

PYROELECTRIC INFRA-RED DETECTOR PLT 533

Large area high performance uncompensated Lithium Tantalate detector with excellent N.E.I. suitable for most demanding applications e.g. radiometric standards.

Unique Characteristics

Element dimensions 3 x 3mm

Field of view >40°(round window)
>60°(square window)
>80°(square window Ge or Si)

Rate of change of temperature <0.5 K min⁻¹
(with standard gate resistor of 5x10¹⁰Ω)

General characteristics See Page 5

Windows available See Page 12 & 13

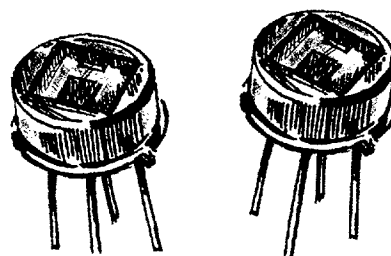
Device outlines Nos. 1 or 2
depending on window requirements See Page 14

Features

- Large area
- Integral JFET
- Excellent NEI

Applications

- Gas analysis
- High performance instrumentation
- Radiometry



Performance Data

At 20°C, +6V supply. The responsivity assumes no window.

Frequency (Hz)		0.1	1.0	10.0	100	1000	
Responsivity	Typ	4400	1800	190	19	1.9	VW ⁻¹
	Min	3500	1440	160	16	1.6	VW ⁻¹
Noise	Typ	10.0	1.1	0.14	0.03	0.01	μVHz ^{-1/2}
	Max	13.0	1.4	0.18	0.04	0.015	μVHz ^{-1/2}
NEP	Typ	2.2	0.6	0.7	1.6	5.2	10 ⁻⁹ WHz ^{-1/2}
	Max	3.7	1.0	1.1	2.5	9.0	10 ⁻⁹ WHz ^{-1/2}
NEI	Typ	2.2	0.7	0.8	2.2	6.0	10 ⁻⁴ WHz ^{-1/2} m ⁻²
	Max	4.0	1.1	1.2	2.8	10.0	10 ⁻⁴ WHz ^{-1/2} m ⁻²
D*	Typ	1.3	5.0	4.0	1.8	0.5	10 ⁶ m Hz ^{1/2} W ⁻¹
	Min	0.7	3.0	2.7	1.2	0.3	10 ⁶ m Hz ^{1/2} W ⁻¹

