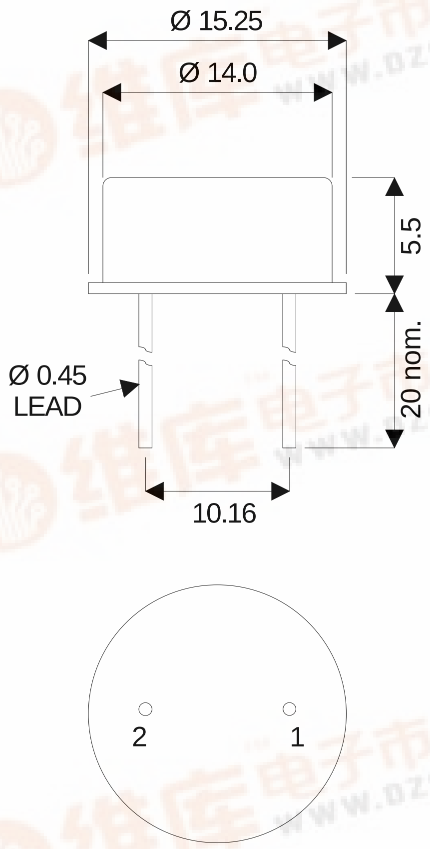
SEME LAB

SMP1000G-JP

MECHANICAL DATA

Dimensions in mm.

P.I.N. PHOTODIODE



Standard TO-8

Pin 1 – Anode

Pin 2 – Cathode & Case

FEATURES

- HIGH SENSITIVITY
- EXCELLENT LINEARITY
- LOW NOISE
- WIDE SPECTRAL RESPONSE
- INTEGRAL OPTICAL FILTER OPTION note 1
- TO8 HERMETIC METAL CAN PACKAGE
- EMI SCREENING MESH AVAILABLE

Note 1 Contact Semelab Plc for filter options

DESCRIPTION

The SMP1000G-JP is a large 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 of 0.2". The cathode of the photodiode is electrically connected to the package.

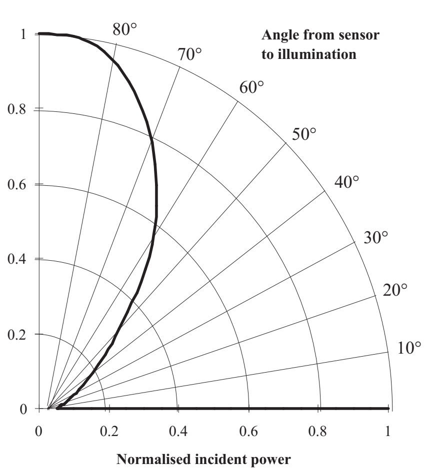
The large photodiode active area provides greater sensitivity than the SMP900 range of devices, with a corresponding reduction in speed. The photodiode structure has been optimised for high sensitivity, light measurement applications. The metal can and optional screening mesh ensure a rugged device with a high degree of immunity to radiated electrical interference.

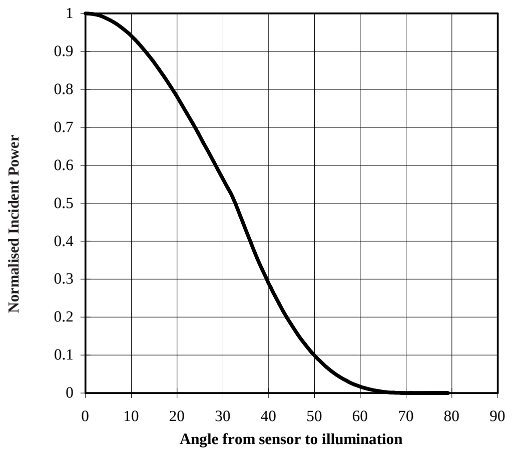
ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

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

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				76.85		mm²
Dark Current	E = 0 Dark	1V Reverse		8	9	nA
	E = 0 Dark	10V Reverse		16	38	
Breakdown Voltage	E = 0 Dark	10µA Reverse	60	80		V
Capacitance	E = 0 Dark	0V Reverse		800	735	pF
	E = 0 Dark	20V Reverse		150		
Rise Time	30V Reverse 50Ω			16		ns
NEP	900nm			28x10^{-14}		W/√Hz


Directional characteristics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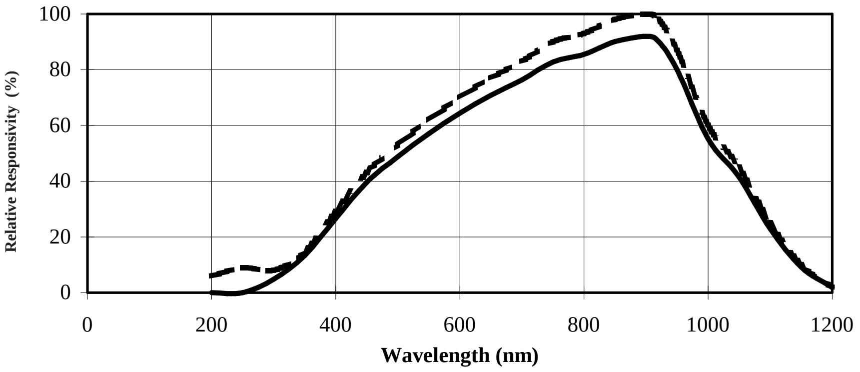
Spectral Response