Photon etc
A spectrum of solutions
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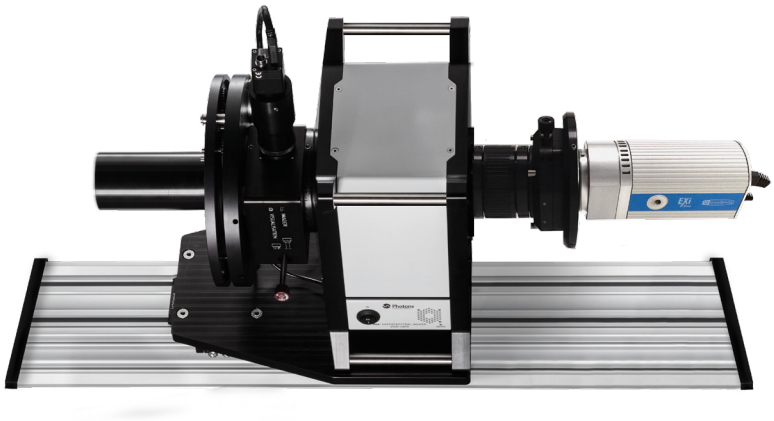
V-EOS™
HYPERSPECTRAL CAMERA



V-EOS is a global hyperspectral camera continuously tunable from 400 to 1000 nm. It 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. V-EOS is designed for reflectance, transmittance and luminescence imaging.

TECHNICAL SPECIFICATIONS	
Spectral range	400 - 1000 nm
Spectral resolution (FWHM)*	< 2 nm
Camera	sCMOS
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

OPTIONS & ACCESSORIES	
	Absolute photometric calibration
	Laser excitation
	White light illumination
	Micro-imaging modality: 5X, 10X
	*Constant over the spectral range

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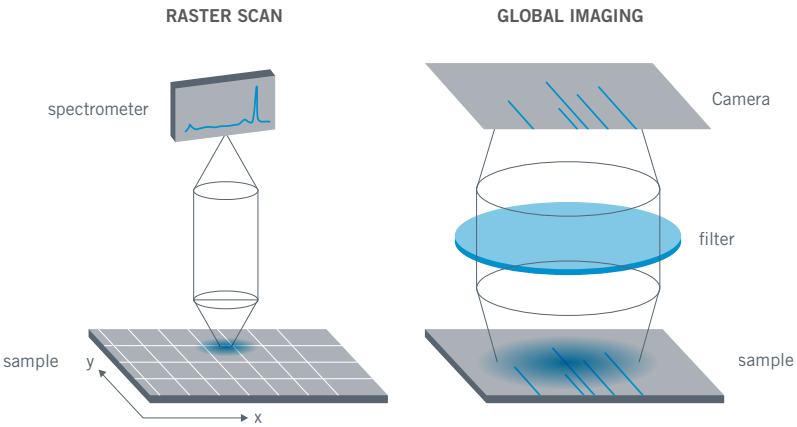
V-EOS OPENS THE DOOR TO:

- 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.



S-EOS

SPECTRAL RANGE
900 - 1620 nm
900 - 2500 nm

GRAND-EOS

SPECTRAL RANGE
400 - 1620 nm
Micro and macro modalities