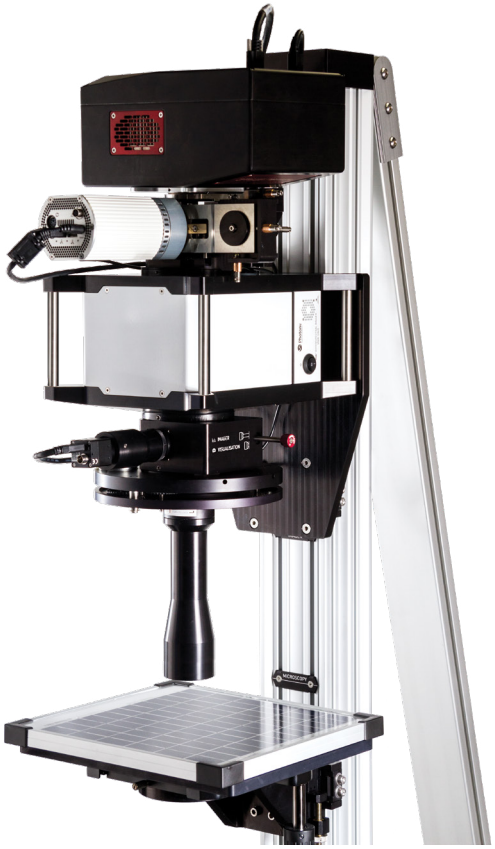
Photon etc
A spectrum of solutions

5795 DE GASPE AVENUE, #222
MONTREAL, QUEBEC, H2S 2X3
CANADA

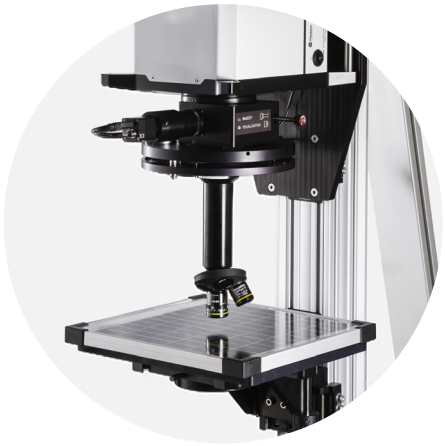
Tel: 514-385-9555
sales@photonetc.com

GRAND-EOS™

HYPERSPECTRAL CAMERA



Macro-imaging modality



Micro-imaging modality

TECHNICAL SPECIFICATIONS			
	GRAND-EOS		
	400 - 1620 nm		
	V-EOS	S-EOS 1.7	S-EOS 2.5
Spectral range	400 - 1000 nm	900 - 1620 nm	900 - 2500 nm
Spectral resolution (FWHM)*	< 2 nm	< 4 nm	< 5 nm
Camera	sCMOS	Photon etc's InGaAs camera (ZephIR™ 1.7 or Alizé™ 1.7)	Photon etc's MCT camera (ZephIR™ 2.5)
Wavelength absolute accuracy	FWHM/8		
Spectral channels	Continuously tunable		
Entrance slit size	No slit / Full field of view measured for each wavelength		
Exposure control	PHySpec™ Software controlled		
Standard field of view (customizable)	160 mm x 160 mm, 20 mm x 20 mm, other fields of view available upon request		
Preprocessing	Image stabilization, spatial filtering, statistical tools, spectrum extraction, data normalization, spectral calibration		
Hyperspectral data format	HDF5, FITS		
Software	PC (Windows10 - 64-bits) with PHySpec™ control and analysis software (computer included)		
Dimensions (L x W x H)	≈ 150 cm x 85 cm x 82 cm		
Weight	≈ 80 kg		
Power requirement	120 VAC / 12 A / 60 Hz 230 VAC / 12 A / 50 Hz		
	*Constant over the spectral range		
OPTIONS & ACCESSORIES			
	Absolute photometric calibration		
	Laser excitation		
	White light illumination		
	Micro-imaging modality: 5X, 10X		

GRAND-EOS is a global hyperspectral camera that is continuously tunable from 400 to 1620 nm. This system combines micro and macro modalities. It provides non-polarized wavelength selection with high throughput and efficiency. This is made possible by Photon etc's patented filtering technology based on volume Bragg grating. GRAND-EOS generates a hyperspectral data-cube with spatial information along the *X-Y* axes and spectral information along the *Z*-axis. Photon etc.'s global-imaging technology extracts a data-cube from a handful of monochromatic images and without the need for image reconstruction. The field of view covered can be adjusted depending on the application and sample size. GRAND-EOS is designed for reflectance, transmittance and luminescence imaging and is well suited for both fundamental research and industrial applications.

Photon etc
A spectrum of solutions

5795 DE GASPE AVENUE, #222
MONTREAL, QUEBEC, H2S 2X3
CANADA

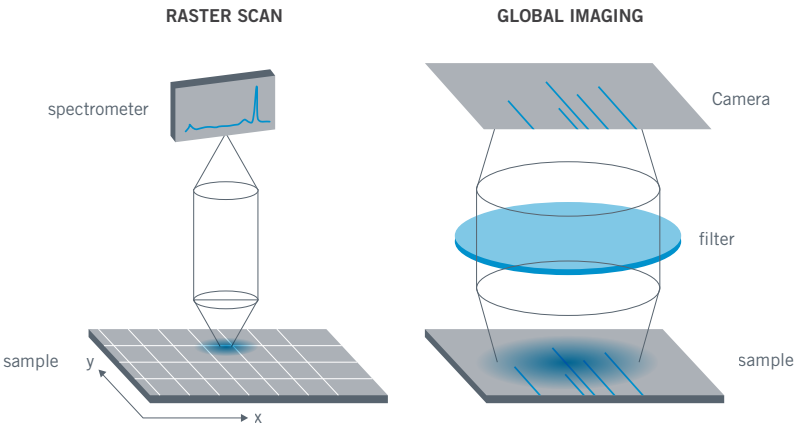
Tel: 514-385-9555
sales@photonetc.com

GRAND-EOS OPENS THE DOOR TO:

- Photovoltaic characterization
- Counterfeit examination
- Forensic research
- Food and plant sorting

GLOBAL IMAGING VS RASTER SCANNING:

Hyperspectral global imaging acquires monochromatic images and scans the wavelengths. In contrast, a spectral measurement performed with raster scanning technology is taken point by point or line by line by moving the sample or the excitation source. The number of acquisitions being much lower in global imaging (a few hundred wavelengths compared to several hundreds of thousands of points in scanning), the excitation density can be reduced while maintaining short measurement acquisition times. Global imaging therefore does not damage the sample in addition to offering high spectral (~ nm) and spatial (~ µm) resolution. Also, since the whole field of view is imaged simultaneously, moving object trajectories can be reconstructed.



V-EOS

SPECTRAL RANGE
400 - 1000 nm

S-EOS

SPECTRAL RANGE
900 - 1620 nm
900 - 2500 nm