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Quadrant geometry detectors PCQ, PVMQ, PVQ

PCQ series features room temperature IR photoconductive quadrant detectors

Detector type	Cooling, operating temperature $T\,[K]$	Optimal wavelength*) $\lambda_{opt}\,[\mu m]$	Detectivity**) $D^*\left[\frac{cm\cdot\sqrt{Hz}}{W}\right]$		Current responsivity length product $@\lambda_{opt}$ $R_i\cdot L\left[\frac{A\cdot mm}{W}\right]$	Time constant $\tau\,[ns]$	1/f noise corner frequency $f_c\,[kHz]$	Bias voltage length ratio $\frac{V_b}{L}\left[\frac{V}{mm}\right]$	Sheet resistance $R_{sq}\,[\Omega]$	Acceptance angle $\varnothing\,[°]\cdot\frac{1}{2NA}$	Optical area of single element***) $[mm\times mm]$	Nuber of element	Distance between elements $[\mu m]$	Package	Window
			$@\lambda_{peak}$, 20kHz	$@\lambda_{opt}$, 20kHz											
PCQ	uncooled, ~300	10.6	≥1.9×10⁷	≥9.0×10⁶	≥0.001	≤5	≤20	≤6.0	≤240	~70	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	4 (quadrant geometry)	20	TO8	no window

*) *Other optimal wavelengths available upon request.*
**) *Data sheet states minimum guaranteed D* values for each detector model. Higher performance detectors can be provided upon request.*
***) *Other optical area available upon request.*

PVMQ series features room temperature IR multiple junction photovoltaic quadrant detectors.

Detector type	Cooling, operating temperature $T\,[K]$	Optimal wavelength*) $\lambda_{opt}\,[\mu m]$	Detectivity**) $D^*\left[\frac{cm\cdot\sqrt{Hz}}{W}\right]$		Current responsivity length product $@\lambda_{opt}$ $R_i\cdot L\left[\frac{A\cdot mm}{W}\right]$	Time constant $\tau\,[ns]$	Resistance $R\,[\Omega]$	Acceptance angle $\varnothing\,[°]\cdot\frac{1}{2NA}$	Optical area of single element ***) $[mm\times mm]$	Number of elements	Distance between elements $[\mu m]$	Package	Window
			$@\lambda_{peak}$	$@\lambda_{opt}$									
PVMQ	uncooled, ~300	10.6	≥2.0×10⁷	≥1.0×10⁷	≥0.002	≤1.5	20 to 150	~70	1×1 2×2	4 (quadrant geometry)	200	TO8	no window

*) *Other optimal wavelengths available upon request.*
**) *Data sheet states minimum guaranteed D* values for each detector model. Higher performance detectors can be provided upon request.*
***) *Other optical area available upon request.*

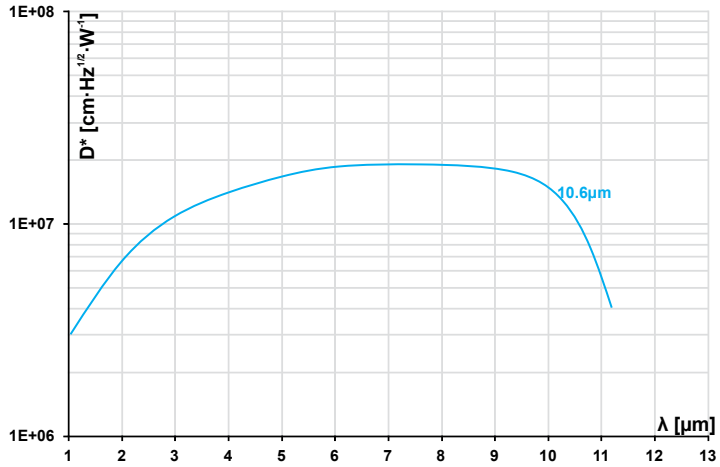
PVQ series features room temperature IR photovoltaic quadrant detectors. The main application of quadrant geometry detectors is laser beam positioning.

Detector type	Cooling, operating temperature $T\,[K]$	Optimal wavelength*) $\lambda_{opt}\,[\mu m]$	Detectivity**) $D^*\left[\frac{cm\cdot\sqrt{Hz}}{W}\right]$		Current responsivity @λ_{opt} $R_i\left[\frac{A}{W}\right]$	Time constant $\tau\,[ns]$	Resistance optical area product $R\cdot A\left[\Omega\cdot cm^2\right]$	Acceptance angle $\varnothing\,[^\circ]$, $\frac{1}{2NA}$	Optical area of single element***) $[mm\times mm]$	Number of elements	Distance between elements $[\mu m]$	Package	Window
			@λ_{peak}	@λ_{opt}									
PVQ	uncooled, ~300	5	≥2.0×10⁹	≥1.0×10⁹	≥1	≤120	≥0.01	~70	0.1×0.1 0.2×0.2	4 (quadrant geometry)	30	TO8	no window

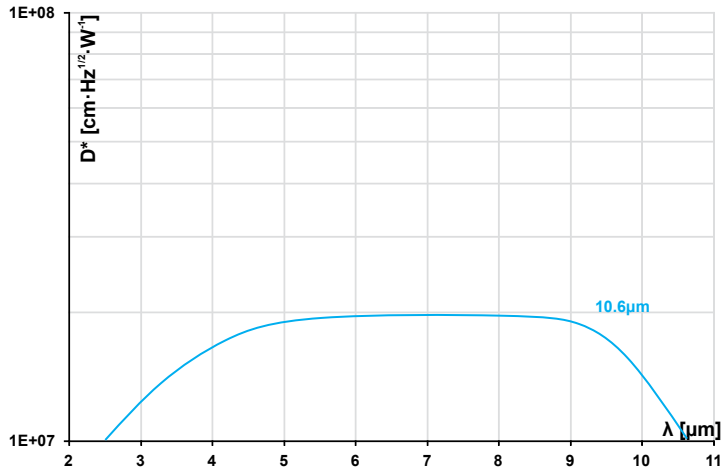
**) *Data sheet states minimum guaranteed D* values for each detector model. Higher performance detectors can be provided upon request.*

***) *Other optical area available upon request.*

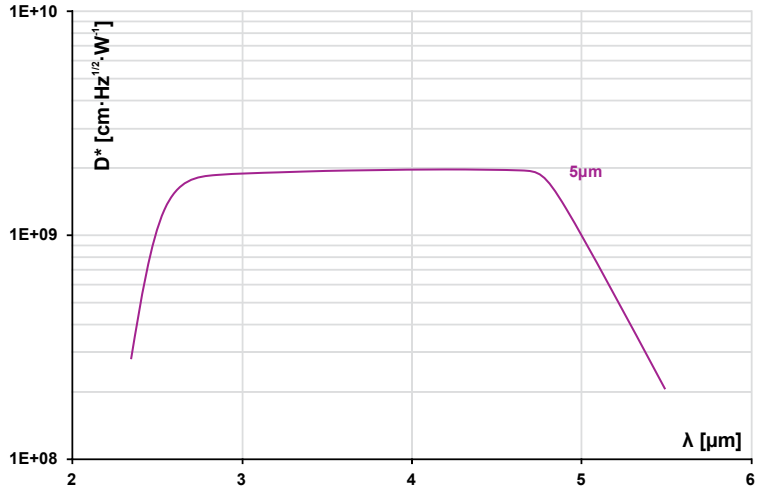
PCQ



PVMQ



PVQ



*) *Example of D* vs wavelength λ for HgCdTe detectors.*
Spectral characteristics of individual detectors may vary from those shown in the chart.