GALAXY SCIENTIFIC

QuasIR™ 4000 FT-NIR for Solids and Liquids and Integrating Sphere FT-NIR

Portability without Compromise

- Two sampling methods in one design
- Large sampling area for reflectance measurements of solids
- Transmission measurements of liquids with optional temperature control
- Compact and Portable
- High Performance and Easy-to-use
- Atline or point-of-need
- Suitable for the road, lab, or factory
- Rugged, insensitive to vibration
- Low cost of ownership and maintenance
- Direct calibration transfer
- Instrument-to-instrument consistency
- Wide operating temperature range
- Powerful and easy-to-use software

Versatility

The QuasIR™ 4000 was designed from the ground up to offer the industry a new kind of NIR analysis solution - a solution that brings together the portability required to move NIR analysis closer to point-of-need, combined with unmatched spectroscopic performance for the fastest and most accurate results.

Innovation

The QuasIR™ 4000 delivers a wide range of technical innovations including our PermAlign™ optics technology. This advanced optical design maintains alignment and performance under conditions from the routine to the extreme.

Our Advanced-ID™ software is a targeted screening software tool that allows quick screening and semi-quantitative results for concentrations substantially less than 0.1%. Advanced-ID™ extends the use of NIR to further reduce ingredients supply chain risk and protect brand integrity.

Two-in-One Design

The QuasIR™ 4000 incorporates both diffuse reflectance and transmission sampling methods for optimized sampling of both solids and liquids. What's more, the QuasIR™ 4000 has an enhanced 23mm sampling area, which is up to 5 times larger than competitive products.

Consistency

The QuasIR™ 4000 is designed to ensure direct calibration transfer without the frustration of standardizing instruments or adjusting models to accommodate excessive instrument variability. Our technology and design ensure unmatched consistency and direct method transfer with no loss in performance, so you can expand your QuasIR™ fleet with confidence.

Key Applications:

Food Processing/Authentication

Feed Analysis

Edible Oils Analysis

Polymers and Plastics

QuasIR™ 4000 FT-NIR

System Specifications

General Specification	Value	Alternate Value/Benefit
Dimensions (W x D x H)	44.5 x 24.1 x 14.5 cm	17.52 x 9.49 x 5.71 in.
Weight	< 9.6 kg	< 21.2 lbs.
Power Supply	12V / 3A Supply, 60W max	
Communication	USB	
Operating Temperature	0° - 40°C , <95% humidity, non-condensing	32° to 104°F
Enclosure Protection	IP55 (dust and water)	NEMA 4
Sampling Mode	Diffuse Reflectance for solids, Transmission for liquids	Maximum signal and collection efficiency
Sampling Devices	1) High performance gold-coated integrating sphere 2) Transmission cell with optional temperature control	Maximum signal and collection efficiency
Automated Verification & Instrument Diagnostics	Automatic, internal, 4-position validation wheel	Continuous performance monitoring
Performance Specifications		
Wavelength Range	12,800 - 3,900 cm^{-1}	785 - 2,560 nm
Spectral Resolution	Better than 4 cm^{-1}	< 0.3 nm @ 870 nm
Wavelength Accuracy	< 0.05 cm^{-1} @ 7181.68 cm^{-1}	< 0.01 nm@ 1392 nm
Wavelength Repeatability	< 0.025 cm^{-1} @ 7181.68 cm^{-1}	< 0.0048 nm@ 1392 nm
Photometric Accuracy	Better than 0.1% T	
Signal-to-Noise Ratio	> 20,000:1	Excellent sensitivity
Noise	Better than 20 micro au	Low detection limit
Detector	TE cooled InGaAs	
Data Acquisition A/D converter	24-bit high speed Delta-Sigma	
Reliability Specifications		
Laser Life	> 10 years	Low downtime & ownership costs
NIR Source Life	> 20,000 hours, user replaceable	Low downtime & ownership costs
Desiccant	User Replaceable	Low ownership costs
Regulatory Compliance		
EMC directive 2004/108/EC	Complies	
RoHS directive 2002/95/EC	Exempt	
WEEE directive 2002/96/EC	Complies	