SIR-1700 VIS/NIR

(Visible / Near Infrared Analyzer)

SANDHOUSE DESIGN

innovative products for fiberoptic sensing

The **SIR-1700-VIS/NIR** Scanning spectrometer represents a unique solution for optical spectroscopy. This instrument combines a Silicon detector for the Visible range and an InGaAs detector for the NIR part of the spectrum. The instrument collects spectral data from 400nm to 1700nm. The spectrometer's fiber based system utilizes a unique design which allows for rapid spectral scans over its entire range. The system can provide real time data from one or several discrete wavelengths. The compact design allows the SIR Analyzer to be easily integrated into OEM and online process applications.

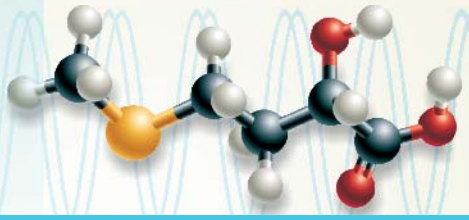
SIR-1700 VIS/NIR

The SIR-1700 offers many innovative features that make this a very high value in fiber based 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 optional 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.

For Applications requiring very fast scan times and very high resolution, Customers can upgrade this system to a SIR-1700-VIS/NIR 'Plus" system. By upgrading to the plus system, users can dramatically decrease scan times and increase resolution.

The USB 2.0 compliant interface provides fast data transfers between the spectrometer and the host PC. Our included "SIR" software package is used to control all of the spectrometer functions, display and analyze data. For applications that require custom software, Sandhouse Design's Software Development Kit is also included. The SIR Analyzers support a variety of triggering interfaces including an external synchronization, and a light source trigger output; both modes have an independently adjustable phase delay adjustment.

See back for technical info



For Orders or Inquiries

Call (727) 738-4477 or Fax (727) 342-7304

info@SandhouseDesign.com

SandHouse Design, LLC Dunedin, Florida U.S.A.

SIR-1700 VIS/NIR

(Visible / Near Infrared Analyzer)

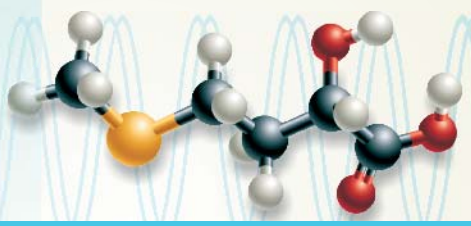
SANDHOUSE DESIGN

innovative products for fiberoptic sensing

System Specifications

Range (µm)	400nm to 1700nm	
Range (cm^{-1})	6,000 to 25,000	
Size (LxWxH)	9 x 9.5 x 4"	
Weight	10lbs	
Detector	Hybrid Silicon and InGaAs detector 1mm active area	
Diffraction Grating	1200 lines 600nm blaze wavelength	
Optical Design	Czerny-Turner F/3	
Slit Widths available	10um, 50um,100um, 200um, 500um, 1000um	
Optical input	SMA-905/906 Optional Lensed input	
Power input	5.0mm 5 Volt 4amps	
Analog Resolution	24bits 16,777,216 counts	
Triggering Options	Internal and external synchronization, pulse width control, and phase delay	
Additional Digital Outputs	2 Channels Selectable 3.3V/5V out	
Additional Digital Inputs	2 Channels 3.3V/5V compatible inputs	
Grating Steps in range	70,200	
Software	Sandhouse Operating Software and SDK	
Step Accuracy	+/- 10 steps	
Data Interface	USB 2.0	
Scan Time	As quick as 20 seconds. This is a function of wavelength resolution and AD/resolution	
Resolution based on the following optional slits	**10um**	.04nm
	50um	.2nm
	100um	.4nm
	200um	.8nm
	500um	6nm
	1000um (no slit)	10nm

SIR 1700-VIS/NIR *Plus* Optional System Upgrade Improves accuracy and speed	
Scan Time	4 seconds/scan
Accuracy	+/- 1/2 step
Digital Resolution	16 bit



For Orders or Inquiries

Call (727) 738-4477 or Fax (727) 342-7304

info@SandhouseDesign.com

SandHouse Design, LLC Dunedin, Florida U.S.A.