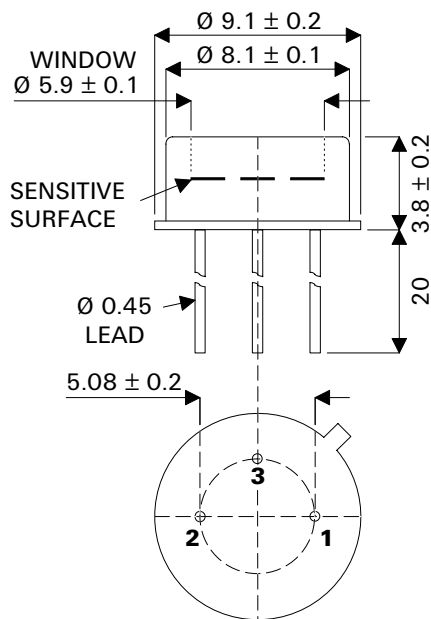


MECHANICAL DATA

Dimensions in mm.

P.I.N. PHOTODIODE



TO-39 Package

Pin 1 – Anode Pin 2 – Cathode Pin 3 – Case

FEATURES

- EXCELLENT LINEARITY
- LOW NOISE
- PHOTODIODE ISOLATED FROM PACKAGE
- WIDE SPECTRAL RESPONSE
- WIDE INTRINSIC BANDWIDTH
- WIDE VIEWING ANGLE
- LOW LEAKAGE CURRENT
- LOW CAPACITANCE
- INTEGRAL OPTICAL FILTER OPTION note 1
- TO18 HERMETIC METAL CAN PACKAGE
- EMI SCREENING MESH AVAILABLE

DESCRIPTION

The SMP400G-CA contains a Silicon P.I.N. photodiode incorporated in a compact, low profile, hermetic metal can package. The electrical terminations are via three leads of diameter 0.008" on a pitch centre diameter of 0.1". The photodiode is electrically isolated from the package, which has a separate earth lead.

The photodiode structure has been optimised for high sensitivity, high speed light measurement applications. The wide viewing angle provides relatively even reception over a large area. The metal can, isolated photodiode and optional screening mesh ensure a rugged device with a high degree of immunity to conducted and radiated electrical interference.

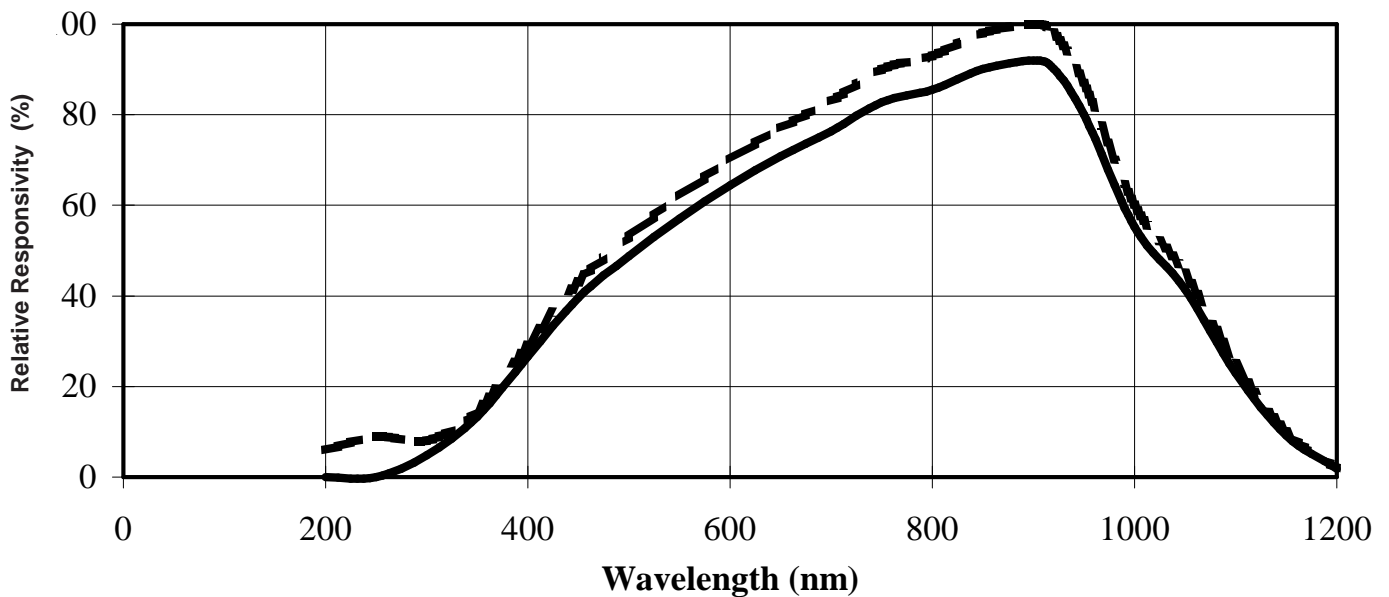
ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

