



FEATURES

- Ambient temperature operation
- Time constant of 1 ns or less
- Wide dynamic range
- Perfect match to fast electronics
- Convenient to use
- Low cost
- Prompt delivery
- Custom design upon request

DESCRIPTION

The PCI-n (where n is wavelength λ_{op} , in micrometers, to which the detector is optimized) series photodetectors are uncooled IR photoconductors, which have been optically immersed to high refractive index GaAs hyperhemispherical (standard) or hemispherical (option) lenses. These devices can be optimized for the maximum performance anywhere within 2 to 11 μm range. High performance and stability were achieved by using a band gap engineered (HgCdZn)Te, structures with optimized composition/doping profiles and improved surface processing. Custom devices with quadrant cells, multielement arrays, specialized packages, connectors, windows and optical filters are available on request.

SPECIFICATION

@20°C

CHARACTERISTICS	UNITS	PCI-4	PCI-5	PCI-6	PCI-9	PCI-10.6
λ_{op}	μm	4	5	6	9	10.6
Detectivity*: at λ_{peak} , 20kHz at λ_{op} , 20kHz	$\text{cmHz}^{1/2}/\text{W}$	$>1 \times 10^{10}$ $>6 \times 10^9$	$>8 \times 10^9$ $>4 \times 10^9$	$>2.5 \times 10^9$ $>1 \times 10^9$	$>5 \times 10^8$ $>1 \times 10^8$	$>1 \times 10^8$ $>8 \times 10^7$
Responsivity-Width product @ λ_{op} 1x1 mm	Vmm/W	>600	>300	>60	>3	>1
Response Time	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 2	2 to 4	3 to 10	3 to 15	5 to 20
Sheet Resistivity	Ω/sqr	300 to 1000	200 to 400	100 to 300	50 to 150	40 to 120
Acceptance angle, F/#	deg, -	36, 1.62				

* Data sheet states minimum D* values for each detector model. Higher performance detectors can be provided upon request. See application notes for more details.

Type	Length [mm]									
	0.025	0.05	0.1	0.2	0.25	0.5	1	2	3	4
PCI-4				X	X	X	X	X		
PCI-5					X	X	X	X		
PCI-6					X	X	X	X		
PCI-9				X	X	X	X	X		
PCI-10.6				X	X	X	X	X		



VIGO System S.A.
129/133 Poznańska St.,
tel.: +48 22 733 54 21
fax.: +48 22 66521 55
info@vigo.com.pl

