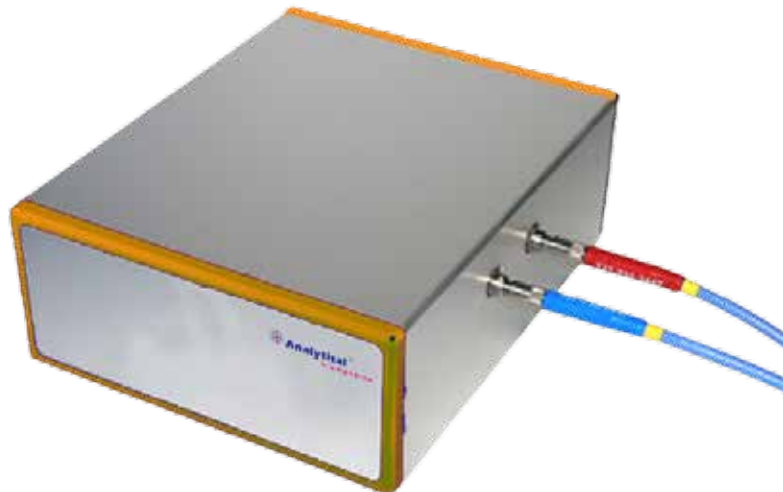


# NIR-3260

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## UV-VIS-NIR-FIB Spectrometer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

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Our UV-VIS-NIR-FIB Spectrometers are ultra-broadband spectrometers designed for use with fibered probes over the complete VIS & NIR spectral range, 350-2600nm. The system incorporates one Arcoptix FT-NIR Fourier-Transform scanning spectrometer for the NIR range 900-2600 and one multichannel grating spectrometer for the VIS (350-1000nm). Both instruments are integrated in a single, portable housing that has two separate SMA inputs for the VIS and for the NIR ranges, matching the transmission ranges of high-OH and low-OH fibers. The software supplied with the spectrometer automatically merges the spectra produced by the 2 spectrometers.

Unlike most scanning spectrometers used for such applications that take several minutes for a complete scan, the VIS-NIR-FIB (350-2600nm) give a result within two seconds! The software can be customized on demand for specific colorimetric or other standard measurements

- Ultra-broad spectral range: 350-2600 or (optionally 200nm-2600nm)
- Very good resolution (<5nm)
- Operation via optical fibers
- Fast measurements (down to 2 seconds)
- Very easy to use

## ►► **Features and benefits:**

Fibered spectrometer with the broadest available spectrum 350-2600nm

The VIS-NIR-FIB (350-2600nm) are the fiber-input spectrometers covering the broadest spectral range on the market.

Best of two worlds

The use of an Fourier-transform spectrometer for the NIR and a grating spectrometer for the UV and VIS is the best solution for a fast and reliable broadband spectrophotometer.:

For the UV-VIS range the most performant solution is the multichannel dispersive spectrometer with a Si-diode array. This solution offers fast measurement times, high sensitivity and good resolution at a moderate cost.

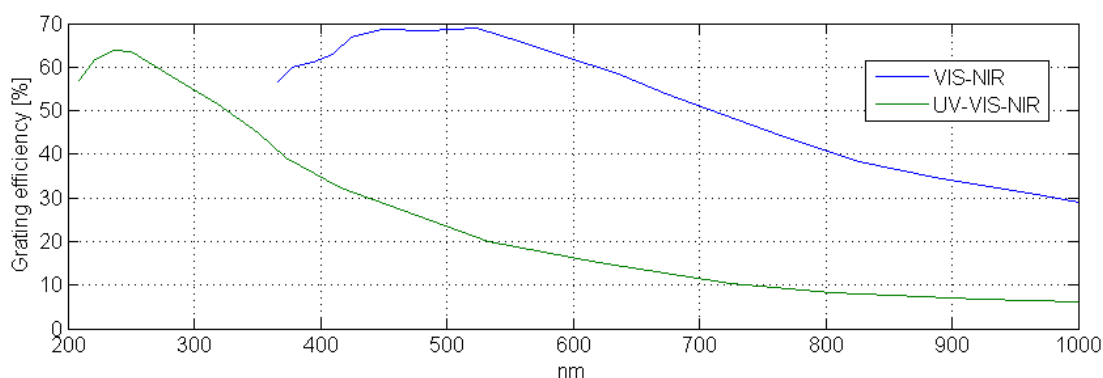
For the NIR spectral range, the scanning Fourier-transform spectrometers produced by Arcoptix are superior to photodiode-array based grating spectrometers. Indeed dispersive spectrometers are based InGaAs photodiode arrays that suffer from various noises and distortions due to the pixel variability and usually cannot reach wavelengths beyond 2300nm.

