

Robust . Reliable . Accurate

Luminar 4070 Miniature Free Space AOTF-NIR Process Analyzer



- Non-contact, Non-destructive Measurement in Diffuse Reflectance Mode
- New Linux-based Software with a Graphic Touchscreen Interface and Stand-alone Operation



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Luminar 4070

■ Luminar 4070 Free Space Analyzer

The Luminar 4070 is a new Brimrose spectrometer that offers advantages in size and power consumption. The Luminar 4070 is seen being a good fit for a variety of different applications.

The Luminar 4070 includes other modern conveniences, including touch screen display.

The Luminar 4070 is compatible with our SNAP32 software and features new software that has a graphic, touchscreen interface, and is capable of stand-alone operation.

The Luminar 4070 analyzer has a number of potential uses such as non-contact, non-destructive measurements of chemical and physical properties of powders, solids, gels, etc, in diffuse reflectance mode.

The Luminar 4070 comes with a variety of options and can be fitted with several different accessories.



■ Key Features

- Small Size, Low-Power Consumption
- No Moving Parts
- Economic Price Tag
- USB Capable
- Amazing Scanning Speed of 16,000 Wavelengths per Second
- New Linux-based Software with a Graphic Touchscreen Interface and Stand-alone Operation
- Measuring Non-Destructively Powders, Solids, Gels, etc, in Diffuse Reflectance Mode

■ Real-time Applications

- Blend Control: Real-time homogeneity monitoring and blending control process
- Drying process: Direct placement on spray or fluid bed dryers
- Pharmaceutical: 100 percent inspection of solids, gels, liquids and powders
- Agricultural/Food: food analysis for fat, protein, moisture, starch, etc
- Polymer: In-site measurement of pellets, films and coatings; high speed polymer waste identification
- Textile: Cotton/polyester ratio accurately by the web
- Pulp and paper: In-line thickness, pulp properties, paper coating analysis



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■ Technical Data Specifications

Spectrometer Name	Luminar 4070 Free Space AOTF-NIR Process Analyzer
Spectral Range Options	1100-2300 nm
Measurement Modes	Diffuse Reflection
Spectral Resolution	2-10 nm
Wavelength Accuracy	± 0.5 nm
Wavelength Repeatability	± 0.01 nm over more than 5 years service
Wavelength Increment	Software Selectable 1-10 nm
Ambient Light Rejection	> 10 ⁶
Vibration Immunity	Blenders, production machinery, conveyor belts
S/N at 70% Range	< 30µabs in reflectance and transmission, for <5 seconds integration time
Wavelength Access Time	< 66 µsec
Photometric Range	3.5 AU
Linearity	Better than 0.15%
Signal Digitalization	16-bit A/D (1 part in 65,536)
Sampling Speed	16,000 wavelength/sec
Sampling Area	Ø6 mm
Sampling Distance	40 mm with Ø6 mm sample area
Diagnostic	10 Built-in monitoring sensors
Power Requirements	12VDC, (24VDC special order), 90Watts, 110VAC 60Hz, 220VAC 50Hz
Outputs	PC Interface via Ethernet connection
Software Package	Windows-based analytical software for data acquisition
Options:	Accessories:
<ul style="list-style-type: none"> ➤ Battery Operation ➤ Wireless Communication ➤ Gravity Switch ➤ GPS Capability 	<ul style="list-style-type: none"> ➤ 1.5" Sapphire Window Assembly ➤ Mounting Plate for Quick Dismounting ➤ Stand with Rotating cup and DC motor ➤ Stand with Rotating cup and Stepper motor



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