

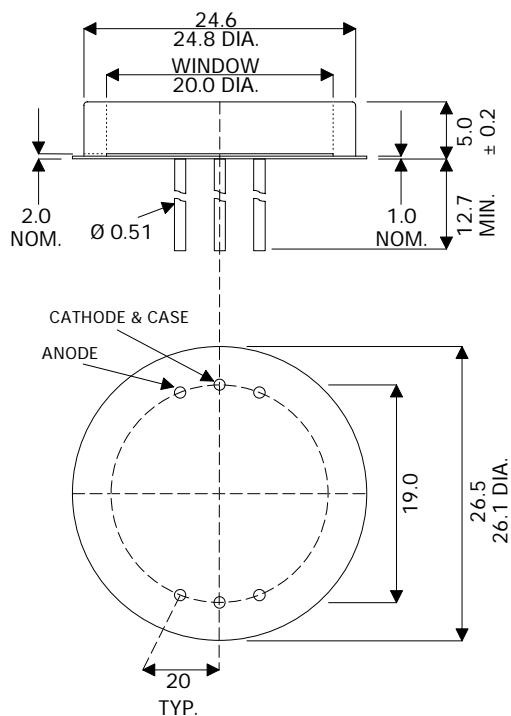


**SEME
LAB**

SMP2000G-MV

MECHANICAL DATA

Dimensions in mm.



TO-M Package

P.I.N. PHOTODIODE

FEATURES

- HIGHEST SENSITIVITY
- EXCELLENT LINEARITY
- 100mm² ACTIVE AREA
- WIDE SPECTRAL RESPONSE
- INTEGRAL OPTICAL FILTER OPTION note 1
- TO-M HERMETIC METAL CAN PACKAGE
- EMI SCREENING MESH AVAILABLE

Note 1 Contact Semelab Plc for filter options

DESCRIPTION

The SMP2000G-MV is a large Silicon P.I.N. photodiode incorporated in a hermetic metal can package. The electrical terminations are via 6 leads of diameter 0.018" on a pitch of 0.75" (two sets of three, +20°). The cathode of the photodiode is electrically connected to the package.

The large photodiode active area provides greater sensitivity than other devices, with a corresponding reduction in speed. The photodiode structure has been optimised for high sensitivity, light measurement and calibration 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



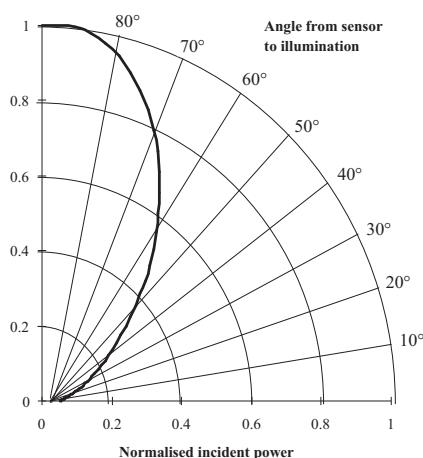
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SMP2000G-MV

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			100		mm^2
Dark Current	$E = 0$ Dark 1V Reverse		12		nA
	$E = 0$ Dark 10V Reverse				
Breakdown Voltage	$E = 0$ Dark 10 μA Reverse	60	80		V
Capacitance	$E = 0$ Dark 0V Reverse		1800		pF
	$E = 0$ Dark 20V Reverse		200		
Rise Time	30V Reverse 50 Ω		19		ns
NEP	900nm		30x10 ⁻¹⁴		W/ $\sqrt{\text{Hz}}$

Directional characteristics



Directional Characteristics



Spectral Response

