SEME LAB

SMP400G-X3

MECHANICAL DATA
Dimensions in inches.

P.I.N. PHOTODIODE

0.175
0.205

0.170
0.210

0.500 Min.

0.015
0.018
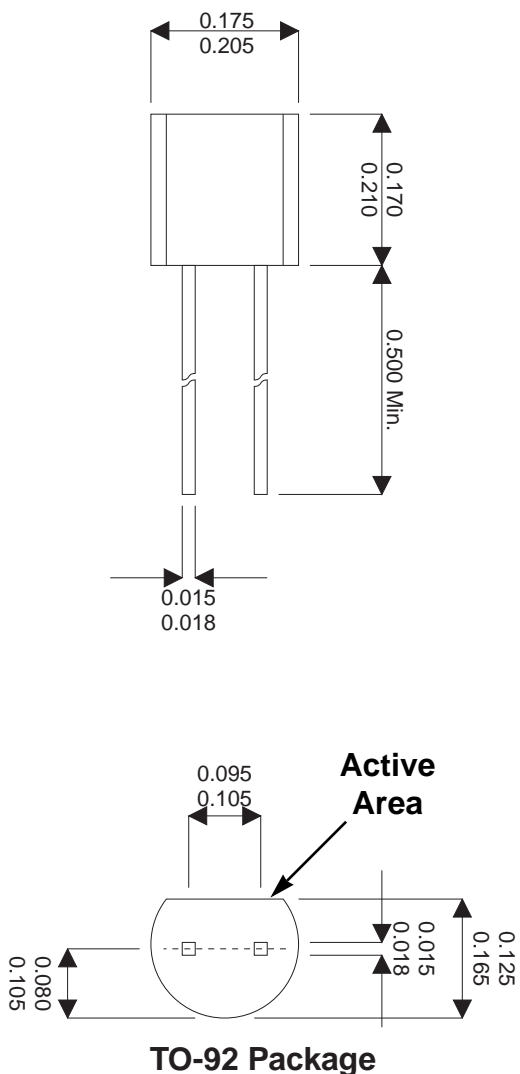
FEATURES
- RED PLASTIC ENCAPSULATED PACKAGE
- 0.1" (2.54mm) LEAD SPACING
- BUILT IN FILTER
- LOW DARK CURRENT

DESCRIPTION

The SMP400G-X3 is a silicon PIN photodiode which is incorporated in a red plastic package which simultaneously serves as a filter and is also transparent for the red to infra-red emission.The terminals are solder tabs with 0.1" (2.54mm) spacing. Due to its design the diode can be assembled vertically on PC board.

Arrays can be realised by multiple arrangements.This versatile photo detector can be used as a diode as well as a voltage cell.

The signal / noise ratio is particularly favourable , even at low illuminances.

The PIN photodiode is outstanding for low junction capacitance , high cut off frequency and short switching time. It is particularly suitable for IR sound transmission and remote control.
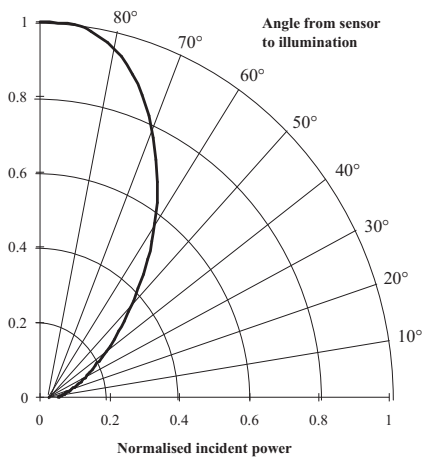
0.095
0.105

Active Area

0.080
0.105

0.015
0.018

0.125
0.165

TO-92 Package

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

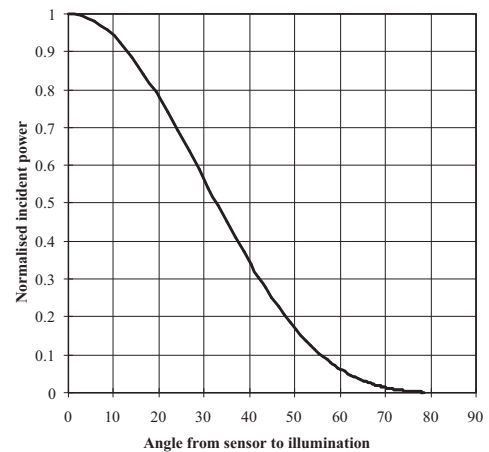|	
Operating temperature range	-40°C to +70°C
Storage temperature range	-45°C to +80°C
Temperature coefficient of responsively	0.35% per °C
Temperature coefficient of dark current	x2 per 8°C rise
Reverse Breakdown Voltage	60V

Semelab plc. Telephone (01455) 556565. Telex: 341927. Fax (01455) 552612.

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CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.		Min.	Typ.	Max.	Units
Responsively	λ at 900nm		0.45	0.55		A/W
Active Area				0.62		mm^2
Dark Current	E = 0 Dark	1V Reverse		0.1	1.0	nA
	E = 0 Dark	10V Reverse		0.5	2.5	
Breakdown Voltage	E = 0 Dark	10µA Reverse	60	80		V
Capacitance	E = 0 Dark	0V Reverse		8	12	pF
	E = 0 Dark	20V Reverse		1.5	2.5	
Rise Time	30V Reverse 50Ω			4		ns
NEP	900nm			7.2		W/√Hz

Directional characteristics

Angle from sensor to illumination
Normalised incident power

Directional Characteristics

Angle from sensor to illumination

Spectral Response

Wavelength (nm)

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