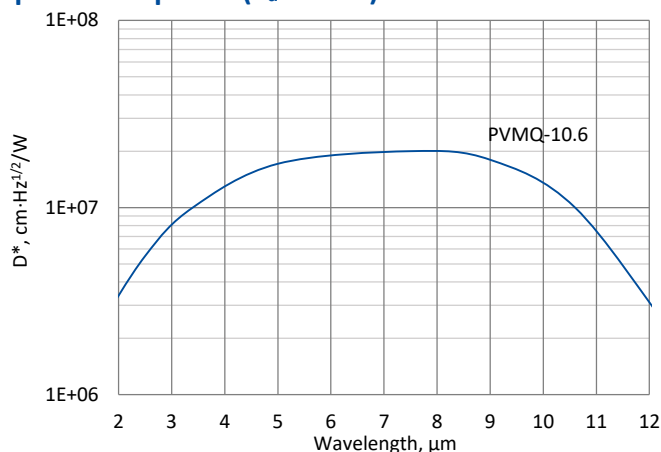


## PVMQ

### 2.0 – 12.0 $\mu\text{m}$ HgCdTe ambient temperature photovoltaic multiple junction quadrant detector

**PVMQ** is uncooled IR photovoltaic multiple junction quadrant detector based on sophisticated HgCdTe heterostructures for the best performance and stability. Quadrant detector consists of four separate active elements arranged in a quadrant geometry. The device is optimized for the maximum performance at 10.6  $\mu\text{m}$ . The main application of PVMQ detector is laser beam profiling and positioning.

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

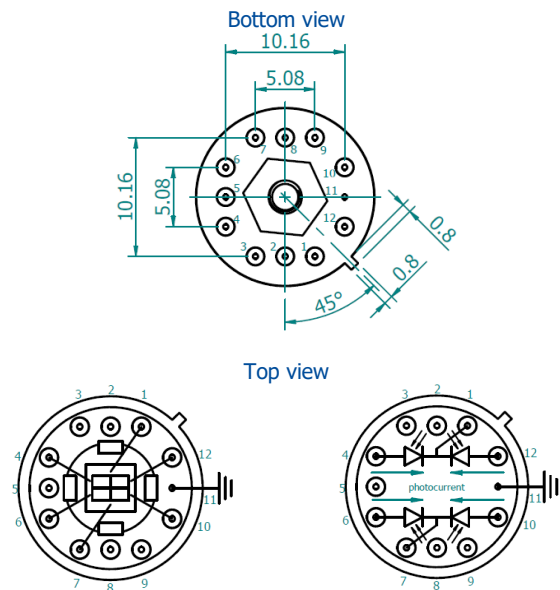
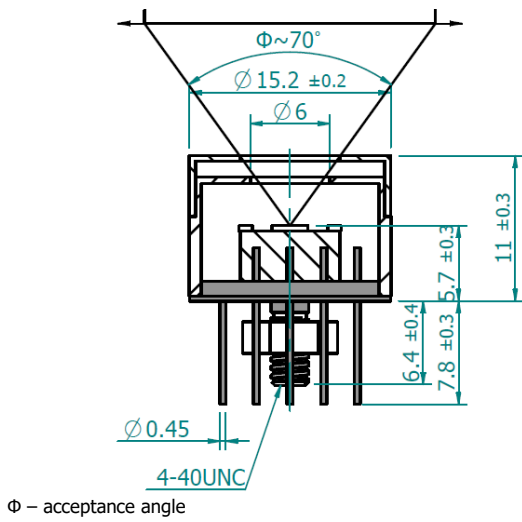


Exemplary spectral detectivity, the spectral response of delivered devices may differ.

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

Parameter	Detector type
	PVMQ-10.6
Active elements material	epitaxial HgCdTe heterostructure
Optimu, wavelength $\lambda_{\text{opt}}$ , $\mu\text{m}$	10.6
Detectivity $D^*(\lambda_{\text{peak}})$ , $\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$	$\geq 2.0 \times 10^7$
Detectivity $D^*(\lambda_{\text{opt}})$ , $\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$	$\geq 1.0 \times 10^7$
Current responsivity $R_i(\lambda_{\text{opt}})$ , A/W	$\geq 0.002$
Time constant $\tau$ , ns	$\leq 1.5$
Resistance R, $\Omega$	30 to 150
Active area of single element A, mm $\times$ mm	1 $\times$ 1
Distance between elements, $\mu\text{m}$	200
Package	TO8
Acceptance angle $\Phi$	$\sim 70^\circ$
Window	none

### Mechanical layout, mm



Function	Pin number
Detector 1	12
Detector 2	10
Detector 3	6
Detector 4	4
Common	1, 7
Chassis ground	11
Not used	2, 3, 5, 8, 9