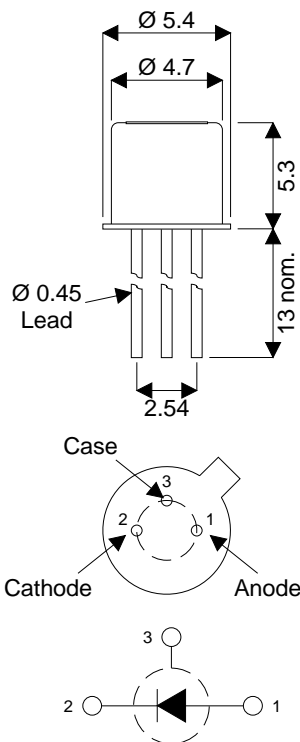


MECHANICAL DATA

Dimensions in mm.



TO-18 Package

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

P.I.N. PHOTODIODE

FEATURES

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

Note 1 Contact Semelab Plc for filter options

DESCRIPTION

The SMP400G-CD is a Silicon P.I.N. photodiode incorporated in a compact, hermetic metal can package. The electrical terminations are via three leads of diameter 0.008" on a pitch centre diameter of 0.1". The taller can structure affords a greater range of optical filter options. 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 moderate viewing angle facilitates easy alignment of the device with on-axis illumination sources. 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.

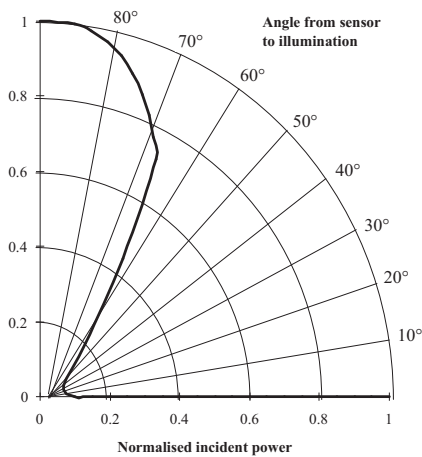
ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

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

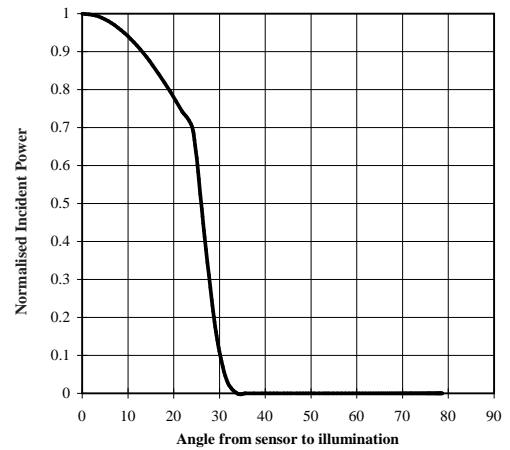
CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsivity	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 10 μ A 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 50 Ω		4		ns
NEP	900nm		7.2	0.4	W/ \sqrt Hz

Directional characteristics



Directional Characteristics



Spectral Response

