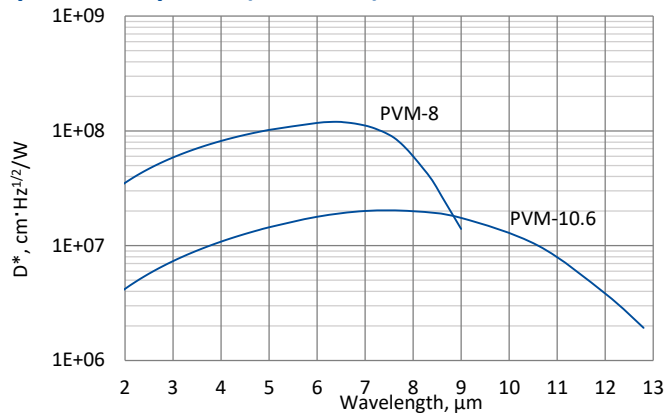


## PVM series

### 2.0 – 13.0 $\mu\text{m}$ HgCdTe ambient temperature photovoltaic multiple junction detectors

**PVM series** features uncooled IR photovoltaic multiple junction detectors based on sophisticated HgCdTe heterostructures for the best performance and stability. The detectors are optimized for the maximum performance at  $\lambda_{\text{opt}}$ . They are especially useful as large active area detectors operating within 2 to 13  $\mu\text{m}$  spectral range.

#### Spectral response ( $T_a = 20^\circ\text{C}$ )



Exemplary spectral detectivity, the spectral response of delivered devices may differ.

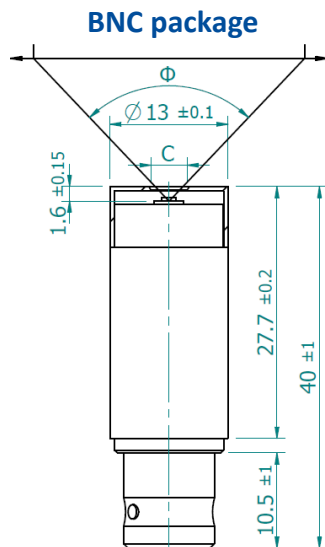
#### Specification ( $T_a = 20^\circ\text{C}$ )

Parameter	Detector type			
	PVM-8		PVM-10.6	
Active element material	epitaxial HgCdTe heterostructure			
Optimum wavelength $\lambda_{\text{opt}}$ , $\mu\text{m}$	8.0		10.6	
Detectivity $D^*(\lambda_{\text{peak}})$ , $\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$	$\geq 1.2 \times 10^8$		$\geq 2.0 \times 10^7$	
Detectivity $D^*(\lambda_{\text{opt}})$ , $\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$	$\geq 6.0 \times 10^7$		$\geq 1.0 \times 10^7$	
Current responsivity-active area length product $R_i(\lambda_{\text{opt}}) \cdot L$ , $\text{A}\cdot\text{mm}/\text{W}$	$\geq 0.008$		$\geq 0.002$	
Time constant $\tau$ , ns	$\leq 4$		$\leq 1.5$	
Resistance $R$ , $\Omega$	50 to 300		20 to 150	
Active area $A$ , $\text{mm}\times\text{mm}$	1×1, 2×2, 3×3, 4×4			
Package	TO39	BNC	TO39	BNC
Acceptance angle $\Phi$	$\sim 90^\circ$	$\sim 102^\circ$ *, $\sim 124^\circ$ **)	$\sim 90^\circ$	$\sim 102^\circ$ *, $\sim 124^\circ$ **)
Window	none			

\*<sup>1</sup>) Aperture  $C = \varnothing 4$  mm.

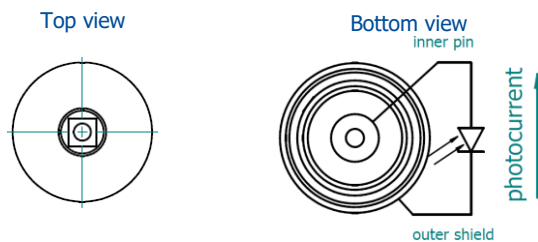
\*\*<sup>2</sup>) Aperture  $C = \varnothing 6$  mm.

### Mechanical layout, mm

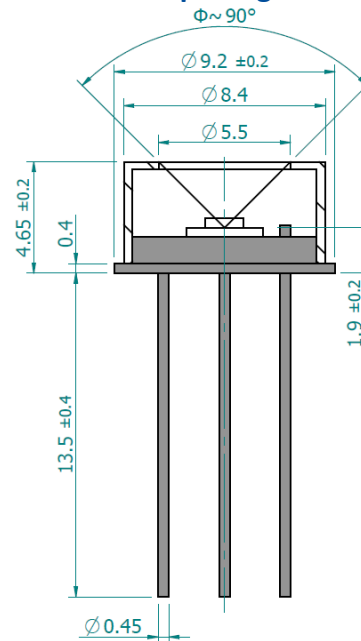


Parameter	Value
Active area, mm×mm	1×1, 2×2 3×3, 4×4
C, mm	Ø4 Ø6
Acceptance angle Φ	~102° ~124°

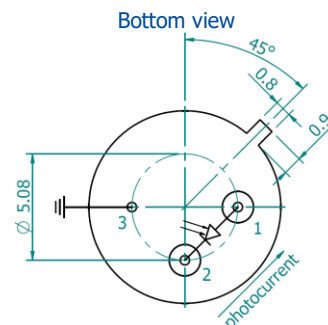
C - aperture



### T039 package



Φ - acceptance angle



Function	Pin number
Detector	1, 2
Chassis ground	3

### Dedicated preamplifier



small SIP-T039