Kingbright

INFRA-RED EMITTING DIODE

KM2520SF4C03

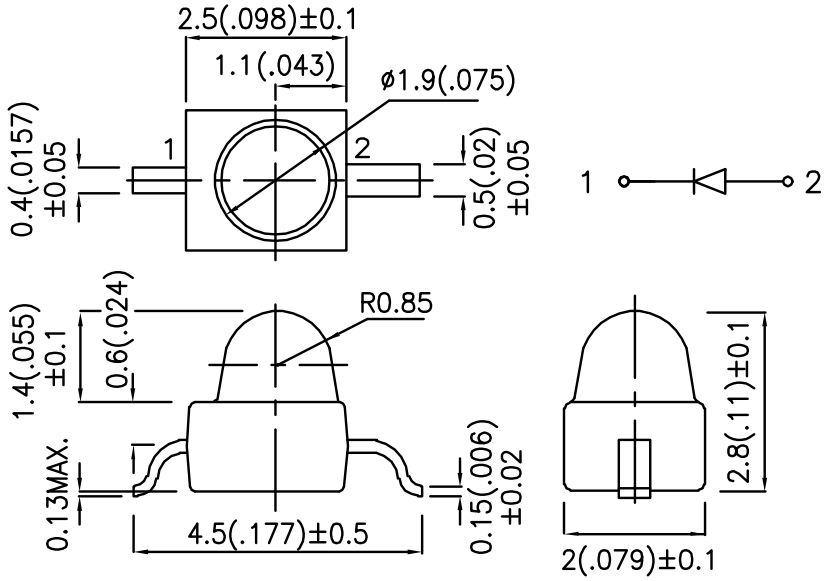
Features

- SUBMINIA TURE PACKAGE.
- GULL WING .
- MECHANICALLY AND SPECTRALLY MATCHED TO THE PHOTOTRANSISTOR.
- PACKAGE : 1000PCS / 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 ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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Selection Guide

Part No.	Dice	Lens Type	Po (mW/sr) @ 20mA *50mA		Viewing Angle
			Min.	Typ.	2θ1/2
KM2520SF4C03	SF4 (GaAlAs)	WATER CLEAR	1.6	4	20°
			*2.6	*8	

Notes:
1.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. * Luminous intensity with asterisk is measured at 50mA.

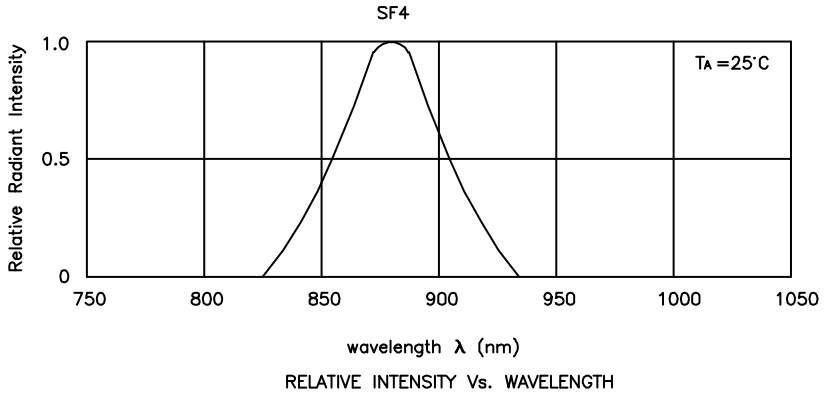
Electrical / Optical Characteristics at T_A=25°C

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

Absolute Maximum Ratings at T_A=25°C

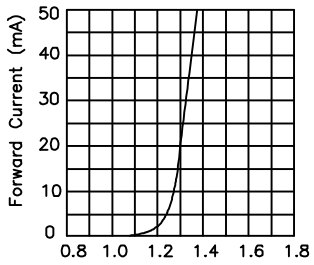
Parameter	Symbol	SF4	Units
Power Dissipation	P_T	100	mW
DC Forward Current	I_F	50	mA
Peak Forward Current[1]	i_{FS}	1.2	A
Reverse Voltage	V_R	5	V
Operating Temperature	T_A	-40 To +85	°C
Storage Temperature	T_{STG}	-40 To +85	°C

