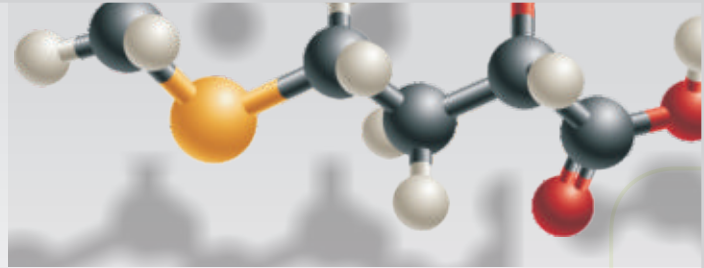


SIR (Mid-Infrared Analyzer)



Introducing the **SIR Mid-Infrared Fiber Optic Analyzers**. The SIR Analyzers collect spectral data over the 1 to 3.4 μ m wavelength range. The spectrometer's fiber based system utilizes a unique design allows for rapid spectral scans over its entire range, or it can provide real time data from one or several discrete wavelengths. The compact design allows the SIR Analyzers to be easily integrated into OEM and online process applications.

Offering many innovative features that make this a very high value in infrared instrumentation, the SIR Analyzers use a single point detector and a high angular resolution tunable grating system. The zero backlash mechanical design provides superior accuracy and repeatability. This combination along with an innovative 24 bit Analog to Digital Converter provides high spectral resolution and very high signal to noise data. An integrated filter wheel provides optical order sorting of diffracted orders. The SIR Analyzers are designed with a rugged aluminum housing which is robust enough to withstand the rigors of chemical processing applications. On board data processing can be accomplished with a powerful microprocessor. Synchronization with external components and light sources is accomplished through a 14 pin digital interface.

The USB 2.0 compliant interface provides fast data transfers between the spectrometer and the host PC. Our included "**SIR-Control**" software package is used to control all of the spectrometer functions, display and analyze data. The SIR Analyzers support a variety of triggering interfaces including external synchronization, and a light source trigger output. Both modes have an independently adjustable phase delay.

Our SIR Analyzers come in two standard configurations, the **SIR 3400** and **SIR 2600**. The SIR 3400 covers from 1-3.4 μ m system with an InAs detector (Indium Arsenide). The SIR 2600 covers the range from 1 to 2.6 μ m. Both SIR Analyzer systems can be custom ordered with pre installed slits and optical long pass filters.

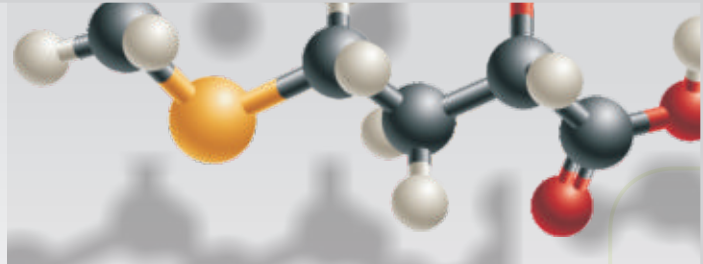
SANDHOUSE

DESIGN

innovative products for fiberoptic sensing

ph 727.474.2877 fax 727.342.7304
Dunedin, Florida
email: info@SandhouseDesign.com U S A

SIR (Mid-Infrared Analyzer)



Specification	SIR 3400	SIR 2600
Range (cm ⁻¹) (µm)	2,900 to 10,000 1 to 3.4	3,800 to 10,000 1 to 2.6
Size (LxWxH)	9 x 9.5 x 4"	9 x 9.5 x 4"
Weight	10lbs	10lbs
Detector	InAs (Indium Arsenide) with 3 stage cooler (1mm diameter)	Extended Range InGaAs (Indium Gallium Arsenide) with 2 stage cooler (1mm diameter)
Diffraction Grating	300 lines/mm 2.0um blaze	600 lines/mm 1.5um blaze
Optical Design	Czerny-Turner F/3	Czerny-Turner F/3
Slit Widths available	10um, 100um, 200um, 500um, 1000um	10um, 100um, 200um, 500um, 1000um
Optical input	SMA-905/906	SMA-905/906
Power input	7 Volt 3amps	7 Volt 3amps
Analog Resolution	24bits 16,777,216 counts	24bits 16,777,216 counts
Triggering	Internal and external synchronization	Internal and external synchronization
Grating Steps in range	28800	54000
Step Accuracy	+/-1 step	+/-1 step
Data Interface	USB 2.0	USB 2.0
Scan time	As quick as a 20 seconds for an entire scan	As quick as a 20 seconds for an entire scan
resolution based on the following optional slits		
10um	0.22nm	.08nm
100um	2.22nm	.76nm
200um	5nm	1.6nm
500um	11nm	4nm
1000um (no slit)	22nm	8nm

Additional options		
High Pass filters	1um high pass	1um high pass
	2um high pass	2um high pass

These can be installed in an internal filter wheel.

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