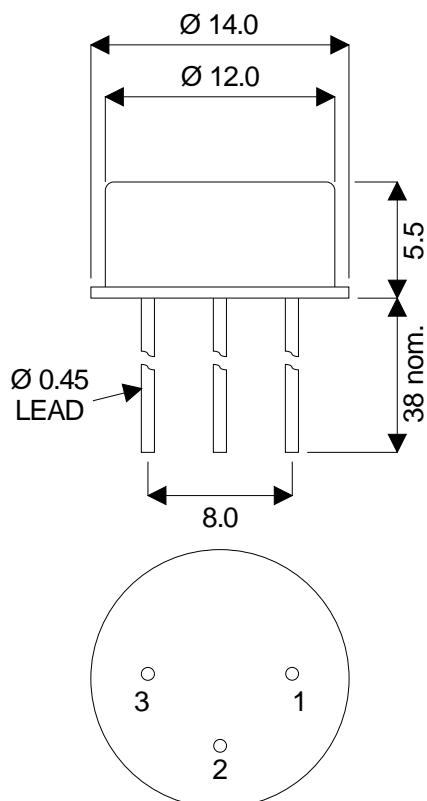


MECHANICAL DATA

Dimensions in mm.

P.I.N. PHOTODIODE



TO8 Small

Pin 1 – Anode

Pin 2 – Cathode

Pin 3 – Case

FEATURES

- HIGH SENSITIVITY
- PHOTODIODE ISOLATED FROM PACKAGE
- 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 SMP690G-KPS is a 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 centre diameter of 0.2". The photodiode is electrically isolated from the package, which has a separate earth lead.

The larger photodiode active area provides greater sensitivity than the SMP600 range of devices, with a corresponding reduction in speed. The photodiode structure has been optimised for high sensitivity, light measurement applications. The metal can, isolated photodiode and optional screening mesh ensure a rugged device with a high degree of immunity to conducted and radiated electrical interference.

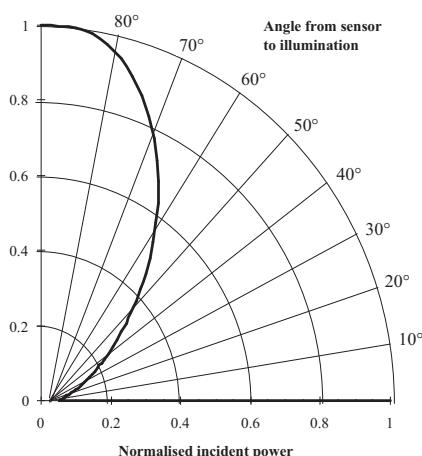
ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^\circ C$ unless otherwise stated)

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

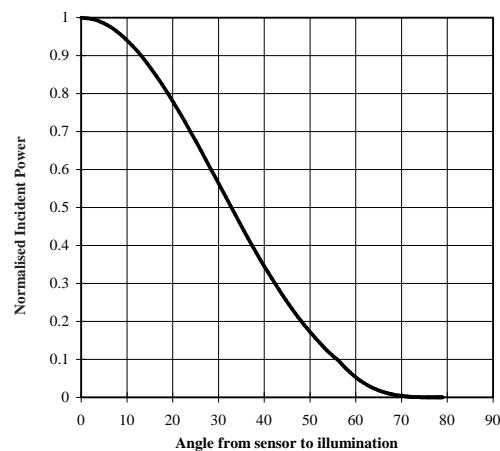
CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions.	Min.	Typ.	Max.	Units
Responsivity	λ at 900nm	0.45	0.55		A/W
Active Area			15		mm^2
Dark Current	$E = 0$ Dark 1V Reverse		2	6	nA
	$E = 0$ Dark 10V Reverse				
Breakdown Voltage	$E = 0$ Dark 10 μA Reverse	60	80		V
Capacitance	$E = 0$ Dark 0V Reverse		90		pF
	$E = 0$ Dark 20V Reverse		25		
Rise Time	30V Reverse 50 Ω			12	ns
NEP	900nm		20×10^{-14}	0.45	W/ $\sqrt{\text{Hz}}$

Directional characteristics



Directional Characteristics



Spectral Response

