LabSpec®4
STANDARD-RES

Faster measurements, superior results–all in a portable lab instrument

Enhanced with a new spectrometer configuration, the LabSpec 4 Standard-Res laboratory analyzer offers extremely accurate material measurement in a portable package. The updated LabSpec 4 line uses ASD's cutting-edge near-infrared (NIR) spectroscopy to measure a wide variety of solids and liquids with precision in the lab or on site. The LabSpec 4 lab analyzer's NIR energy penetrates several millimeters into organic substances to evaluate multiple properties simultaneously. The lab instrument produces high-quality measurements that identify materials in real-time with minimal sample prep required.

- Faster measurements with the same spectral precision, or improved results in the same amount of time.
- A 2X increase in performance in the SWIR 1 (1001 – 1800 nm) region and a 2.5X improvement in the SWIR 2 (1801 – 2500 nm) region provide faster, more complete material measurement.
- Improved portability thanks to a standard 802.11g Wi-Fi connection and a ruggedized fiber optic cable.
- Available with an internal broad-spectrum halogen light source (LabSpec 4 Standard-Res i model) for more versatile material analysis.

UNIQUE APPLICATIONS:

- Powders
- Solids
- Quantification of materials
- Multivariate analysis of data

WITH INTERNAL LIGHT OPTION (*i*)

- Liquids
- Slurries
- Small sample sizes
- Any application requiring a probe with an external light source

ASDInc.

The 10 nm LabSpec 4 Standard-Res instrument provides the ideal balance between spectral resolution and noise performance. The instrument's augmented signal-to-noise characteristics remain consistent at high analytic throughput rates, allowing you to process hundreds of samples per day with precise results.

The LabSpec 4 Standard-Res lab analyzer is optimized for measurement of materials with broader spectral features, such as food and feed products, forestry products, and a variety of raw materials.

LabSpec 4 Standard-Res Specifications

PERFORMANCE

Wavelength range	350-2500 nm
Resolution	3 nm @ 700 nm 10 nm @ 1400/2100 nm
Scanning time	100 milliseconds
Signal-to-noise ratio	
VNIR	9,000:1 @ 700 nm
SWIR 1	9,000:1 @ 1400 nm
SWIR 2	4,000:1 @ 2100 nm
Photometric noise	
VNIR	4.8×10^{-5} AU or 48 μAU @ 700 nm
SWIR 1	4.8×10^{-5} AU or 48 μAU @ 1400 nm
SWIR2	1.1×10^{-4} AU or 110 μAU @ 2100 nm
Stray light	VNIR: 5000:1 (0.02%) NIR: 10,000:1 (0.01%)
Wavelength reproducibility	0.1 nm
Wavelength accuracy	0.5 nm
Channels	2151
VNIR detector	(350-1000 nm) 512 element silicon array
SWIR 1 & 2 detectors	(1001-1800 nm) & (1801-2500 nm) Graded Index InGaAs Photodiode, TE Cooled

CERTIFICATION AND APPROVALS

CE certified	EN61010-1:2001 2nd Edition EN61326-1:2006
EU Directive	2006/95/EC, 2004/108/EC
NIST traceable calibration	
21 CFR, Part 11	Installed per customer request
USP 1119	Installed per customer request and purchase of applicable USP Standards

COMMUNICATIONS

Wired	10/100 Base T Ethernet port with Ethernet cross-over cable
Wireless	802.11g wireless card

PHYSICAL & ENVIRONMENTAL

Dimensions (H x W x D)	12.7 x 36.8 x 29.2 cm (5 x 14.5 x 11.5 in)
Weight	5.44 kg (12 lbs)
Battery weight	1.2 kg (2.7 lbs)
Battery run time	Approximately 6 hours (without lamps or accessories)
Operating temperature	0 to 40° C (32 to 104° F)
Storage temperature	-15 to 45° C (5 to 113° F)
Input power	AC/DC switching power supply or a sealed lead-acid gel cell battery
AC input	90-240 VAC, 50/60 Hz
DC input	12 VDC, 60 W
Auxiliary port power	Output, +12 VDC, 27 Watt (max)

LABSPEC® 4 STANDARD-RES *i (optional)*

Integral light source	Lamp 10 VDC, 50 W

ADDITIONAL DETAILS

Software compatibility	Indico® Pro, GRAMS spectroscopy software suite by Thermo Scientific, The Unscrambler® by Camo Software
Portability	Rugged instrument transportation case
Warranty	One year full warranty including expert customer support
Computer	Windows® 7 64-bit laptop (instrument controller)