PYROELECTRIC INFRA-RED DETECTOR PLT 522

High performance uncompensated Lithium Tantalate detector with a wide range of options including versions for Fourier Transform Infrared analysis

Unique Characteristics

Element dimensions 2mm x 2mm

Field of view >50° (round window)
>90° (square window)
>110° (square window, Ge or Si)

Rate of change of temperature < 0.5 K min^{-1}
(With standard gate resistor of $5x10^{10}\Omega$)

General characteristics See Page 5

Windows available See Page 12 & 13

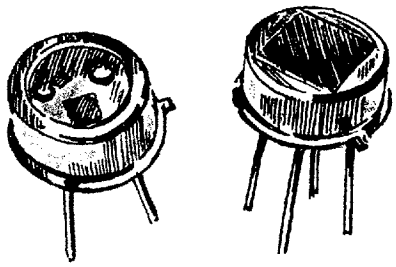
Device outlines Nos. 1 or 2 depending on window requirements See Page 14

Features

- Good detectivity
- Rugged construction
- Integral JFET preamplifier
- Range of window options

Applications

- Non-dispersive infra red analysis
- Fourier transform infra red
- Flame detection
- General instrumentation



Performance Data

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

Frequency	(Hz)	0.1	1.0	10.0	100	1000	
Responsivity	Typ	5000	3300	430	43	4.3	VW^{-1}
	Min	4000	2700	360	37	3.7	VW^{-1}
Noise	Typ	20	3.0	0.3	0.05	0.02	$\mu VHz^{-½}$
	Max	30	4.0	0.4	0.08	0.03	$\mu VHz^{-½}$
NEP	Typ	4.0	1.0	0.7	1.2	5.0	10^{-9} $WHz^{-½}$
	Max	7.5	1.5	1.1	2.2	7.5	10^{-9} $WHz^{-½}$
NEI	Typ	1.0	2.5	1.6	2.9	1.2	10^{-4} $WHz^{-½}m^{-2}$
	Max	1.9	3.7	2.7	5.5	1.9	10^{-4} $WHz^{-½}m^{-2}$
D*	Typ	0.5	2.0	2.8	1.6	0.4	10^{6} m $Hz^{½}W^{-1}$
	Min	0.2	1.3	1.8	0.9	0.2	10^{6} m $Hz^{½}W^{-1}$