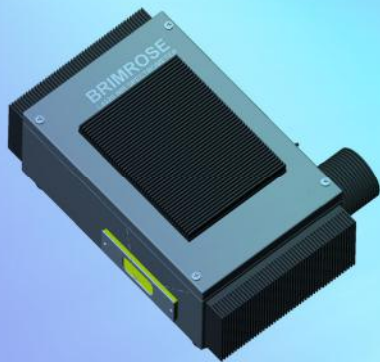
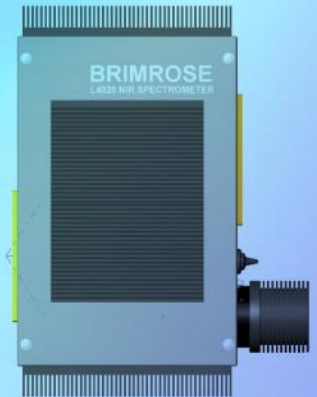
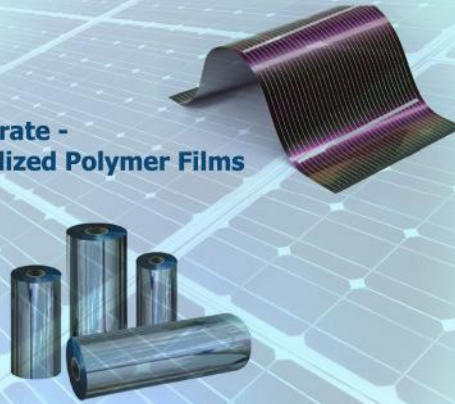


Robust . Reliable . Accurate

Miniature Integrated Thin Film AOTF-NIR Analyzer



Substrate -
Metallized Polymer Films



- On-line Specification Verification, Analyze and Evaluate Chemical Compositions
- Brimrose Analytical Software - Snap32!
- Totally Insensitive to Ambient Light and Easy Installation Requirements in the Production Environment



Brimrose Corporation of America
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www.brimrose.com

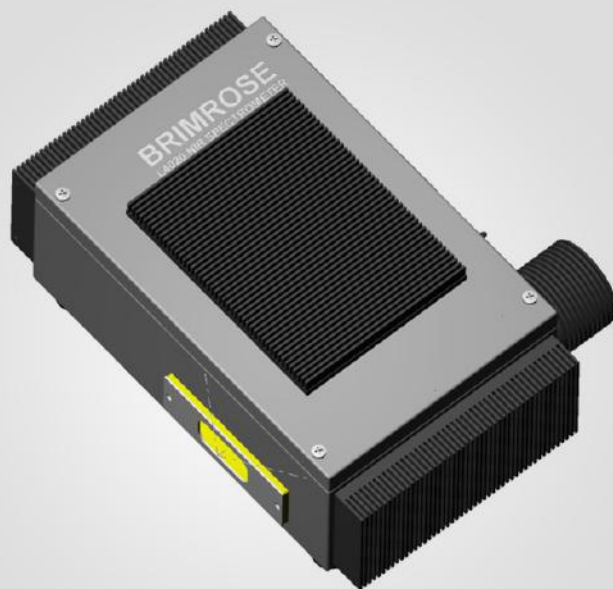
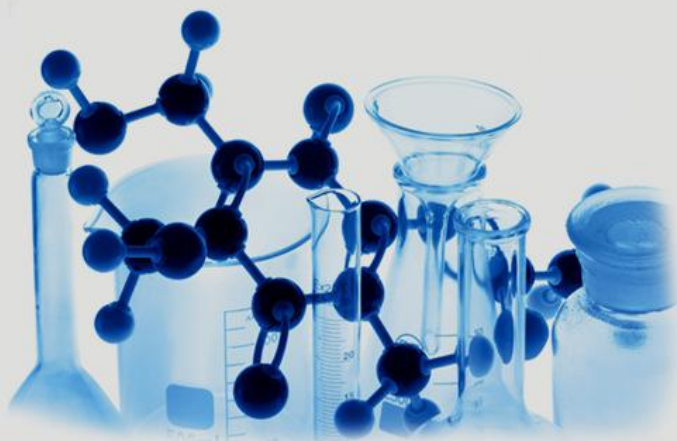
Luminar 4020

■ Miniature Integrated Thin Film Analyzer for the Measurements of Thin Films or Coatings

Brimrose solid-state high speed Miniature Thin Film AOTF-NIR Analyzer is designed for performing non-contact, non-destructive ON-LINE measurements of chemical and physical properties on wide ranges of substrates and coatings with extreme accuracy.

The Luminar 4020 analyzer can measure multiple Layers of the films individually and eliminate the need to measure thickness of substrate for accurate coating weight. Coating weight of adhesive and residual solvent are routinely measured with this high speed on-line analyzer, which can either be mounted on a traveler and scan across the web or measures statically.

Brimrose Luminar systems are non-contact solid state sensors with a compact, rugged design, providing rapid full spectrum scanning for demanding industrial use. The integrated Luminar 4020 is totally insensitive to ambient light, immune to vibration, dust, and dirt, which eases installation requirements in the production environment. An optical design eliminates the interference fringes making the measurement of thin films now possible using this on-line spectrometer.



Luminar 4020 AOTF-NIR Analyzer Isometric View

■ Key Features

- Dual Beam, Pre-aligned Lamp Assembly, InGaAs Detectors
- Fast Scanning Speed - 16,000 wavelengths/sec
- SNAP32! Brimrose Analytical Software with Brimrose MACRO Language
- Miniature Integrated Design Includes Optical Module and Miniaturized Electronics

■ Real-time Applications

- **Coating Material:**
Acrylic, Epoxy, Epoxy-Phenolic, Epoxy-Urea, Multi-layer Films and Tapes, Nitrocellulose, Polyesters, Polystyrene, Vinyl and more
- **Substrates:**
Aluminum Foil, Copper Clad Sheet, Metallized Polymer Films, Tin Plate, Polymer Films and More
- On-line Measurement of Film Thickness, Coating on Film and Residual Solvents



Brimrose Corporation of America
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■ Technical Data Specifications

Spectrometer Name	Luminar 4020 Miniature Integrated Film Analyzer
Spectral Range Options	600-1100 nm, 850-1700 nm, 900-1800 nm, 1100-2300 nm
Measurement Modes	Transmission
Spectral Resolution	2-10 nm
Wavelength Accuracy	± 0.5 nm
Wavelength Repeatability	± 0.01 nm
Wavelength Increment	Software Selectable 1-10 nm
Ambient Light Rejection	> 10 ⁶
Signal Digitalization	16-bit A/D (1 part in 65,536)
Non-Linearity	0.1%
Sampling Speed	16,000 wavelength/sec
Sampling Area	Ø10 mm
Working Distance	6 mm ± 0.5 mm (from reflecting surface to window flange)
Process Control	Up to 16 A/D, 16 D/A Channels and 16 I/O Channels accessed via MACRO language, D/A outputs can be supplied as isolated 4-20 mA current loop outputs - Modbus capability (optional) (RS 422/485)
Diagnostic	10 Built-in monitoring sensors
Thickness Range	Typical 0-15 µm (standard) (above 15 µm it is possible to use models 4030 and 7030)
Permissible Sheet Flutter	±5 mm and ±2 degrees
Power Requirements	24 VDC, 80 Watts or 100-240 VAC, 50/60 Hz, 90 Watts
Software Package	Windows-based analytical software for data acquisition
Options:	
<ul style="list-style-type: none"> ➤ Input/Output Capability ➤ Battery Operation ➤ Wireless Ethernet Interface 	



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