

Remote Sensing Series Technical Specifications

Model	NATURASPEC			NATURASPEC PLUS			NATURASPEC ULTRA			PSR-1100f	RS-3500			PSR+				
																		
	• Best signal to noise compromise in a field instrument • High resolution & sensitivity • Better data quality of any field spectrometer • The new standard for remote sensing			Same specifications as the NaturaSpec but with added compatibility with the Sensaprobe: • Built-in inclinometer • Built-in camera for real-time targeting • Distance sensor • GPS Coordinates			• The highest spectral resolution of any field spectroradiometer • Enables field validation and calibration of even the highest resolution hyperspectral cameras and satellites by bringing lab quality hyperspectral data into the field. • The optimum instrument to build high-resolution libraries and to push the limits of spectral analysis			• Smallest and lightest portable instrument • Spectral range is ideal for vegetation and water analysis • Internal memory – no need for external PC to operate • Tripod mountable • Compatible with all fore optics and accessories			• Tried and true full-range model • Standard spectral resolution • Lightweight and portable for field research • Compatible with all fore optics and accessories			• Lightest, most portable full-range instrument • Internal memory & onboard controls - no need for external PC to operate • Option for direct attach lens or fiber optic • Tripod mountable • Compatible with all fore optics and accessories		
Spectral Range	350-2500nm			350-2500nm			350-2500nm			320-1100nm			350-2500nm			350-2500nm		
SpectralResolution	2.7nm @ 700nm	5.5nm @ 1500nm	5.8nm @ 2100nm	2.7nm @ 700nm	5.5nm @ 1500nm	5.8nm @ 2100nm	1.5nm @ 700nm	3nm @ 1500nm	3.8nm @ 2100nm	3.0nm @ 600nm	2.8nm @ 700nm	8nm @ 1500nm	6nm @ 2100nm	2.8nm @ 700nm	8nm @ 1500nm	6nm @ 2100nm		
SpectralSamplingBandwidth (nm)	Data output in 1nm increments; 2151 channels reported			Dataoutputin1nmincrements; 2151channelsreported			Dataoutputin1nmincrements; 2151channelsreported			Dataoutputin1nmincrements; 781channelsreported			Data output in 1nm increments; 2151 channels reported			Data output in 1nm increments; 2151 channels reported		
De te cto rs	1024-elementUV-enhancedSiArray 512-element TE-cooled InGaAs Array 512-element extended TE-cooled InGaAs Array			1024-elementUV-enhancedSiArray 512-elementTE-cooledInGaAsArray 512-elementextendedTE-cooledInGaAsArray			1024-elementUV-enhancedSiArray 512-elementTE-cooledInGaAsArray 512-elementextendedTE-cooledInGaAsArray			512-elementSiArray			512-element Si Array Two 256-element TE-cooled InGaAs Arrays			512-element Si Array Two 256-element TE-cooled InGaAs Arrays		
Calibration	Spectral and radiometric calibration for radiance/irradiance measurements using NIST traceable sources.																	
Noise Equivalence Radiance W/cm ² /nm /sr (1.2m fiber optic)	0.3x10 ⁻⁹ @ 400nm	0.1x10 ⁻⁹ @ 1500nm	2.5x10 ⁻⁹ @ 2100nm	0.3x10 ⁻⁹ @ 400nm	0.1x10 ⁻⁹ @ 1500nm	2.5x10 ⁻⁹ @ 2100nm	0.4x10 ⁻⁹ @ 400nm	0.2x10 ⁻⁹ @ 1500nm	4.0x10 ⁻⁹ @ 2100nm	0.8x10 ⁻⁹ @ 700nm	0.8x10 ⁻⁹ @ 400nm	1.2x10 ⁻⁹ @ 1500nm	1.8x10 ⁻⁹ @ 2100nm	0.5x10 ⁻⁹ @ 400nm	0.8x10 ⁻⁹ @ 1500nm	1.0x10 ⁻⁹ @ 2100nm		
Software Included	DARWin™ Data Acquisition			DARWin™ Data Acquisition			DARWin™ Data Acquisition			DARWin™ Data Acquisition			DARWin™ Data Acquisition			DARWin™ Data Acquisition		
Power(volts watts)	7.4v 28w			12v 28w			12v 33w			7.5v 2.5w			7.5v 22.5w			7.5v 22.5w		
Dimensions(millimeters inches)	314.9x220.9x111.7(mm) 12.4x8.7x4.4(in)			317.5x226.1x86.4(mm) 12.5x8.9x3.4(in))			314.9x220.9x111.7(mm) 12.4x8.7x4.4(in)			177.8x82.5x147.3(mm) 7x3.3x5.8(in)			215.9x304.8x88.9(mm) 8.5x12x3.5(in)			215.9x292.1x82.5(mm) 8.5x11.5x3.3(in)		
Weight(kilograms pounds)	5.5kg 12lbs			4.5kg 9.9lbs (without internal battery) 5kg 11lbs (with internal battery)			5.5kg 12lbs			1.8kg 4lbs			3.3kg 7.3lbs			3.5kg 7.6lbs		
In te rface	USB, Wireless Connection			USB, WirelessConnection			USB, WirelessConnection			USB, WirelessConnection			USB, Wireless Connection			USB, Wireless Connection		
Minimum Scan Speed	100ms			100ms			100ms			100ms			100ms			100ms		
Wavelength Reproducibility	0.1nm			0.1nm			0.1nm			0.1nm			0.1nm			0.1nm		
Wavelength Accuracy (nm)	±0.5Bandwidth			±0.5Bandwidth			±0.5Bandwidth			±0.5Bandwidth			±0.5Bandwidth			±0.5Bandwidth		
Automatic Data	Data Optimization One Touch Operation Automatic Exposure Detector Integration Dark Current Correction																	
Input	1.5 m fiber optic (25° field of view); optional fore optics and optional longer fiber optic cables available			1.5 m fiber optic (25° field of view); optional fore optics andoptionallongerfiberopticcablesavailable			1.5 m fiber optic (25° field of view); optional fore optics andoptionallongerfiberopticcablesavailable			1m fiber optic (25° field of view); optional fore optics andoptionallongerfiberopticcablesavailable			1.5 m fiber optic (25° field of view); optional fore optics and optional longer fiber optic cables available			4° lens as standard optic; optional fore optics and fiber optic cables available		
Operationaltemperature range (°C)	0 to 40 degrees																	
Maximum Radiance	VNIR2xSolar SWIR10xSolar																	