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

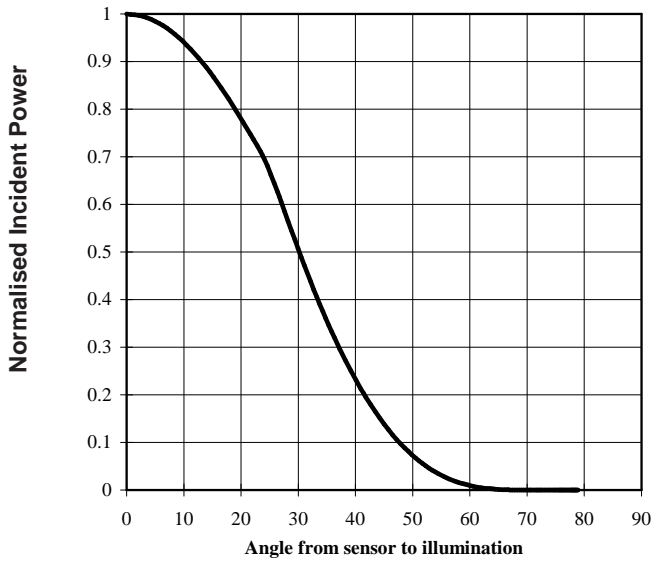
CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsivity	λ at 900nm	0.45	0.55		A/W
Active Area			2.05		mm ²
Dark Current	E = 0 Dark 1V Reverse		0.25	4	nA
	E = 0 Dark 10V Reverse		4	10	
Breakdown Voltage	E = 0 Dark 10 μ A Reverse	60	80		V
Capacitance	E = 0 Dark 0V Reverse		45		pF
	E = 0 Dark 20V Reverse		6		
Rise Time	30V Reverse 50 Ω				ns
NEP	900nm			0.45	W/ $\sqrt{\text{Hz}}$

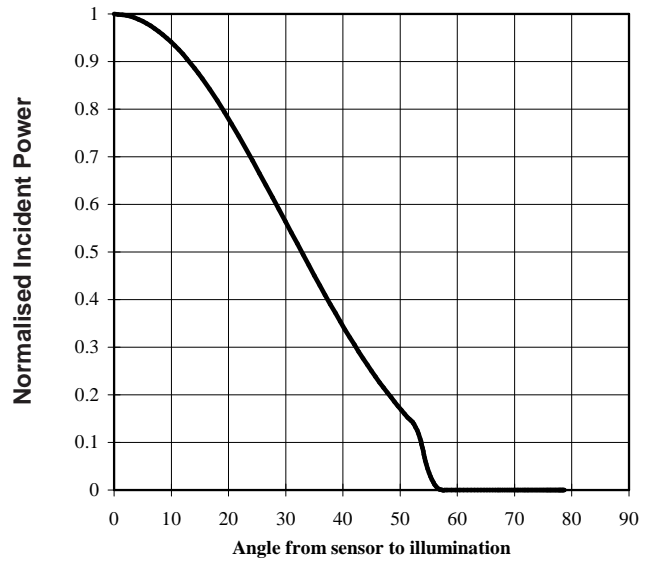
Spectral Response



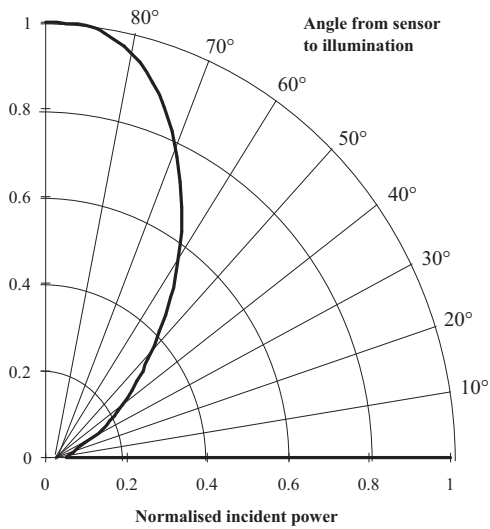
Directional Characteristics



Directional Characteristics



Directional characteristics



Directional characteristics

