

Hyperspec VS® imaging spectrographs available in broad spectral ranges for OEMs and system integrators

Headwall's Hyperspec® VS family of hyperspectral imaging spectrographs are very compact, high optical throughput spectrographs for use with the latest, large format focal plane array detectors. With an exceptionally large and distortion free image plane, these all-reflective concentric spectrographs are designed for hyperspectral imaging applications where very high spectral and spatial resolution is required..

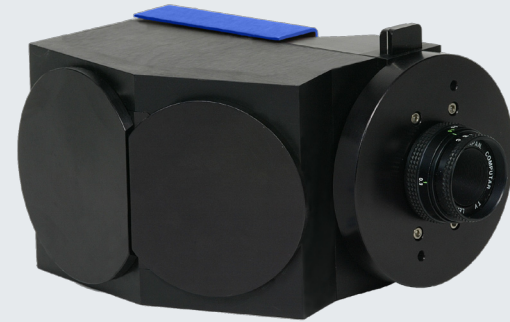
The Hyperspec® VS imaging spectrographs are available in six configurations; each model providing different capabilities to support application requirements across broad spectral ranges.

Hyperspec® VS UV-VIS	330 - 825 nm
Hyperspec® VS VIS	380 - 825 nm
Hyperspec® VS VNIR	400 - 1000 nm
Hyperspec® VS Extended VNIR	600 - 1600 nm
Hyperspec® VS NIR	900 - 1700 nm
Hyperspec® VS SWIR	1000 - 2500 nm

The award-winning, Hyperspec® imaging spectrometer family is built on a totally reflective concentric, f/2.0 optical design and optimized for imaging in harsh environments. All Hyperspec® instruments are based on Headwall's patented aberration-corrected, imaging design which feature the company's "original", high efficiency holographic diffraction gratings.

The Hyperspec® imaging spectrographs are also configurable as multi-fiber, multi-channel spectrometers and can be purchased with the Hyperspec® Starter Kit, the Hyperspec® Reflectance/Fluorescence System, or with the pan/tilt configuration.

In order to minimize stray light and aberrations, the use of transmissive optical components are not used within the imaging spectrometer. This platform is further enhanced by a telecentric optical input design which enables superior spectral and spatial imaging.



Applications:

- Color measurement
- Food safety & quality
- LCD/display quality control
- Machine vision
- Military, defense, homeland security
- Moving webs of product
- Multi-channel/multi-point spectroscopy
- Process control of biomass/biofuels
- Pulp & paper
- Photovoltaic/semiconductor manufacturing
- Remote sensing & analysis
- Textile production
- Waste recycling & sorting

Key Benefits:

- Superb imaging performance
- Exceptional spectral & spatial resolution
- Ideal for low light, low signal applications
- Compact with very wide field of view
- Extremely high signal-to-noise
- Low scatter or stray light
- Rugged design for durability & stability
- Cost effective deployment

Application-Specific Solutions For Critical Environments

Headwall Photonics is the leading designer and manufacturer of imaging spectrometers.

Hyperspec™ VS Spectrographs	UV-VIS	VIS	VNIR	Ext VNIR	NIR	SWIR
Wavelength Range (nm)	330-825	380-825	400-1000	600-1600	900-1700	1000-2500
Aperture	F/2.0	F/2.0	F/2.0	F/2.0	F/2.0	F/2.0
Dispersion per mm	82.5	82.5	100	200	160	250
Slit Width (Interchangeable) Optional - 12, 16, 40, 60, 100	25µm	25µm	25µm	25µm	25µm	25µm
Slit Length	18mm	18mm	18mm	18mm	18mm	18mm
Spectral Resolution (25µ slit)	1-2nm	1-2nm	1-2nm	6-7nm	5-6 nm	8-12nm
Smile - Aberration-corrected	Yes	Yes	Yes	Yes	Yes	Yes
Keystone - Aberration-corrected	Yes	Yes	Yes	Yes	Yes	Yes
Stray Light	< 0.02%	< 0.02%	< 0.02%	< 0.02%	< 0.02%	< 0.02%

Environmental & Mechanical	UV-VIS	VIS	VNIR	Ext VNIR	NIR	SWIR
Operational Temperature	-10°C - 50°C	-10°C - 50°C	-10°C - 50°C	-10°C - 50°C	-10°C - 50°C	-10°C - 50°C
Storage Temperature	-30°C - 70°C	-30°C - 70°C	-30°C - 70°C	-30°C - 70°C	-30°C - 70°C	-30°C - 70°C
Weight	5 lbs/2.6 kg	5 lbs/2.6 kg	5 lbs/2.6 kg	5 lbs/2.6 kg	5 lbs/2.6 kg	5 lbs/2.6 kg

Information on UV, MWIR, and LWIR Hyperspec® sensors are available upon request.

Optimized for every application, Hyperspec® imaging spectrometers offer industry leading spectral imaging performance.



Raman Imaging Instruments

Raman Explorer™ 266 nm

Raman Explorer™ 532 nm

Raman Explorer™ 642 nm

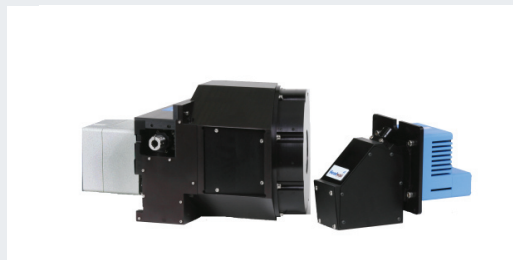
Raman Explorer™ 785 nm

Raman Explorer™ 830 nm

Raman Explorer™ 1064 nm

Raman Discovery™ 532 nm

Raman Discovery™ 785 nm



Visit www.HeadwallPhotonics.com for more information on OEM and system integrator spectral imaging solutions.

About Headwall Photonics:

Headwall Photonics is the leading designer and manufacturer of imaging spectrometers and spectral instrumentation for industrial, commercial, and government markets. Headwall's high performance spectrometers, spectral engines, and holographic diffraction gratings have been selected by OEM and end-user customers around the world for use in critical application environments. As a pioneer in the development of innovative spectrographs and imaging spectrometers based on optical technologies, Headwall enjoys a market leadership position through the design and manufacture of patented spectral instrumentation that is customized for application-specific performance. Headwall Photonics was formed in 2003 as the result of a management buy-out from Agilent Technologies. For more information please call 978.353.4100 or email us at Information@HeadwallPhotonics.com.



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