## ►► Specifications

Features	VIS-NIR-FIB	Optionally UV-VIS-NIR-FIB
<b>Main characteristics</b>	Smaller Spectral range, Better SNR in the VIS range (350-1000nm)	Larger spectral range. Reduced SNR in the VIS Range (up to 5x lower in the 800-1000nm range) due to grating efficiency. <b>Not recommended if UV is not absolutely necessary.</b>
<b>Spectral range</b>	350nm-2600nm	200nm-2600nm
<b>UV-VIS spectrometer</b>	Dispersive spectrometer with a silicon array detector (3648 pixels) 16-bit ADC <b>Spectral range: 350-1000nm</b> Best efficiency (>30%): 350-850nm (see graph below)	Dispersive spectrometer with a silicon array detector (3648 pixels) 16-bit ADC. <b>Spectral range: 200-1025nm</b> Reduced efficiency (see graph below)
<b>NIR spectrometer</b>	Fourier-Transform NIR spectrometer with extended range InGaAs photodiode, 24-bit ADC, Spectral range: 900-2600nm (uncooled version) or optionally 900-2500nm 2TE cooled.	
<b>Fiber inputs</b>	2x SMA-905 (one for UV-VIS, one for NIR)	
<b>Minimum measurement time</b>	<2 seconds	
<b>Resolution</b>	<5nm	
<b>SNR (Full dynamic range- 5 sec measurement, Halogen lamp directly attached)</b>	>1'000:1 (UV-VIS) @ 600nm >10'000:1 (NIR) @ 2000nm Notice that (due to poor sensitivity of Si and InGaAs detectors) the SNR is up to 10x lower in the overlap region from 900 to 1100 nm.	

<b>Software interface</b>	Windows 10
<b>Operating voltage (power)</b>	12V / 10W (line power adaptor 100-240V included)
<b>Communication Interface</b>	USB 2.0
<b>Product Dimensions</b>	220mm x 180mm x 80mm
<b>Product Weight</b>	2.5Kg
<b>Operating Temperature</b>	5°C – 35°C

**Efficiencies of VIS and UV-VIS spectrometer gratings**



The UV-VIS-NIR-FIB Spectrometer (350-2600nm) and the UV-VIS-NIR-FIB Spectrometer (200-2500nm) not only differ by their spectral ranges, but also by the efficiency of their grating in the VIS or UV-VIS spectral range. The VIS-NIR-FIB offers a better efficiency the range 350-1000nm, while the UV-VIS is rather optimized for the UV but has lower performance in the VIS range. If UV is not needed, we recommend strongly to choose the VIS-NIR-FIB spectrometer option which gives much better results in particular in 700-1100nm spectral region.

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

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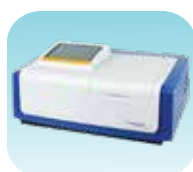
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Optima Gas  
Chromatograph  
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Chromatograph



Atomic Absorption  
Spectrophotometer



Liquid Particle  
Counter



Optical Emission  
Spectrophotometer



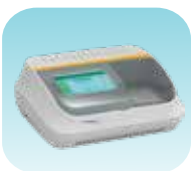
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Analyzer



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URINOVA 2800  
Urine Analyzer



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Carbon 3800



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CLIA



NOVA-2100  
Chemistry Analyzer



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TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system



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## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



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**Foundation**

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2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



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