SciAps ASD FieldSpec4 Specifications

Highest-performing spectral analysis system

- **Best-in-class signal-to-noise performance**
- **Factory-installed, fixed fiber-optic input**
- **True post-dispersive spectroradiometer architecture**

The ASD FieldSpec4 spectroradiometer is the highest-performance spectral analysis system, designed for users who require the best possible data quality under real-world field conditions. Now produced and supported by SciAps Inc., FieldSpec4 continues the industry-standard legacy for remote sensing, environmental monitoring, and advanced geoscience research.

FieldSpec4 is purpose-built for applications that rely on natural illumination, including solar-based reflectance measurements and ground-truthing of airborne and satellite sensors. Its optical design enables reliable collection of low-signal data in challenging conditions where lighting, atmosphere, and surface properties cannot be controlled.

Spectral Range
250 - 2500 nm

Key Specifications

- **Best-in-class signal-to-noise performance** enabled by direct optical coupling to the diffraction gratings, delivering maximum sensitivity for low-light and solar-illumination measurements.
- **Factory-installed, fixed fiber-optic input** to eliminate junction losses and ensure long-term optical stability for demanding field and research applications.
- **True post-dispersive spectroradiometer architecture** with support for external light sources and factory radiometric calibration for absolute spectral radiometry and remote-sensing validation workflows.

As a true post-dispersive spectroradiometer, FieldSpec4 supports the use of external light sources—most importantly sunlight—making it ideal for building high-quality spectral libraries and validating hyperspectral imagery. This capability allows researchers to replicate the same illumination conditions experienced by overflight sensors.

For users working in variable environments, unknown materials, or complex atmospheric conditions, FieldSpec4 delivers the sensitivity, stability, and measurement flexibility required for accurate, defensible spectral results.

For more information, or to schedule a demonstration:

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SciAps

SciAps ASD FieldSpec4
Specifications

Product		FieldSpec 4 Hi-Res NG	FieldSpec 4 Hi-Res	FieldSpec 4 Standard-Res
Spectral Range		250 - 2500 nm	250 - 2500 nm	250 - 2500 nm
Resolution		3 nm @ 700 nm 6 nm @ 1400/2100 nm	3 nm @ 700 nm 8 nm @ 1400/2100 nm	3 nm @ 700 nm 10 nm @ 1400/2100 nm
Noise Equivalent Radiance (NEdL)	**VNIR** **SWIR 1** **SWIR 2**	1.0×10^{-9} W/cm²/nm/sr @ 700 nm 8.0×10^{-9} W/cm²/nm/sr @ 1400 nm 8.0×10^{-9} W/cm²/nm/sr @ 2100 nm	1.0×10^{-9} W/cm²/nm/sr @ 700nm 1: 1.4×10^{-9} W/cm²/nm/sr @ 1400nm 2: 2.2×10^{-9} W/cm²/nm/sr @ 2100nm	1.0×10^{-9} W/cm²/nm/sr @ 700 nm 1.2×10^{-9} W/cm²/nm/sr @ 1400 nm 1.9×10^{-9} W/cm²/nm/sr @ 2100 nm

ASD Fieldspec® 4 Instrument Details	FieldSpec 4 Hi-Res
Spectral sampling (bandwidth)	1.4 nm @ 350–1000 nm, 1.1 nm @ 1001–2500 nm
Scanning time:	100 milliseconds
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
Detectors:	VNIR detector (350–1000 nm) 512 element silicon array SWIR 1 detector (1001–1800 nm) graded index InGaAs photodiode, two stage TE cooled SWIR 2 detector (1801–2500 nm) graded index InGaAs photodiode, two stage TE cooled
Imput:	1.5 m fiber optic (25° field of view). Optional narrower field of view fiber optics available.
Weight:	5.44 kg (12 lbs)
Calibration:	Wavelength, reflectance, radiance*, irradiance*. All calibrations are NIST traceable (*radiometric calibrations are optional).
Computer:	Windows® 7 64-bit laptop (instrument controller)
Warranty:	One year full warranty including expert customer support

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