Data Sheet

Hyperspec™ UV
Hyperspectral Imaging Spectrometer

Hyperspec® UV imaging sensor for the 300nm to 600 nm spectral range

Headwall's Hyperspec® UV integrated hyperspectral imaging sensor provides the foundation for utilizing hyperspectral imaging to achieve superior spectral sensing and chemical imaging results for mission-critical applications ranging from biomedical applications to forensic science to process monitoring where UV measurement is a critical application parameter.

Key attributes of the hyperspectral imaging instrument are:

- High performance aberration corrected hyperspectral imaging for 300 - 600 nm
- Fully reflective imager eliminates chromatic distortion over the entire wavelength range
- Back-Illuminated CMOS sensor optimized for ultra-violet response
- 100% fill-factor and high Quantum Efficiency (QE) maximizes UV sensitivity & dynamic range
- Greater than 50 frames per second digital readout

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.

In order to minimize stray light and aberrations, 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.

The Hyperspec® UV sensors are also available with the Hyperspec® Starter Kit, the Hyperspec® Reflectance/Fluorescence System, and in pan/tilt configurations for stationary deployment or portable field-based deployment.

Application-SpecificSolutionsForCriticalEnvironments

Applications:
- Biomedical research
- Chemical & biological analysis
- Food safety & quality
- Forensics
- Laboratory & healthcare
- Material identification
- Microscopy
- Multi-channel/multi-point spectroscopy
- Process control of biomass/biofuels

Key Benefits:
- Superb imaging performance
- Exceptional spectral & spatial resolution
- Ideal for low light, low signal applications
- Accurate, consistent spectral measurement
- Compact with very wide field of view
- Extremely high signal-to-noise
- Very portable - laboratory or field
- Rugged design for durability & stability
- Cost effective deployment

Hyperspec™ UV Imaging Spectrometer	
Wavelength Range (nm)	300-600
Aperture	F/2.0
Dispersion per pixel	0.61nm
Slit Width (Interchangeable) Optional - 16, 40, 60, 100	25µm
Slit Length	18mm
Spectral Resolution (25µ slit)	2nm
Spectral Bands	496
Spatial Bands	1280
Smile - Aberration-corrected	Yes
Keystone-Aberration-corrected	Yes
Stray Light	< 0.02%

Image Acquistion	
FPA/Detector	CMOS
Pixel Fill Factor	100%
Frame Rates (fps)	50-1230
Pixel Pitch (microns)	10.8
Read A/D	10 bits
Shutter	2 Modes
Region of Interest	Yes
Digital Interface	CameraLink

Environmental & Mechanical	
Operational Temperature	0°C - 50°C
Power Consumption	2W @ 3.6VDC
Relative Humidity (Non-Condensing)	5-95%
Weight	~7 lbs

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

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

Hyperspectral Sensors	Spectral Range
Hyperspec® VIS	380 - 825 nm
Hyperspec® VNIR	400 - 1000 nm
Hyperspec® Extended VNIR	600 - 1600 nm
Hyperspec® NIR	900 - 1700 nm
Hyperspec® SWIR	1000 - 2500 nm
High Efficiency Hyperspec® NIR	900 - 1700 nm
High Efficiency Hyperspec® SWIR	1000 - 2500 nm

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

Raman Imaging Instruments

Raman Explorer™ 266 nm
Raman Explorer™ 532 nm
Raman Explorer™ 642 nm
Raman Explorer™ 785nm
Raman Explorer™ 830 nm
Raman Explorer™ 1064 nm

Visit www.HeadwallPhotonics.com for more information on end-user and OEM 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 contact:

POLYTEC GmbH
Polytec-Platz 1 – 7 76337 Waldbronn GERMANY
Telefon (0 72 43) 604-0 Telefax (0 72 43) 6 99 44
e-mail: info@polytec.de
www.polytec.de