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

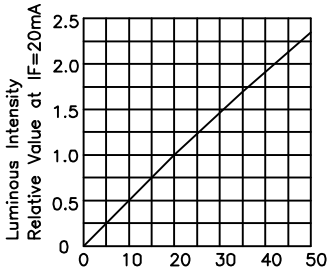


RELATIVE INTENSITY Vs. WAVELENGTH

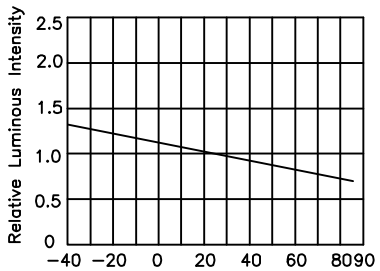
KM2520SF4C03



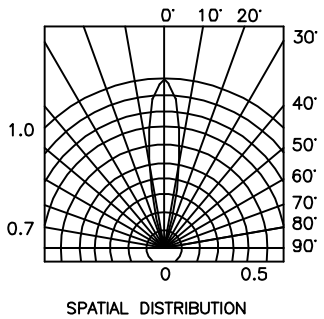
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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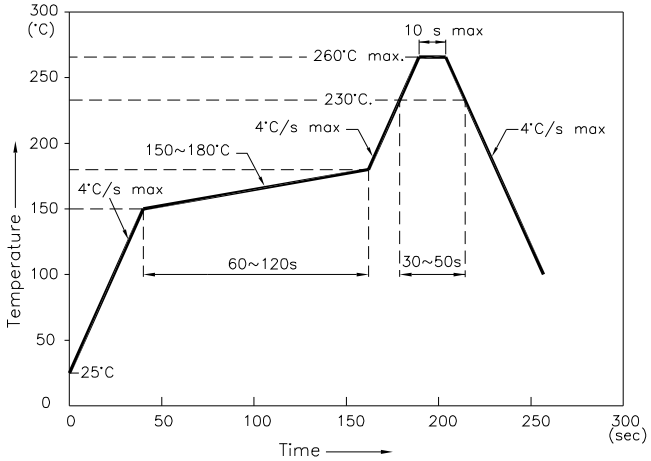
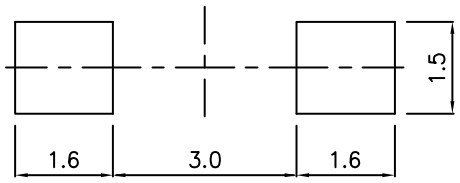
Reflow Soldering Profile For Lead-free SMT Process.



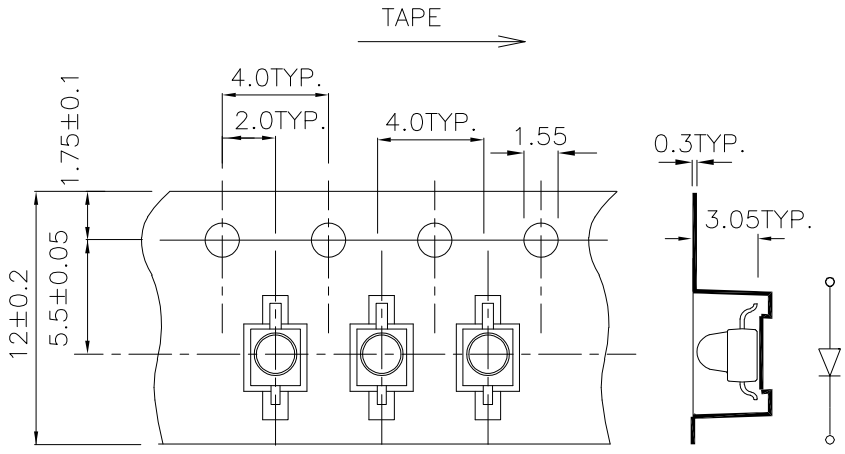
NOTES:

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)



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: +/-15%
2. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

Mouser Electronics

Authorized Distributor

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