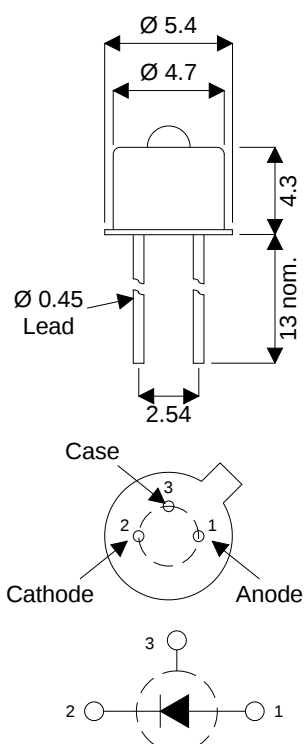


MECHANICAL DATA

Dimensions in mm.



TO-18 Package

Pin 1 – Anode

Pin 2 – Cathode

Pin 3 – Case

P.I.N. PHOTODIODE

FEATURES

- LARGE NUMERICAL APERTURE FOR EASE OF COUPLING TO FIBRE OPTIC CABLES
- LOW NOISE
- WIDE INTRINSIC BANDWIDTH
- EXCELLENT LINEARITY
- LOW LEAKAGE CURRENT
- LOW CAPACITANCE
- TO-46 HERMETIC METAL CAN PACKAGE

DESCRIPTION

The SMP400G is a Silicon P.I.N. photodiode specifically designed for optical fibre communication. The device is incorporated in a compact, low profile, hermetic metal can package.

A glass bead lens incorporated into the TO-46 case provides an efficient optical design. This affords substantial mis-alignment between the device and a fibre optic cable without degrading the coupling efficiency.

The electrical terminations are via three leads of diameter 0.02" on a pitch of 0.1". Both cathode and anode connections to the photodiode are electrically isolated from the package.

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

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

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsivity	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 10 μ A 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 50 Ω		4		ns
NEP	900nm		7.2	0.45	W/ $\sqrt$ Hz

