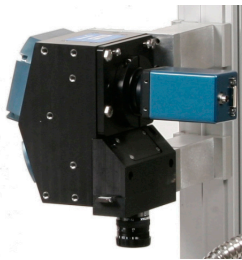


A simple, fast, and easy application for hyperspectral UV-VIS scanning and analysis of forensics, documents and biological sample materials for the UV spectral region

**The Starter Kit provides everything needed for high performance imaging and sample scanning: a high-performance UV-VIS spectrometer with UV objective lens, illumination kit, full software controls, and gantry.**

Headwall Photonics has developed a UV-VIS Starter Kit that provides a simple and rapid means of collecting hyperspectral images that can be used for reflective spectroscopic analysis. The Starter Kits can be deployed almost anywhere hyperspectral imaging is needed - in the field or in the laboratory. Headwall's fully reflective, patented UV-VIS spectrometer design eliminates image aberrations while offering high resolution with a wide field of view.



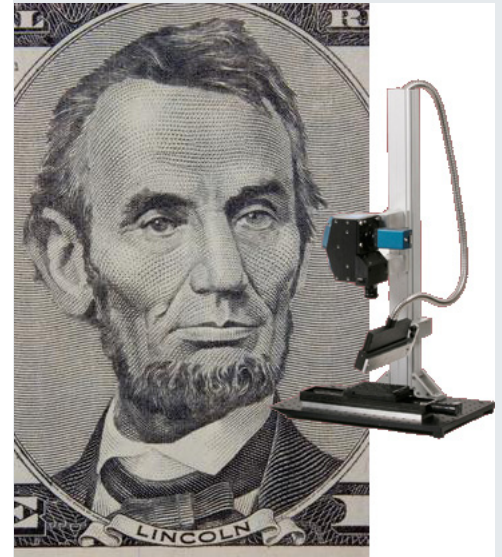
This represents a major advantage in the UV-VIS spectral range where spectral and spatial imaging performance is a critical success factor.

High Quantum-Efficiency (QE) detection electronics and 100% fill-factor means high signal-to-noise characteristics which maximizes UV sensitivity and dynamic range. A design-optimized objective

lens comes with each Starter Kit, providing excellent chromatic compensation and imaging results over the 250nm-600nm UV-VIS spectral range. The 28mm focal-length lens provided with the Hyperspec UV Starter Kit has been optimized for high resolution of UV wavelengths.

Stable lighting for sample illumination for the Starter Kit is provided by a remote-controlled Pulsed Xenon UV light source that can operate up to 9,600 pulses per minute. This light source also includes two interchangeable filter windows: one isolates a 100nm illumination band centered at 360nm while the other isolates a 50nm illumination band at 275nm.

Optional for every Starter Kit is Headwall's Hyperspectral Data Processing Unit (HDPU), which contains a powerful GPU in addition to a high-speed CPU to deliver extremely fast capture, transfer and processing of the hyperspectral image data. The HDPU also comes with Headwall's Hyperspec® image-analysis and display software that allows the user to export the data in industry-standard file formats.



#### Key Benefits:

- Instantly scan sample materials & display hyperspectral results
- Determine spectral band differentiators
- Increased user productivity
- Cost-effective deployment
- Simple to set up, simple to use
- Flexibility to quickly modify configurations
- Quickly run multiple experiments
- Rapid development of spectral libraries

#### Key Features:

- Adjustable Hyperspec® mounting stage and gantry includes base plate, tower, and sensor mounting hardware
- Precision DC Servo linear stage and controller with 100mm travel distance (optional 250mm travel available)
- Lighting includes adjustable light line and light guide, 50mm wide standard/200mm optional
- Hyperspec® software manages hyperspectral data
- Optional darkening enclosure and high-speed Hyperspectral Data Processing Unit

Application-Specific Solutions For Critical Environments



An enclosure can be added to the UV Starter Kit to eliminate the effects of ambient or other light sources.



Headwall's Hyperspec Data Processing Unit (HDPU) comprises a high-performance CPU and GPU combination plus high-capacity storage to provide instantaneous management of hyperspectral image data



Power-stabilized Pulsed Xenon UV and Quartz Tungsten Hologen (QTH) light sources.



Headwall's spectrometers provide a highly resolved means of determining the spectral makeup of any reflective material, including documents, currency, food products, and more.

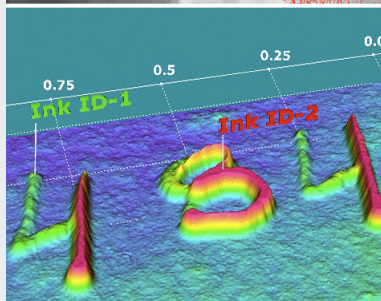


Image courtesy of Science GL

Performance Guideline Table	
Spectral Region	250-600nm
F-Number	f/2
Spectral Resolution	Variable, 2nm +
Spectral Bands	578
Spatial Bands	1280
Stray Light	As low as 0.02%
Frame Rate	50+
Camera Control	CameraLink
ROI	Yes, software-selectable
Shutter Type	Rolling shutter & Pseudo Snapshot
Exposure Time Range	Rolling shutter mode 30µs to 6 sec. Pseudo snapshot Mode 30µs to 260 milliseconds
Computer OS Platforms	Windows Vista, XP, 2000

Optical Characteristics for 28mm focal length lens	
Focal length	28.3 mm
f stop	f/3.5 to f/16
Minimum Object Distance	25 cm
Image Format	Ø 18 mm
Field of View	35,4°
Usable Spectral Range	220 nm to 900 nm
Optical Design	Multi-element, synthetic fused silica and UV-grade mono-crystal calcium fluoride
Front Accessory Filter Mount	M 32 x 0.5

Headwall Photonics is the world's leading manufacturer of Hyperspectral and Raman imagers for industry, defense/aerospace, and medical applications.



## 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](mailto:information@headwallphotonics.com).**

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