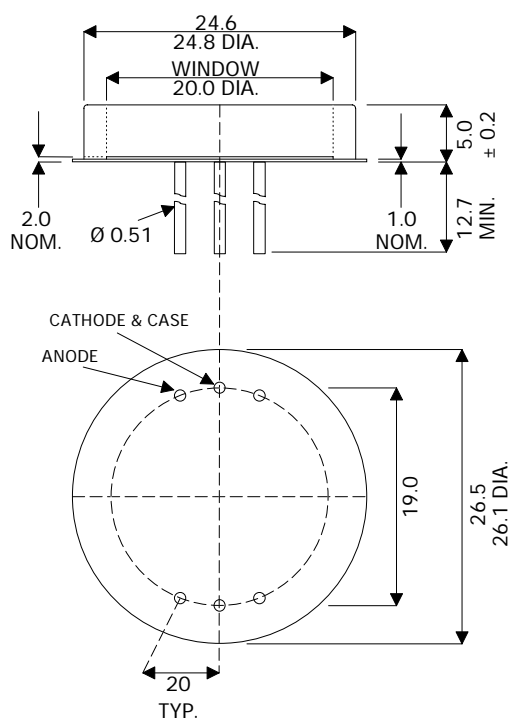


Dimensions in mm.

## P.I.N. PHOTODIODE



## TO-M Package

- **HIGHEST SENSITIVITY**
- **EXCELLENT LINEARITY**
- **100mm<sup>2</sup> 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**

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.

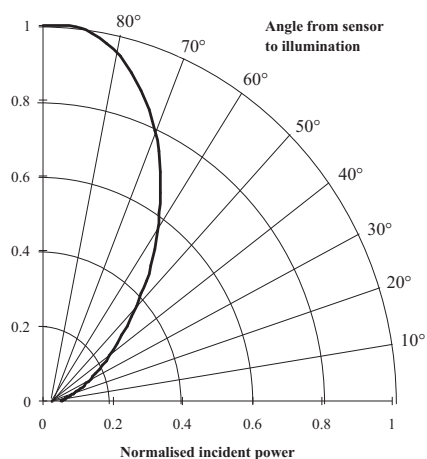
### ABSOLUTE MAXIMUM RATINGS (T<sub>Case</sub> = 25°C unless otherwise stated)

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

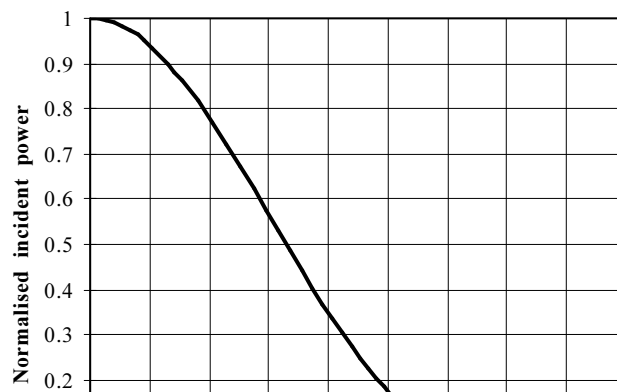
## CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsivity	$\lambda$ at 900nm	0.45	0.55		A/W
Active Area			100		mm <sup>2</sup>
Dark Current	E = 0 Dark 1V Reverse		12		nA
	E = 0 Dark 10V Reverse				
Breakdown Voltage	E = 0 Dark 10 $\mu$ A Reverse	60	80		V
Capacitance	E = 0 Dark 0V Reverse		1800		pF
	E = 0 Dark 20V Reverse		200		
Rise Time	30V Reverse 50 $\Omega$		19		ns
NEP	900nm		30x10 <sup>-14</sup>		W/ $\sqrt{\text{Hz}}$

Directional characteristics



Directional Characteristics



Spectral Response

