

# FieldSpec<sup>®</sup>4

STANDARD-RES



## The New Standard in Field Spectroscopy

Ideally suited to meet the needs of today's researcher, the FieldSpec<sup>®</sup> 4 Standard-Res spectroradiometer offers dramatically improved speed, performance and portability over previous models. This full-range Vis/NIR (350-2500 nm) instrument features enhanced capabilities in the SWIR 1 and 2 regions, as well as double the signal-to-noise performance, allowing you to cover twice the ground in half the time without any loss of data quality.

- Improvements in the SWIR 1 and 2 regions allow researchers to cover twice the area in half the time as the FieldSpec 3.
- New spectrometer configuration provides double the signal-to-noise ratio performance as previous models.
- New ruggedized fiber optic cable and a compact, impact-resistant case make the FieldSpec 4 Standard-Res field ready and highly portable.

### UNIQUE APPLICATIONS:

- Crops and Soils Research
- Landscape Ecology and Ecology Research
- Ground Truthing
- Spectral Remote Sensing
- Ice and Snow Research
- Spectroradiometry and Radiometric Calibration



ASD is a Malvern Panalytical brand



The FieldSpec 4 Standard-Res, with a 10 nm resolution, comes in a mobile package with a small, lightweight, impact-resistant case and a convenient backpack travel cover. A new ruggedized cable protects the fiber optics, nearly eliminating fiber breakage. An expanded wireless range adds flexibility by helping users capture spectra farther from the instrument controller.

The FieldSpec 4 is ideal for a wide range of applications, including hyperspectral image interpretation, crops and soils research and radiometric calibration.

## FieldSpec 4 Standard-Res Specifications

### PERFORMANCE

Wavelength range	350-2500 nm
Resolution	3 nm @ 700 nm and 10 nm @ 1400/2100 nm
Scanning time	100 milliseconds
NEdL (Noise Equivalent Radiance)	
VNIR	1.0 X10 <sup>-9</sup> W/cm <sup>2</sup> /nm/sr @ 700 nm
SWIR 1	1.2 X10 <sup>-9</sup> W/cm <sup>2</sup> /nm/sr @ 1400 nm
SWIR 2	1.9 X10 <sup>-9</sup> W/cm <sup>2</sup> /nm/sr @ 2100 nm
Stray light	VNIR 0.02% SWIR 1 & 2 0.01%
Wavelength reproducibility	0.1 nm
Wavelength accuracy	0.5 nm
Maximum radiance	VNIR 2X Solar, SWIR 10X Solar
Channels	2151
VNIR detector	(350-1000 nm) 512 element silicone array
SWIR 1 & 2 detectors	(1000-1800 nm) & (1800-2500 nm) Graded Index InGaAs Photodiode, TE Cooled

### CERTIFICATION AND APPROVALS

CE certified	EN61010-1:2001 2nd Edition
EU Directive	2006/95/EC, 2004/108/EC
NIST traceable calibration	
WEEE Compliance	

Manufactured by Malvern Panalytical,  
distributed in the UK and Ireland by **analytik**.

### 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)
NiMH battery weight	1.2 kg (2.7 lbs)
NiMH 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 12V 9Ah NiMH battery pack
AC input	90-240 VAC, 50/60 Hz
DC input	12 VDC, 60 W
Auxiliary port power	Output, +12 VDC, 27 Watt (max)

### ADDITIONAL DETAILS

Software	RS <sup>3</sup> ™ spectral acquisition software, Seamless interface with ENVI®, ASD ViewSpec™ Pro for post processing Optional Indico™ Pro
Portability	Waterproof customized backpack with soft-sided travel bag; Rugged instrument transportation case
Warranty	One year full warranty including expert customer support
Computer	Windows® 7 64-bit laptop (instrument controller)
GPS	Optional