

ARCOPTIX FTS

Portable High Resolution Fourier Transform Spectrometer

The ANIR series of scanning Fourier Transform Spectrometers (FTS) from Arcoptix uses an exclusive micro-actuated lamellar grating and operates with a single photodiode detector. The actuation of the interferometer system is actively controlled by a laser enabling a precise and reliable operation. The single photodiode detection ensures highest dynamic range and signal quality at very attractive pricing. The spectrometer is fiber based and portable. The modular concept of the ANIR allows users to adapt it for specific applications, as the wavelength range is solely dependent on the detector choice.



Features & Benefits

Active laser position control allows reliable, high quality, robust, maintenance-free operation at low power consumption.

In Fourier spectroscopy extreme wavelength ranges are accessible because detection range is limited only by the detector.

High resolution and high throughput are combined in Fourier transform spectroscopy because resolution is limited by the maximum scanning range and not by the entrance aperture.

Optional parameters like variable gain, variable resolution and variable scan speed permit optimization to obtain best results.

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	ANIR 0.9-1.7	ANIR 0.9-2.6	ANIR 2.0-4.5
Spectrometer			
Spectral range (nm):	900 - 1700	900 - 2600	2000 - 4500
Detector type:	InGaAs	InGaAs	MCT
Resolution in wavenumber:	8 cm ⁻¹	8 cm ⁻¹	8 cm ⁻¹
At 1000 nm:	1.4 nm	1.4 nm	
At 1700 nm:	4.2 nm	4.2 nm	
At 2600 nm:		9.7 nm	9.7 nm
At 4500 nm:			29.2 nm
Wavelength accuracy:	<0.5 nm	<0.5 nm	<0.5 nm
Signal-to-noise ratio:	>1:1000	>1:1000	1:300
A/D converter:	16 bit	16 bit	16 bit
Minimum scan time:	1 s	1 s	1 s
Effective measurement time:	5 s	5 s	5 s
Optical Bench			
Fiber core diameter:	650 μm	650 μm	650 μm
Fiber optics connector:	SMA 905	SMA 905	SMA 905
Physical			
Dimensions:	210 mm x 100 mm x 70 mm		
Weight:	850 g		
Electronics			
Operating voltage:	5V (USB powered)	5V (USB powered)	5V / 3A
Operating temperature:	10 - 30 °C	10 - 30 °C	10 - 30 °C
Computer			
Software interface:	Windows XP	Windows XP	Windows XP
Communication interface:	USB 2.0	USB 2.0	USB 2.0

Typical characteristics of the ANIR series:

Huge wavelength range:
- 900-600 nm
- or 2000-4500 nm

High resolution of 8 cm⁻¹ with a high signal-to noise ratio

Variable gain and resolution

Typical Applications:

- Gas detection
- Environmental monitoring
- Security
- Material identification and process control
- Laser characterization