

SMP550G-EK

MECHANICAL DATA

Dimensions in mm.

WINDOW Ø 9.1 ± 0.2 Ø 8.1 ± 0.1 SENSITIVE SURFACE Ø 0.45 LEAD 5.08 ± 0.2

TO-39 Package

Pin 1 – Anode

Pin 2 - Cathode & Case

P.I.N. PHOTODIODE

FEATURES

- EXCELLENT LINEARITY
- LOW NOISE
- WIDEST SPECTRAL RESPONSE
- ENHANCED UV SENSITIVITY
- LOW LEAKAGE CURRENT
- LOW CAPACITANCE
- INTEGRAL OPTICAL FILTER OPTION note 1
- TO39 HERMETIC METAL CAN PACKAGE
- EMI SCREENING MESH AVAILABLE

Note 1 Contact Semelab Plc for filter options

DESCRIPTION

The SMP550G-EK is a Silicon P.I.N. photodiode incorporated in a hermetic metal can package. The package window has greater ultra-violet light transmission, thus extending the useful spectral range of the device. The electrical terminations are via two leads of diameter 0.018" on pitch of 0.2". The cathode of the photodiode is electrically connected to the package.

The larger photodiode active area provides greater sensitivity than the SMP400 range of devices, with a corresponding reduction in speed. The photodiode structure has been optimised for high sensitivity, light measurement applications across the infra-red to ultraviolet spectrum. Inclusion of a suitable optical filter into the package can produce a device that responds only to ultraviolet light. The metal can and optional screening mesh ensure a rugged device with a high degree of immunity to radiated electrical interference.

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

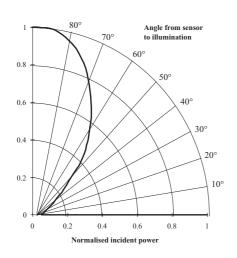


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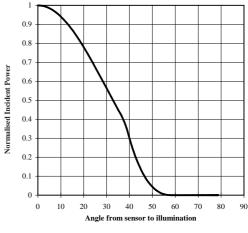
CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.		Min.	Тур.	Max.	Units
Responsively	λ at 900nm		0.45	0.55		A/W
Active Area				5.19		mm²
Dark Current	E = 0 Dark	1V Reverse		2	4	nA
	E = 0 Dark	10V Reverse		16	22	
Breakdown Voltage	E = 0 Dark	10µA Reverse	60	80		V
Capacitance	E = 0 Dark	0V Reverse		55		pF
	E = 0 Dark	20V Reverse		10		
Rise Time	30V Reverse		9			ns
	50Ω			9		113
NEP	900nm			19x10 ⁻¹⁴	0.45	W/√Hz

Directional characteristics



Directional Characteristics



Spectral Response

