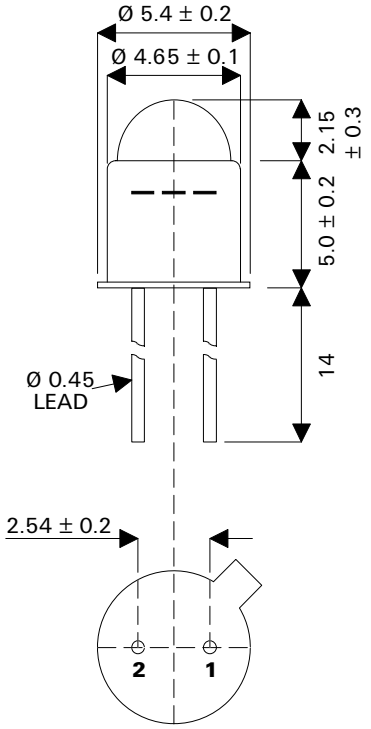
SMP400G-BC

P.I.N. PHOTODIODE

MECHANICAL DATA
Dimensions in mm.



TO-18 Package

Pin 1 – Anode Pin 2 – Cathode & Case

FEATURES

- **NARROW RECEIVING ANGLE**
- **EXCELLENT LINEARITY**
- **LOW NOISE**
- **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-BC is a Silicon P.I.N. photodiode incorporated in a compact, lensed, hermetic metal can package. The electrical terminations are via two leads of diameter 0.005" on a pitch of 0.1". The cathode of the photodiode is electrically connected to the package.

The photodiode structure has been optimised for high sensitivity, high speed light measurement applications. The narrow viewing angle provides better coupling to on-axis illumination sources. 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

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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

Spectral Response