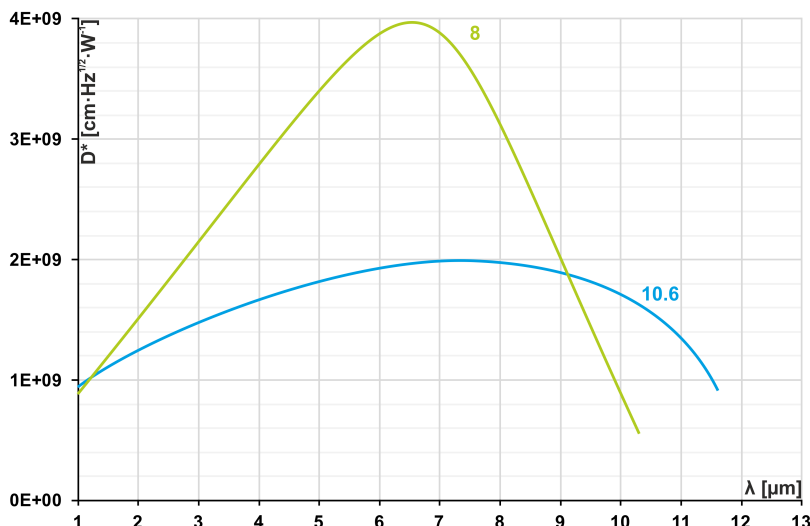
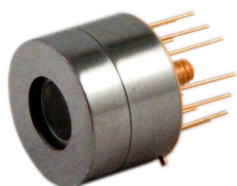


PVMI-3TE Series

8 – 11 μm IR PHOTOVOLTAIC MULTIPLE JUNCTION DETECTORS THERMOELECTRICALLY COOLED OPTICALLY IMMERSED



Example of D^* vs Wavelength λ for PVMI-3TE Series HgCdTe Detectors. Spectral Characteristics of individual detectors may vary from those shown on the chart.

Features

- High performance in the long wavelengths 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 PVMI-3TE- λ_{opt} photodetectors series (λ_{opt} - optimal wavelength in micrometers) feature IR multiple junction optically immersed photovoltaic detectors on three-stage thermoelectrical cooler.

The devices are optimized for the maximum performance at λ_{opt} . Highest performance and stability are achieved by application of variable gap HgCdTe semiconductor, optimized doping and sophisticated surface processing. Custom devices with quadrant cells, multielement arrays, different windows, lenses and optical filters are available upon request.

Standard detectors are available in TO8 packages with wedged BaF₂ windows. Other packages, windows and connectors are available upon request.

IR Detector Specification @20°C

Parameter	Symbol	Unit	PVMI-3TE-8	PVMI-3TE-10.6
Optimal Wavelength	λ_{opt}	μm	8	10.6
Detectivity ¹⁾ : @ λ_{peak} @ λ_{opt}	D^*	$\frac{cm \cdot \sqrt{Hz}}{W}$	$\geq 4.0 \times 10^9$ $\geq 3.0 \times 10^9$	$\geq 2.0 \times 10^9$ $\geq 1.5 \times 10^9$
Current Responsivity - Width Product @ λ_{opt} 1x1mm	$R_i \cdot w$	$\frac{A \cdot mm}{W}$	≥ 0.15	≥ 0.10
Time Constant	τ	ns	≤ 4	≤ 3
Resistance	R	Ω	200 to 1200	100 to 400
Operating Temperature	T	K	~210	
Acceptance Angle, F/#	$\Phi, -$	deg, -	36, 1.62	

¹⁾ Data Sheet states minimum guaranteed D^* values for each detector model. Higher performance detectors can be provided upon request.

Type	Optical Area [mm×mm]									
	0.025×0.025	0.05×0.05	0.1×0.1	0.2×0.2	0.25×0.25	0.5×0.5	1×1	2×2	3×3	4×4
PVMI-3TE-8					O	O	X	X		
PVMI-3TE-10.6					O	O	X	X		

X – standard detectors

O – detectors available upon request, parameters may vary from these in Data Sheet