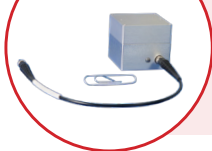


Best Selling Miniature Spectrometers for OEM Industrial Applications

Fiber-coupled USB Spectrometers:

MiniVS20 Spectrometer with Linear UV-VIS CMOS or NIR INGAAS sensor

5 nm resolution



OEM hand-held spectrometer covering 190 to 1,700 nm for various low stray light applications

- Aberration-corrected concave holographic grating options
- VIS configuration featuring a 1.7" x 1.9" x 2" size combined with full F/2.3 optics for high signal-to-noise
- High throughput, compactness and long term reliability

MiniVS70 VIS Spectrometer with FI CMOS or BI CCD

1 nm resolution



NEW miniaturized VS70 configuration

- Based on high performance aberration-corrected concave gratings fitted with a custom order-sorting filter to eliminate higher orders
- Low cost combined with high performance and low stray light
- Long term opto-mechanical stability and choice of front-illuminated linear CMOS or back-illuminated CCD sensors

VS70 UV-VIS-NIR Spectrometer with uncooled / TE-cooled CCD

1-2 nm resolution

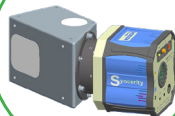


Most popular, compact versatile VS70 OEM Spectrometer and OES configurations

- Based on high performance aberration-corrected concave gratings with full F/2.3 aperture
- SINGLE or DUAL fiber channel versions available
- Affordable high throughput, robust and stable
- Electronics drivers ranging from **USB 2 to Ethernet and EtherCAT**

CiCi-Raman-NIR with scientific camera optimized for 785 nm

6 cm⁻¹ resolution



Most compact OEM Raman spectrometer with aberration-corrected holographic grating

- Covers 150-3,300 cm⁻¹
- High efficiency and low stray light
- Available in F/2.3 and in compact F/5 configurations
- -50° C deep-cooled scientific CCD camera with minimized etaloning and high NIR QE

PoliSpectra® Quad Spectrometer for simultaneous acquisition of 4 VIS spectra

1 nm resolution



CCD spectrometer for simultaneous acquisition from 4 fiber inputs (470-730 nm)

- High-speed electronics (as fast as <1.5 msec readout time for 4 spectra)
- QUAD-channel high throughput system (f/2.3) and ultra-low stray light
- Industrial low light applications from low light fluorescence to reflectance

PoliSpectra® M116 8-32 channel MultiTrack UV-VIS-NIR CMOS spectrometer

1 nm resolution



Fiber-coupled multi-spectra system with 8 to 32 channel simultaneous measurements

- Concentric optical design with UV extended spectral range provides minimized crosstalk
- High throughput USB 3 system featuring a fast 2D scientific BI CMOS running at 94 to 188 frames per second, acquiring 8, 16 or 32 simultaneous spectra (2048 pixels per spectrum)

PoliSpectra® H116 Imaging Spectrometer for hyperspectral work from UV to NIR

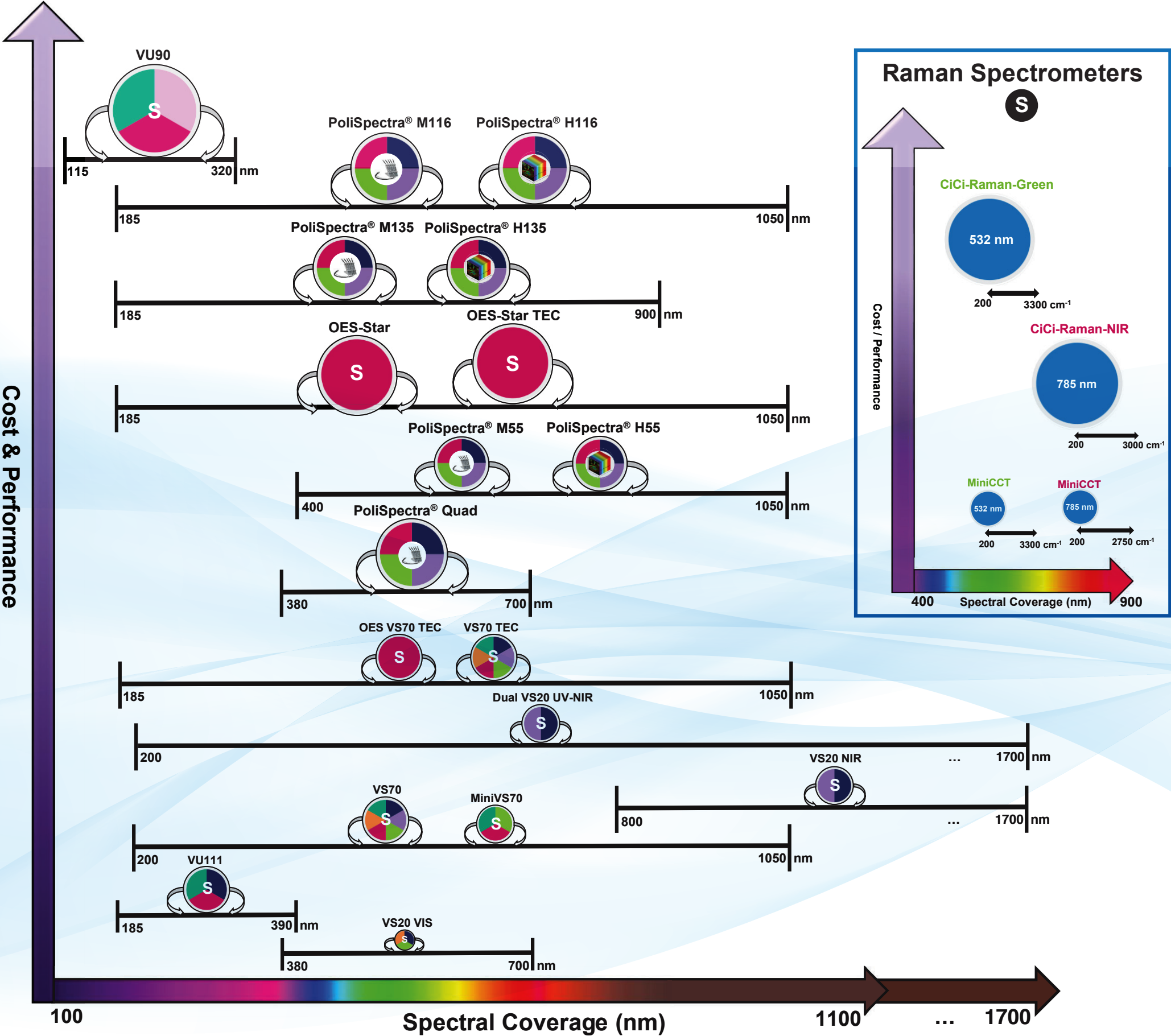
Free-space coupled
1 nm & 40 μm resolution



