



**FEATURES**

- High performance in the long wavelength range without LN-cooling
- Fast response
- No flicker noise
- Convenient to use
- Wide dynamic range
- Compact, rugged and reliable
- Low cost
- Prompt delivery
- Custom design upon request

**DESCRIPTION**

The PVM-2TE-n (where n is wavelength  $\lambda_{op}$ , in micrometers, to which the detector is optimized) series photodetectors are two-stage TE-cooled IR photovoltaic detectors. These devices can be optimized for the maximum performance for long wavelength, large area devices. Standard detectors are available in modified TO-8 packages with  $\text{BaF}_2$  windows. High performance and stability were achieved by using a newly developed variable gap semiconductors (HgCdZn)Te, optimized composition/doping profiles and improved surface processing. Custom devices with quadrant cells, multielement arrays, specialized packages, connectors, windows and optical filters are available on request. See application notes for more details.

**SPECIFICATION**

@20°C

CHARACTERISTICS	UNITS	PVM-2TE-8	PVM-2TE-10.6
$\lambda_{op}$	$\mu\text{m}$	8	10.6
Detectivity*:			
at $\lambda_{peak}$	$\text{cmHz}^{1/2}/\text{W}$	$\geq 6 \cdot 10^8$	$\geq 2 \cdot 10^8$
at $\lambda_{op}$		$\geq 3 \cdot 10^8$	$\geq 1 \cdot 10^8$
Responsivity - Width Product at $\lambda_{op}$	$\text{V} \cdot \text{mm}/\text{W}$	$\geq 2$	$\geq 0.5$
Response time	ns	$\leq 7$	$\leq 3$
Resistance	$\Omega$	40 to 300	30 to 300
Operating temperature	K	220 to 240	
Acceptance angle, F#	deg	60, 0.5	

\* Data sheet states minimum  $D^*$  values for each detector model. Higher performance detectors can be provided upon request. See application notes for more details.

Type	Length or diameter [mm]									
	0.025	0.05	0.1	0.2	0.25	0.5	1	2	3	4
PVM-2TE-8	X	X	X	X	X	X	X	X	X	
PVM-2TE-10.6	X	X	X	X	X	X	X	X	X	