

Kingbright

2.0x1.25mm INFRA-RED EMITTING DIODE

AP2012SF4C

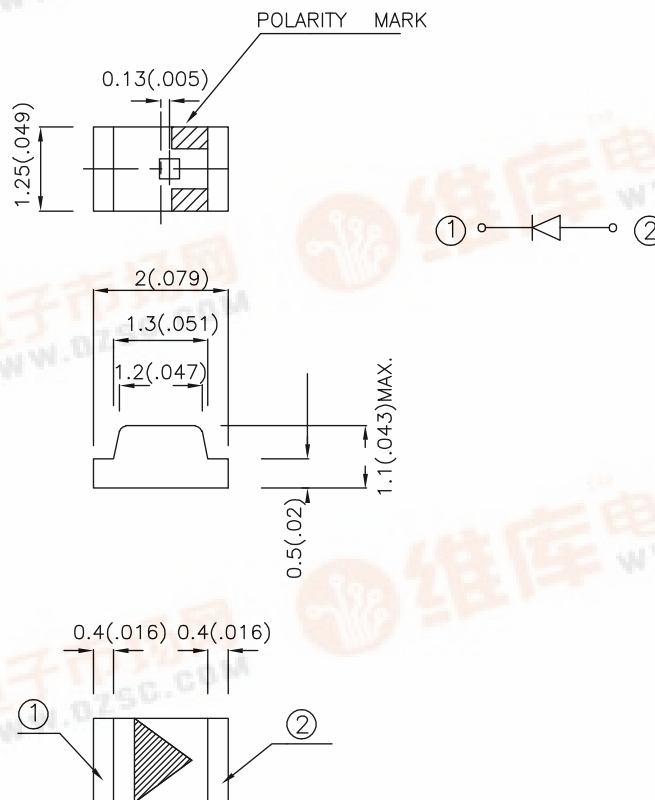
Features

- 2.0mmx1.25mm SMT LED, 1.1mm THICKNESS.
- MECHANICALLY AND SPECTRALLY MATCHED TO THE PHOTOTRANSISTOR.
- WATER CLEAR LENS.
- PACKAGE: 2000PCS / REEL.
- 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 $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.



Selection Guide

Part No.	Dice	Lens Type	Po (mW/sr) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
AP2012SF4C	SF4(GaAlAs)	WATER CLEAR	0.4	1	120°

Note:

1.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at TA=25°C

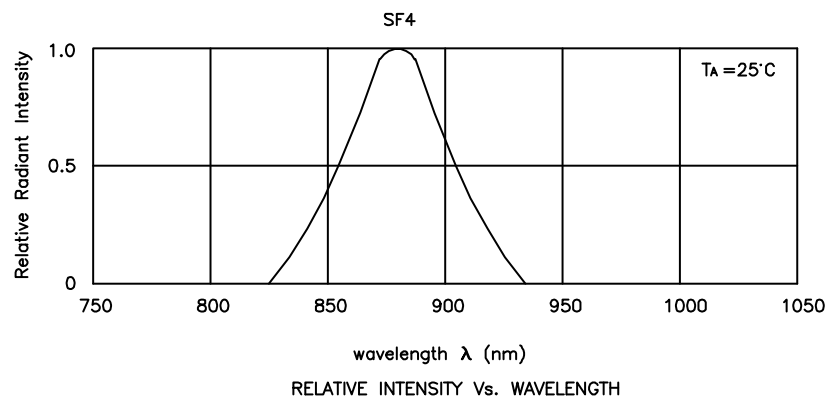
Item	P/N	Symbol	Typ.	Max.	Units	Test Conditions
Forward Voltage	SF4	VF	1.3	1.6	V	IF=20mA
Reverse Current	SF4	IR	-	10	uA	VR=5V
Capacitance	SF4	C	90	-	pF	VF=0V;f=1MHz
Peak Spectral Wavelength	SF4	λP	880	-	nm	IF=20mA
Spectral Bandwidth	SF4	Δλ1/2	50	-	nm	IF=20mA

