

LN2 Cooled HgCdTe Detectors

Product Data Sheet



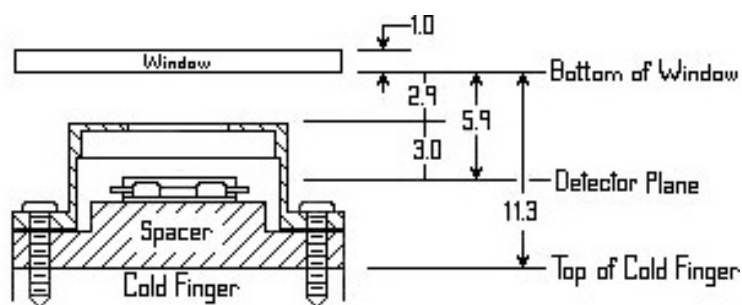
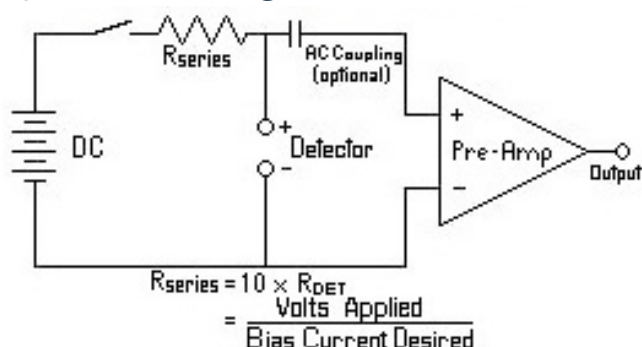
Each detector is optimized for specified wavebands of; 2μm to 5μm, 2μm to 13μm or our FTIR Series with wavebands up to 2μm to 24μm, as shown in the table below.

The FTIR series of HgCdTe detectors are designed to achieve optimum performance in Fourier Transform Infrared spectrometers. The detectors offer the highest sensitivities with cutoffs ranging from 750 to 400 cm-1.

A variety of dewar designs are available, all supplied with wedged windows to eliminate interference effects. In addition to the standard sizes listed in the following table, custom configurations are available on request. Custom packaging, both metal and glass, designed to interface with customer specified cooling systems, is also available.



Typical operating circuit



LN2 Cooled HgCdTe Detectors

Standard Liquid Nitrogen cooled HgCdTe Detectors

Model Number	Element Size (mm)	FOV=60°						Std. Pkg.	Std. Window
		Wave- length Peak λp (μm)	Wavelength Response (20% λco) (μm)	D* (λp,10000,1) (cmHz ^{1/2} W ⁻¹)	Responsivity (pk, (V/W))	Resistance (Ω)	Time Constant (μsec)		
2 μm to 5 μm									
MCT-5-N-0.05 MCT-5-N-0.10 MCT-5-N-0.25 MCT-5-N-0.50 MCT-5-N-1.00	0.05 X 0.05 0.10 X 0.10 0.25 X 0.25 0.50 X 0.50 1.00 X 1.00	~4.5	≥ 5.0	≥ 1.0E11	≥100,000 ≥50,000 ≥10,000 ≥4,000 ≥2,000	50-500	~1.0	MSL-8 MSL-12 OR MDL-8 MDL-12	Sapphire
MCT-5-N-2.00	2.00 X 2.00			≥ 8.0E10	≥1,000				
2 μm to 13 μm									
MCT-13-.025 MCT-13-0.05 MCT-13-0.10 MCT-13-0.25	.025 X .025 0.05 X 0.05 0.10 X 0.10 0.25 X 0.25	~12.0	≥13.0 (750cm ⁻¹)	≥ 5.0E10	≥100,000 ≥60,000 ≥30,000 ≥10,000	20-100	~0.4	MSL-8 MSL-12 OR MDL-8 MDL-12	ZnS ZnSe (2-14mm)
MCT-13-0.50 MCT-13-1.00	0.50 X 0.50 1.00 X 1.00			≥ 4.0E10	≥5,000 ≥2,000				
MCT-13-2.00 MCT-13-3.00	2.00 X 2.00 3.00 X 3.00			≥ 3.0E10	≥500 ≥200				
MCT-13-4.00	4.00 X 4.00			≥ 2.0E10	≥100				
2 μm to 24 μm "FTIR Series"									
FTIR-16-0.10 FTIR-16-0.25 FTIR-16-0.50	0.10 X 0.10 0.25 X 0.25 0.50 X 0.50	~14.0	≥16.6 (600cm ⁻¹)	≥ 4.0E10	≥10,000 ≥3,000 ≥1,500	20-100	~0.2	MSL-8 MSL-12 OR MDL-8 MDL-12	ZnSe/W
FTIR-16-1.00	1.00 X 1.00			≥ 3.0E10	≥800				
FTIR-16-2.00	2.00 X 2.00			≥ 2.0E10	≥200				
FTIR-22-0.25 FTIR-22-0.50 FTIR-22-1.00	0.25 X 0.25 0.50 X 0.50 1.00 X 1.00	~18.0	≥22.2 (450cm ⁻¹)	≥ 1.0E10	≥700	20-100	~0.1	Same as FTIR-16	KRS-5/W
					≥350				
					≥150				
FTIR-24-0.25 FTIR-24-1.00	0.25 X 0.25 1.00 X 1.00	~18.0	≥24.0 (415cm ⁻¹)	≥ 5.0E9	≥200	20-100	~0.1	Same as FTIR-16	KRS-5/W
					≥50				
MSL-8 Side Looking Metal Dewar---8 Hour Hold Time MDL-8 Down Looking Metal Dewar---8 Hour Hold Time					MSL-12 Side Looking Metal Dewar---12 Hour Hold Time MDL-12 Down Looking Metal Dewar---12 Hour Hold Time				

LN2 Cooled HgCdTe Detectors

Contact Details

Manufacturer

Infrared Associates

2851 SE Monroe Street

Stuart, FL 34997

Phone: 772-223-6670 ext. 101

Distributor

Acal BFi

www.acalbfi.com

Disclaimer

This data sheet has been compiled to the best of our knowledge and with the utmost care. Nevertheless, we cannot guarantee that the information contained herein is up to date, accurate, complete or suitable for specific applications. The technical data and specifications are provided solely for the purpose of providing non-binding preliminary information. They do not constitute any warranted characteristics in the legal sense.

The user is obliged to check the suitability and applicability of the product for their specific intended use on their own responsibility. We accept no liability for any damage arising from the use of the information provided here.

We expressly reserve the right to make changes to the technical data and to correct any errors.