

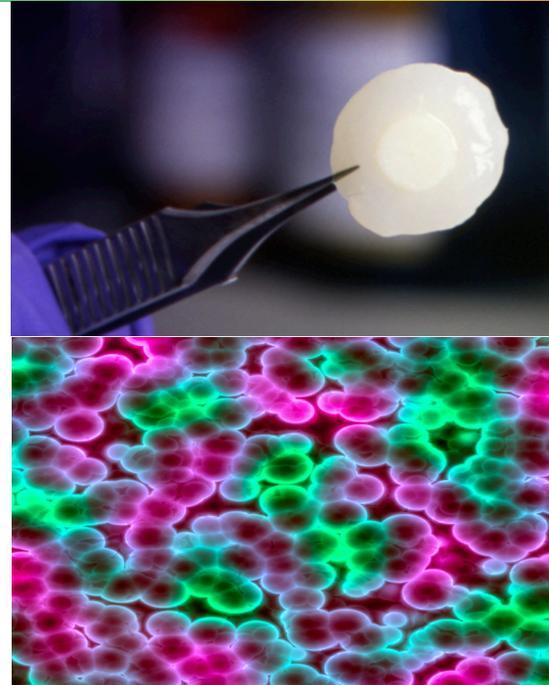
For diagnostic healthcare applications, hyperspectral sensing provides a highly resolved means of imaging tissues at either macroscopic or cellular levels and providing accurate spectral information relating to the patient, tissue sample, or disease condition.

One key advantage of the Hyperspec™ imaging sensor is the ability to non-invasively scan tissue or samples in vivo or in vitro with exceptional spectral and spatial resolution. The size of the area or size of the sample scanned is based on the required field of view (FOV) and the spectral/spatial resolution needed (IFOV, instantaneous field of view) by the application. These parameters can be modified to achieve the necessary diagnostic or investigatory imaging performance.

Key advantages of hyperspectral imaging for healthcare applications include the ability to:

- Derive the spectral signature for every point within the field of view for material classification
- Color render the image scene based on an established library of known spectral signatures or disease conditions
- For high-throughput patient screening and non-invasive diagnosis, generate wavelength-specific criteria for disease conditions based on spectral features

Optimized for a number of broad spectral ranges, Hyperspec™ imaging sensors are available as integrated instruments, supplied with the Hyperspec™ Starter Kit, or available in point & stare configurations for stationary patient or sample scanning.

**Microscopy****Cellular Spectroscopy****Non-invasive Diagnostic Imaging****Optical Biopsy****Tissue Demarcation****Therapeutic Analysis**

Headwall's 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 gratings or diamond-turned diffraction gratings. To achieve very low stray light and high signal-to-noise performance, no prism or transmissive optics are used within the spectrometer. With Headwall's unique ability to design and fabricate the diffractive optics, each fully integrated Hyperspec™ imaging sensor is manufactured with application-specific, spectral and spatial imaging performance.

Headwall Photonics offers the broadest range of spectral imaging instrumentation for demanding applications.

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
Micro-Hyperspec™ VNIR	400 - 1000 nm
Micro-Hyperspec™ NIR	900 - 1700 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™ 260 nm
- Raman Explorer™ 532 nm
- Raman Explorer™ 785nm
- Raman Explorer™ 830 nm
- Raman Explorer™ 1064 nm
- Raman Discovery™ 532 nm
- Raman Discovery™ 785 nm



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.

POLYTEC GmbH

**Büro Berlin Schwarzschildstraße 1 D - 12489 Berlin GERMANY w1@polytec.de
 Tel: +49 (30) 63 92 51 40 Fax: +49 (30) 63 92 51 41 www.polytec.de**



© Copyright by Headwall Photonics, Inc. - Headwall Photonics, Hyperspec, Micro-Hyperspec, Raman Explorer and Raman Discovery are trademarks of Headwall Photonics, Inc.
 Cover Photo Credit - National Institutes of Health/NAIMS