Absolute Maximum Ratings at TA=25°C

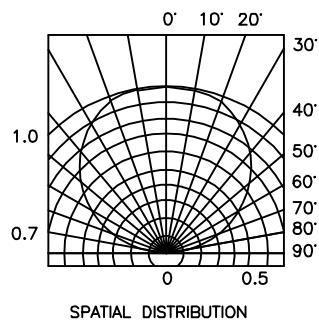
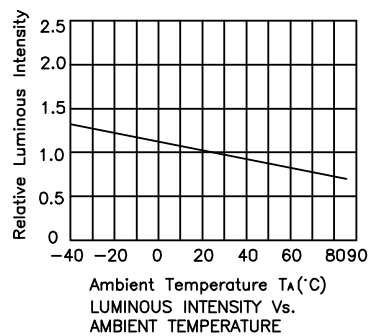
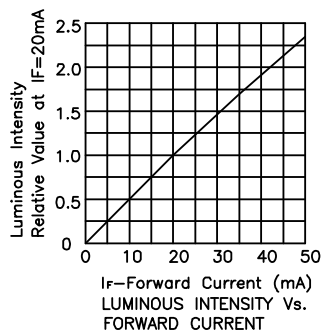
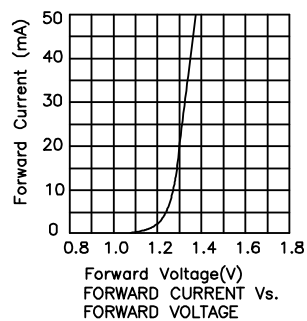
Parameter	Symbol	SF4	Units
Power Dissipation	PT	100	mW
DC Forward Current	IF	50	mA
Peak Forward Current[1]	iFS	1.2	A
Reverse Voltage	VR	5	V
Operating Temperature	TA	-40 To +85	°C
Storage Temperature	TSTG	-40 To +85	°C

Note:

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

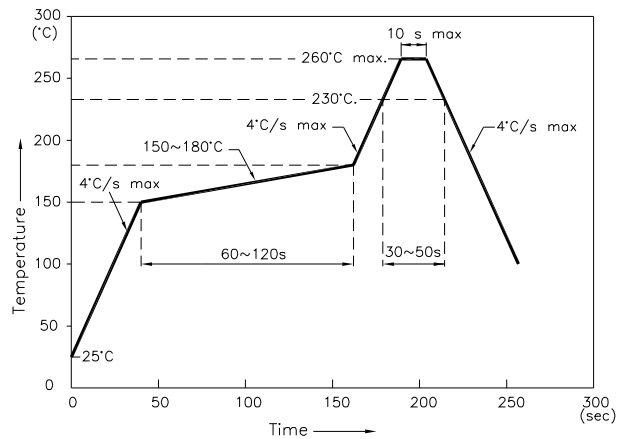


AP2012SF4C



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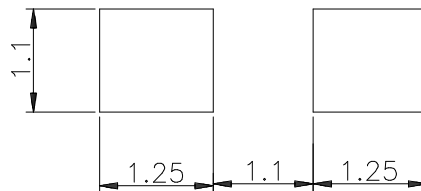
Reflow Soldering Profile For Lead-free SMT Process.



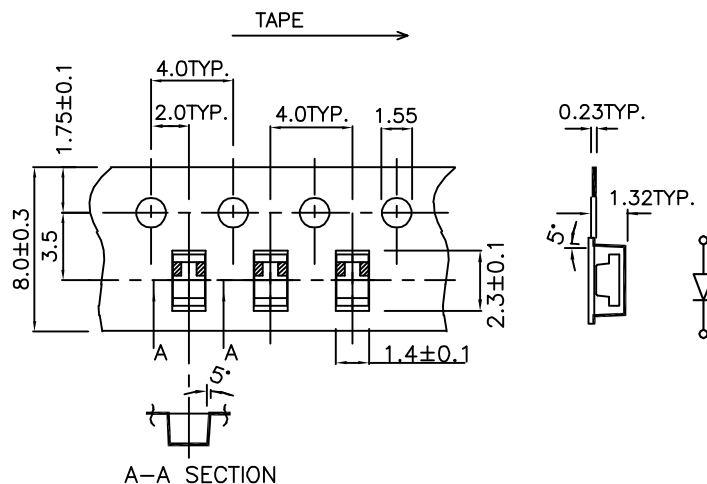
NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. 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)



Tape Specifications (Units : mm)



Remarks:

If special sorting is required (e.g. binning based on forward voltage or radiant intensity), the typical accuracy of the sorting process is as follows:

1. Radiant Intensity: $\pm 15\%$
2. Forward Voltage: $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.