



LabSpec[®]4

Laboratory instrumentation for qualitative and quantitative materials analysis

The LabSpec[®] line of laboratory instrumentation offers laboratory-grade performance in a ruggedized, portable design suitable for benchtop analysis or transport to the sample location. LabSpec analytical instrumentation performs rapid, non-destructive qualitative and quantitative materials analysis.

The LabSpec 4 product line utilizes the same spectrometer configuration as ASD's FieldSpec[®] line of spectroradiometers, long recognized as the "gold standard" in portable near-infrared (NIR) field spectroscopy. Employing this state-of-the-art NIR technology, these portable lab instruments can quickly and non-destructively measure a wide range of materials with absolute precision.

Optimized for rapid analysis and flexibility of operation, LabSpec 4 spectrometers are the ideal analytical instruments for fast-moving laboratory environments, providing instant results with no sample preparation.

- Evaluate hundreds of samples per day with high analytic throughput rates.
- Identify spectral characteristics of both liquids and solids in real time.
- Non-destructive measurement means no sample preparation and allows for the reuse of the sample.
- Compatible with Grams IQ and The Unscrambler[®] chemometrics software applications for qualitative and quantitative constituent analysis.
- Compatible with all ASD probes and sampling accessories.
- Rapid analysis moves with the speed of production to evaluate incoming, in-process, or finished materials almost instantaneously.



Which LabSpec spectrometer is best suited for my application?

All ASD LabSpec spectrometers provide 3 nm spectral resolution in the VNIR (350 – 1000 nm) range. Multiple spectral resolution options are available for the SWIR (1001 nm – 2500 nm) range.

LabSpec 4 Hi-Res: The LabSpec 4 Hi-Res analytical spectrometer is designed for analysis of materials that are characterized by sharp spectral features that require more resolute spectral data for accurate detection and identification. The 6 nm spectral resolution in the SWIR range (1001 nm – 2500 nm) is particularly useful for detecting and identifying compounds with narrow spectral features in these longer wavelengths such as soil mineralogy, pharmaceuticals, cosmetics, plastics and petrochemicals.

LabSpec 4 Standard-Res: The 10 nm SWIR spectral resolution provides the basis for building accurate spectral models for chemometric quantitative and qualitative materials analysis, making the LabSpec 4 Standard-Res ideal for the characterization of a wide range of materials and constituents.

LabSpec 4 Bench: Configured specifically for fixed-location analysis with AC power, the LabSpec 4 Bench benchtop analyzer provides all the performance of ASD's LabSpec laboratory spectrometer line in a space-saving and cost-efficient design. This benchtop analyzer delivers 10 nm SWIR spectral resolution, the same as the LabSpec 4 Standard-Res spectrometer.

LabSpec 4 i: The LabSpec 4 Hi-Res and Standard-Res models are available with an internal broad-spectrum halogen light source that eliminates the need for an external fiber optic light source. Fiber optic light sources are used with bifurcated probes such as the Rapid Analysis Probe, cuvette holders, and other accessories to provide a wide range of customized sampling options.

Custom services

ASD's SummitCAL solutions team is a professional services group dedicated to helping customers convert complex spectral data into actionable solutions.

With a broad range of applications expertise, SummitCAL works with customers and their ASD spectrometers to

create customized models for their unique analytical requirements. SummitCAL performs feasibility studies for users investigating the applicability of ASD's solutions for specific applications. The team also offers chemometric training and consulting.

LabSpec 4 Specifications

Product	LabSpec 4 Hi-Res	LabSpec 4 Standard-Res	LabSpec 4 Bench
Spectral Range	350 – 2500 nm	350 – 2500 nm	350 – 2500 nm
Resolution	3 nm @ 700 nm 6 nm @ 1400/2100 nm	3 nm @ 700 nm 10 nm @ 1400/2100 nm	3 nm @ 700 nm 10 nm @ 1400/2100 nm
Height x Width x Depth	12.7 x 36.8 x 29.2 cm	12.7 x 36.8 x 29.2 cm	32.5 x 10.8 x 29.5 cm
Weight (w/o battery)	5.44 kg (12 lbs)	5.44 kg (12 lbs)	6.8 kg (15 lbs)
Integrated light source	Lamp 10 VDC, 50 W (optional)	Lamp 10 VDC, 50 W (optional)	Not available

Global and near



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