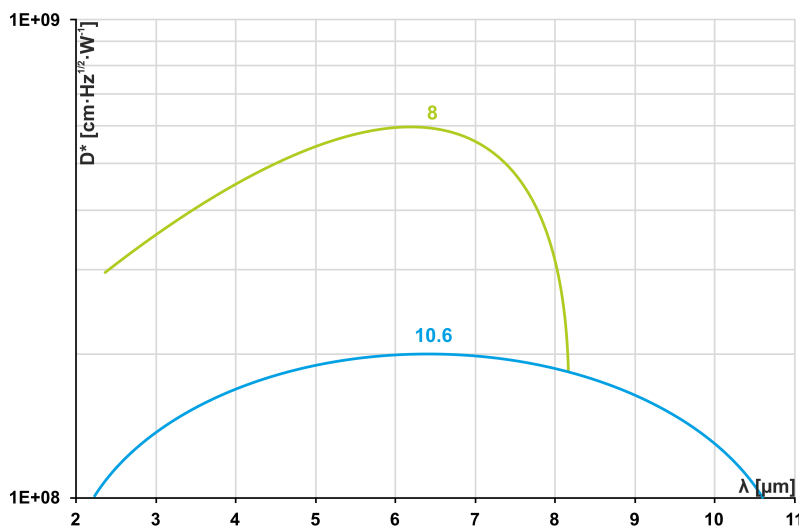# PVMI Series

8 – 11 µm IR PHOTOVOLTAIC MULTIPLE JUNCTION DETECTORS OPTICALLY IMMERSED

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

Features

- Ambient temperature operation
- No bias required
- Short time constant
- No flocker noise
- Operation from DC to VHF
- Perfect match to fast electronics
- Wide dynamic range
- Low cost
- Custom design upon request

Description

The **PVMI-λ_{opt}** photodetectors series (λ_{opt} - optimal wavelength in micrometers) feature IR multiple junction optically immersed photovoltaic detector.

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.

Standard detectors are available in **TO39** or **BNC** packages without windows. Various windows, other packages and connectors are available upon request.

IR Detector Specification @20°C

Parameter	Symbol	Unit	PVMI-8	PVMI-10.6
Optimal Wavelength	λ_{opt}	µm	8	10.6
Detectivity[*]: @ λ_{peak} @ λ_{opt}	D*	$\dfrac{cm \cdot \sqrt{Hz}}{W}$	≥6.0×10^8 ≥3.0×10^8	≥2.0×10^8 ≥1.0×10^8
Current Responsivity - Width Product @λ_{opt} 1×1mm	$R_i \cdot w$	$\dfrac{A \cdot mm}{W}$	≥0.04	≥0.01
Time Constant	т	ns	≤4	≤1.5
Resistance	R	Ω	50 to 300	20 to 150
Operating Temperature	T	K	~300	
Acceptance Angle, F/#	Φ, -	deg, -	36, 1.62	

[*] *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-8					O	O	X	X		
PVMI-10.6					O	O	X	X		

X – standard detectors

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

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