GRAND-EOS™ HYPERSPECTRAL CAMERA

Macro-imaging modality

Micro-imaging modality

TECHNICAL SPECIFICATIONS

	GRAND-EOS	
Spectral Range	400 - 1700 nm	
	VNIR	**SWIR**
Spectral Resolution	< 2.5 nm (400-1000 nm)	< 4 nm (900-1700 nm)
Spatial Resolution (with 10 X microscope objective)	< 7.5 µm	< 12 µm
Camera	Front-illuminated interline CCD camera	
Sample Holder	XY Manual translation stage (50 mm travel)	
Wavelength tuning speed	60 ms stabilization time for 2 nm step	
Wavelength Absolute Accuracy	< 0.3 nm	
Visualisation Camera	Monochrome or Color XMP camera 2/3" 5.1M Progressive Color CMOS / 2448 x 2048 pixels	
Preprocessing	Spatial filtering, statistical tools, spectrum extraction, data normalization, spectral calibration	
Hyperspectral Data Format	FITS, HDF5,	
Single Image Data Format	JPG, PNG, TIFF, CSV, PDF, SGV	
Operating system	Windows 7 (64 bits)	
Software	PHySpec control and analysis software included	

Macro-imaging modality	
Field of view	Optimized from 20 x 20 mm to 160 x 160 mm

Micro-imaging modality	
Microscope	Upright or Inverted
Objectives	5x, 10x (other magnifications available upon request)
Illumination	Broadband and monochromatic illumination available via light guide
Excitation	532 nm, 660 nm, 785 nm, or 808 nm lasers. *Other wavelengths avaiblable upon request*

GRAND-EOS combines a hyperspectral microscopy system with a hyperspectral wide-field imaging platform, giving access to micro and macro modalities with both VNIR (400-1000 nm) and SWIR (900-1700 nm) spectral ranges. This imaging platform takes advantage Photon etc's patented filtering technology based on volume Bragg grating providing a non-polarized wavelength selection with high throughput and efficiency. This filtering method allows imaging of large field-of-view, scanning through a user defined wavelength range. Using a megapixel sensor, the acquisition of filtered images provides spectral information from million of points at the surface of the sample. The versatility of GRAND-EOS as well as its high spatial and spectral resolution makes it an ideal tool for both fundamental research or industrial applications.

APPLICATION EXAMPLES:

» Photovoltaic characterization

» Mineral analysis

» Forensic

» Food and plants sorting