Ultra-high performance rugged spectrometer for hyperspectral imaging with a 2D sCMOS Camera

- For line-image scanning, in a push-broom hyperspectral configuration
- High throughput, USB 3 system featuring a fast 2D scientific BI CMOS with rolling shutter, running at 94 (HDR) to 188 (Standard Mode) frames per second (2048 pixels per spectrum)

OEM Spectrometer Selection Guide



Legend

Spectrometer Input Type

- S** Single-fiber Input
- Multi-fiber Input
- Hyperspectral Imager

Technique & Application

- Emission (OES)
- Absorbance
- Fluorescence
- Reflectance
- Raman
- Metrology
- Photoluminescence
- Colorimetry

Spectrometer Size

- ≤ 10.5x9x7 inches
- ≤ 8x8x8 inches
- ≤ 7.5x4.5x5 inches
- ≤ 7.5x4.5x3 inches
- ≤ 6x6x7.5 inches
- ≤ 5x5x5 inches
- ≤ 5x5x2 inches
- ≤ 2x2x2 inches

OEM Philosophy and Mission

3 Centers of Excellence Dedicated to OEM Spectroscopy and Camera Solutions in US, EU, and Asia

Our mission is to provide a complete development and manufacturing experience, from optical simulations to opto-mechanical design and prototyping of spectroscopic and camera systems extending to, and including, electronics, firmware, software design and first articles.

Our products provide superior performance, reliability and stability, combined with robust cost reduction. Capable of flexible high volume production capacity in quantities of hundreds to thousands per year, we offer full confidentiality providing "Black Boxes" or private labelling, using your logo or graphics.

Unmatched customer service is provided by our exceptionally experienced workforce featuring on-time delivery and flexibility, allowing scheduling modifications.

Adhering to Copy Exactly! (CE!) processes, our fully trained staff from engineering to manufacturing form a dedicated OEM engineering force that supports you over the lifetime of the product.

Scientific Segment - OEM Products and Capabilities:

- Custom master optical diffraction gratings
- Diffraction grating replicas (concave, convex and flat)
- Spectrometers, optical assemblies with pre-aligned sensors (CCD, PDA, CMOS, InGaAs) using either customers' or HORIBA's OEM electronics
- OES spectrometers
- Spectroscopy systems or modular engines, such as mini fluorometers and mini Raman systems
- Single and double scanning monochromators
- Imaging spectrographs and spectrometers with CCD or CMOS cameras
- Multispectra spectrometers with multiple fiber inputs / MultiTrack spectroscopy
- Hyperspectral system with HORIBA or customer provided camera (Push-broom configurations)
- Cameras: Spectroscopic deep-cooled scientific cameras (1D and 2D CCD & InGaAs – FI and BI)
- OEM electronics for optosensors ranging from PD and PDA to CCD and CMOS sensors
- Imaging cameras: Uncooled and cooled with FI and BI high-end scientific CMOS
- VUV/FUV spectrometers and CCD vacuum and N2-purged cameras

Scientific Deep Cooled CCD, InGaAs and CMOS Cameras

Syncerity®	Synapse® Plus	Synapse® EM	VUV Syncerity®	Synapse® InGaAs
				
Low Cost -50° C Air-cooled OEM Camera	Deep-cooled -80° C to -100° C Air- or Water-cooled Camera	EM CCD Deep-cooled Camera	TE-cooled to -50° C (Vacuum) or -30° C with N2 purge	Deep-cooled NIR Camera to -75° C (Water-cooled)

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