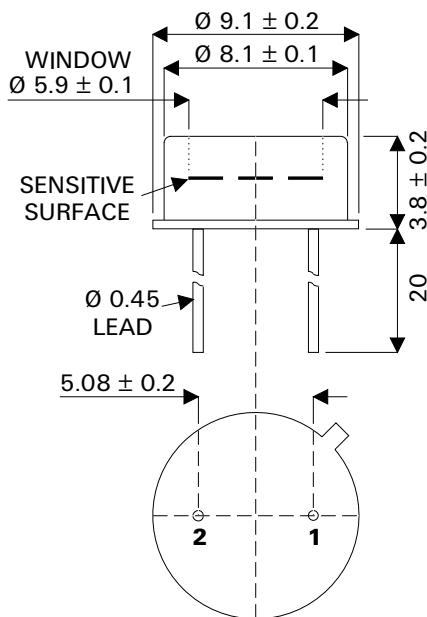


MECHANICAL DATA

Dimensions in mm.



TO-39 Package

Pin 1 – Anode

Pin 2 – Cathode & Case.

P.I.N. PHOTODIODE

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 a 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.

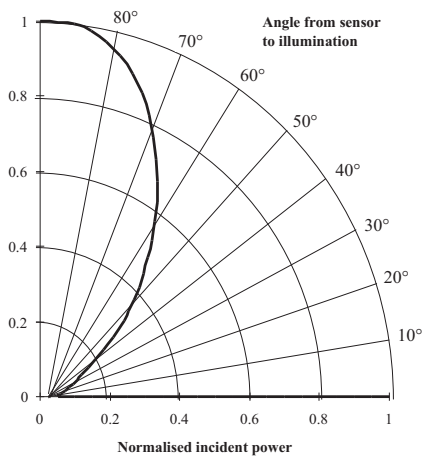
ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

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

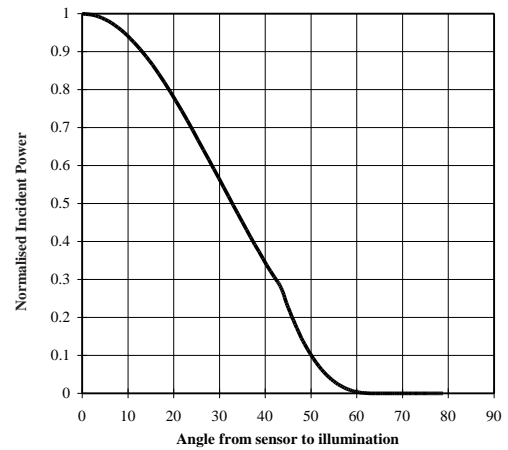
CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

| Characteristic | Test Conditions. | Min. | Typ. | Max. | Units |
|-------------------|-------------------------------|------|----------------------|------|-----------------|
| Responsivity | 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 10 μ A Reverse | 60 | 80 | | V |
| Capacitance | E = 0 Dark 0V Reverse | | 55 | | pF |
| | E = 0 Dark 20V Reverse | | 10 | | |
| Rise Time | 30V Reverse 50 Ω | | 9 | | ns |
| NEP | 900nm | | 19x10 ⁻¹⁴ | 0.45 | W/ \sqrt Hz |

Directional characteristics



Directional Characteristics



Spectral Response

