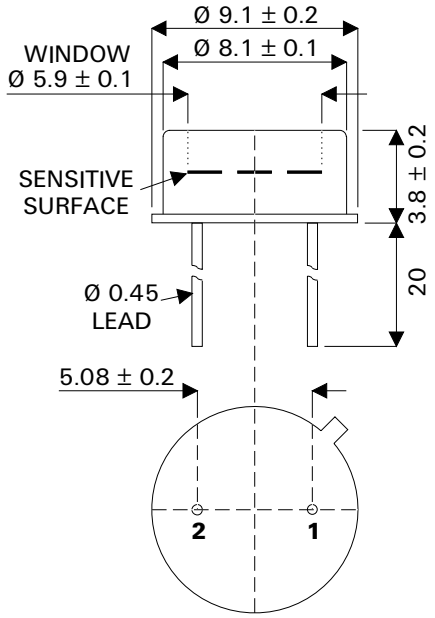
SMP550G-EL

MECHANICAL DATA
Dimensions in mm.

P.I.N. PHOTODIODE



TO-39 Package

Pin 1 – Anode Pin 2 – Cathode & Case.

FEATURES

- **EYE RESPONSE DETECTION**
- **EXCELLENT LINEARITY**
- **LOW NOISE**
- **WIDE SPECTRAL RESPONSE**
- **LOW LEAKAGE CURRENT**
- **LOW CAPACITANCE**
- **BG18 INTEGRAL OPTICAL FILTER**
- **TO39 HERMETIC METAL CAN PACKAGE**
- **EMI SCREENING MESH AVAILABLE**

DESCRIPTION

The SMP550G-EL is a Silicon P.I.N. photodiode incorporated in a hermetic metal can package. The electrical terminations are via two leads of diameter 0.018" on a pitch centre diameter of 0.2". The can structure incorporates an photoptic response optical filter with peak transmission at 510nm. 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. 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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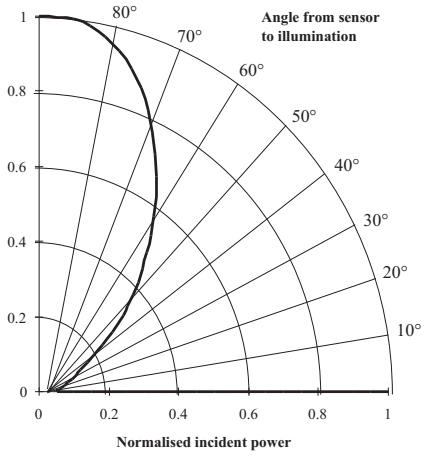
CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsively	λ at 900nm	0.45	0.55		A/W
Active Area			5.19		mm^2
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 50Ω		9		ns
NEP	900nm		$19x10^{-14}$	0.45	$W/\sqrt{Hz}$

Directional characteristics



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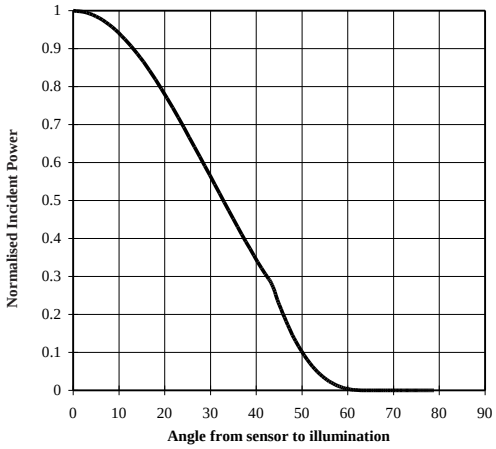

Spectral Response