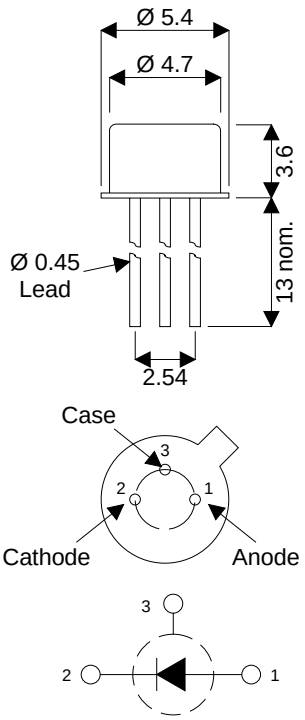
SMP400G-CA

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**
- **WIDE VIEWING ANGLE**
- **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-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 responsively	0.35% per °C
Temperature coefficient of dark current	x2 per 8°C rise
Reverse breakdown voltage	60V

Semelab plc. Telephone (01455) 556565. Telex: 341927. Fax (01455) 552612.

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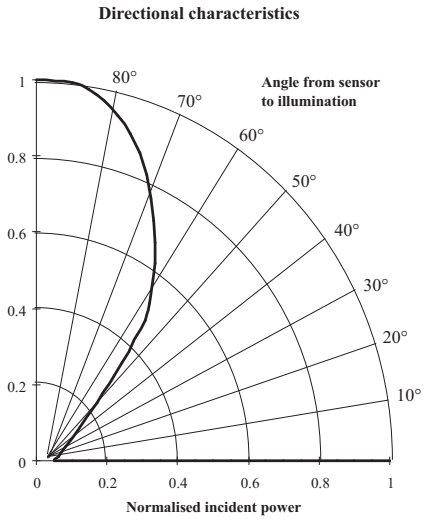
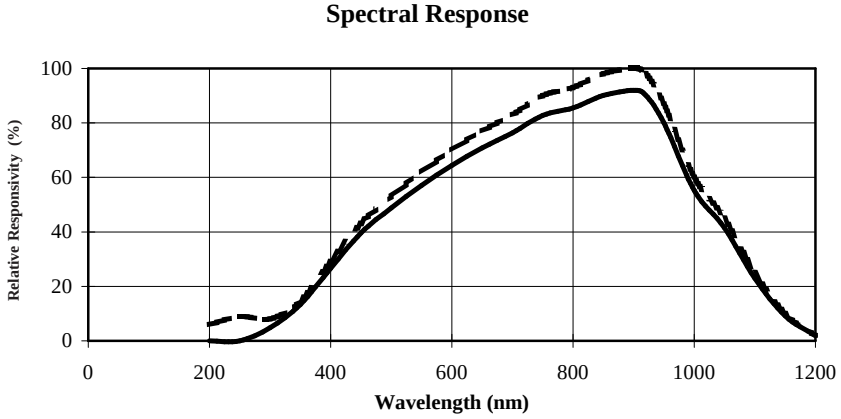
CHARACTERISTICS (T_{amb}=25°C unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsively	λ at 900nm	0.45	0.55		A/W
Active Area			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 10µA 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 50Ω		4		ns
NEP	900nm		7.2	0.45	W/√Hz