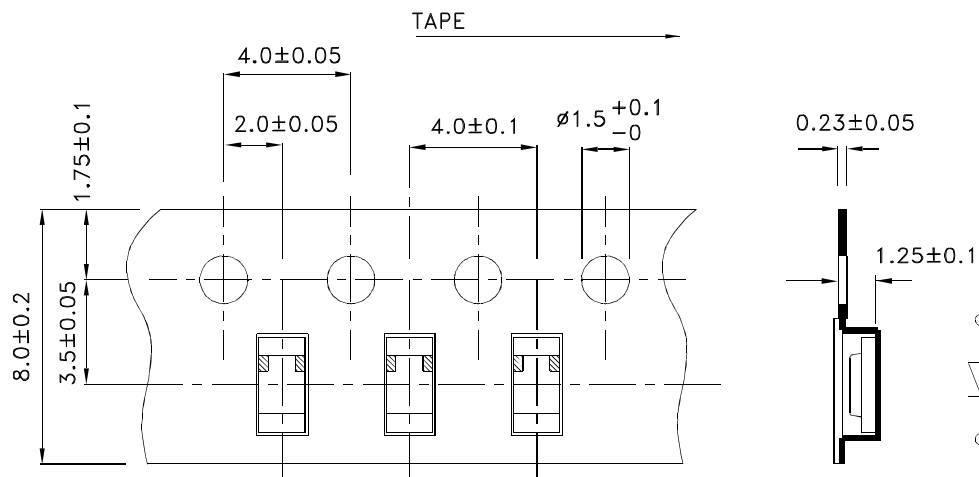
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

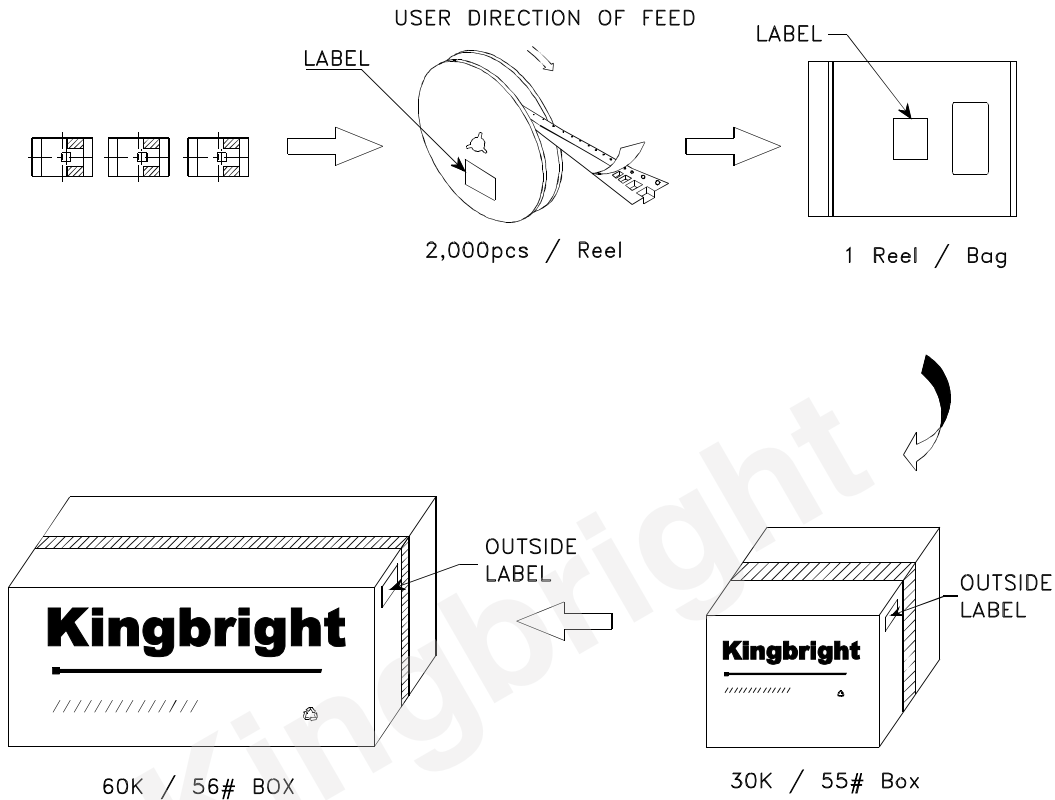



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KP-2012SF4C



Kingbright	
P/NO: KP-2012xxx	
QTY: 2,000 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes