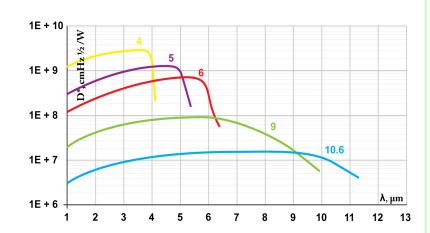
PC SERIES

2-11 µm IR PHOTOCONDUCTORS







FEATURES

- Ambient temperature operation
- Wide dynamic range
- Perfect match to fast electronics
- Convenient to use
- Low cost
- Prompt delivery
- Custom design upon request

DESCRIPTION

The PC- λ_{opt} (λ_{opt} - optimal wavelength in micrometers) feature IR photoconductive detector.

This series is easy to use, no cooling or heatsink needed. The devices are optimized for the maximum performance at $\lambda_{\text{opt}}.$ Cut-on wavelength is limited by GaAs transittance (~0.9 µm). Bias is needed to operate photocurrent. Performance at low frequencies (<20 kHz) is reduced due to 1/f noise. Highest performance and stability are achieved by application of variable gap (HgCd)Te semiconductor, optimized doping and sophisticated surface processing. Standard detectors are available without window in TO-39 or BNC based package. Various windows, other packages and connectors are available upon request.

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SPECIFICATION

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CHARACTERISTICS	UNITS	PC-4	PC-5	PC-6	PC-9	PC-10.6	
λ_{opt}	μm	4	5	6	9	10.6	
$ \begin{array}{ll} \textbf{Detectivity}^{1)} \colon \\ \textcircled{0} \ \lambda_{peak}, \ 20k\text{Hz} \\ \textcircled{0} \ \lambda_{opt}, \ 20k\text{Hz} \\ \end{array} $	cmHz ^{1/2} /W	≥3.2×10 ⁹ ≥2×10 ⁹	≥1.5×10 ⁹ ≥1×10 ⁹	≥7×10 ⁸ ≥3×10 ⁸	≥1×10 ⁸ ≥2×10 ⁷	≥1.9×10 ⁷ ≥9×10 ⁶	
Responsivity-Width product @ λ_{opt}	Vmm/W	>100	>40	>6	>0.4	>0.1	
Time Constant	ns	<1000	<500	<200	<2	<1	
1/f Corner Frequency	kHz	1 to 10	1 to 10	1 to 10	1 to 10	1 to 20	
Bias current-Width Ratio	mA/mm	1 to 5	1 to 10	1 to 15	2 to 20	5 to 30	
Sheet Resistance	Ω/sqr	300 to 1000	200 to 400	100 to 300	50 to 150	40 to 120	
Operating temperature	K			~300			
Acceptance angle, F/#	dea			>90. 0.71			

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

Туре	Length [mm]										
	0.025	0.05	0.1	0.2	0.25	0.5	1	2	3	4	
PC-4	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	
PC-5	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	
PC-6	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	
PC-9	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	
PC-10.6 (R005)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	

X – standard detectors

