

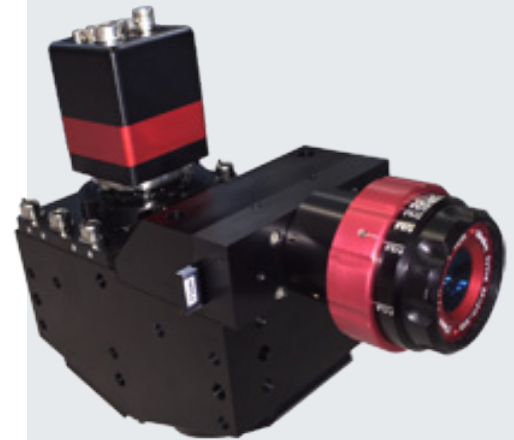
Hyperspec® NIR imaging sensor for the 900nm to 1700 nm spectral range

Headwall's Hyperspec® NIR sensors offer outstanding hyperspectral imaging performance in the near-infrared (NIR) range of 900-1700nm. Application areas for Hyperspec NIR include remote sensing (UAVs, aircraft and satellites), advanced process vision, and medical.

Hyperspec® NIR is built on a totally reflective concentric, f/2.0 optical design that includes aberration-corrected imaging in a lightweight design that is optimized for harsh environments. Two versions of Hyperspec NIR are available, each providing 320 spatial bands and 166 spectral bands. The **R-Series** has Base CameraLink connectivity while the **X-Series** uses USB.

Headwall's imaging sensors minimize stray light and aberrations by eliminating transmissive optical components such as prisms. Hyperspec® NIR sensors are also suited for laboratory-based Hyperspec Starter Kits and in pan/tilt configurations for stationary deployment.

Application-Specific Solutions For Critical Environments



Applications:

- Food safety & quality
- Machine vision
- Moving webs of product
- Pharmaceutical manufacturing
- Pulp & paper
- Process control of biomass/biofuels
- Remote sensing & analysis
- Photovoltaic/semiconductors
- Waste recycling & sorting

Key Benefits:

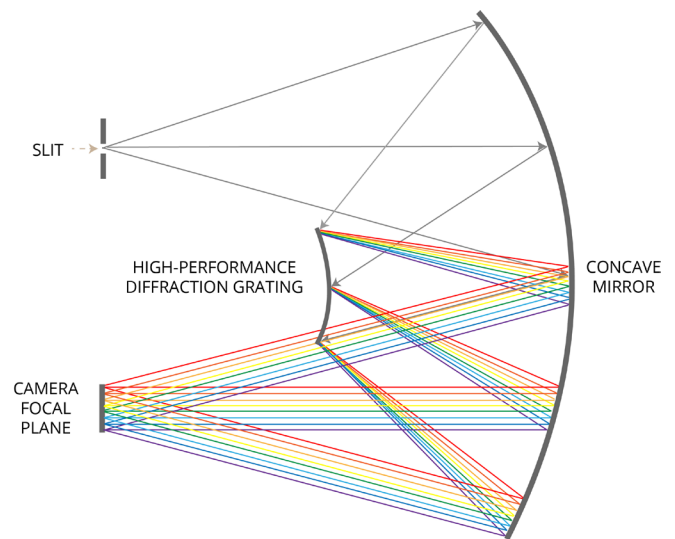
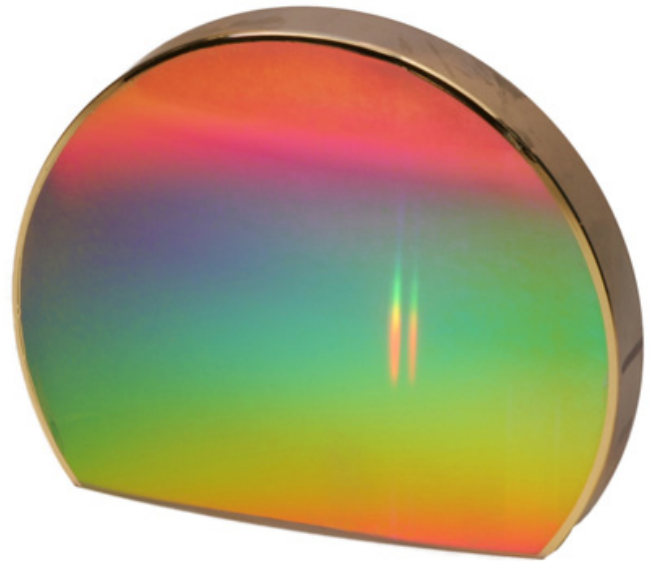
- Superb imaging performance
- Exceptional spectral & spatial resolution
- Ideal for low light, low signal applications
- Compact with very wide field of view
- Extremely high signal-to-noise
- Low scatter or stray light
- Rugged design for durability & stability
- Cost effective deployment

Hyperspec[®] NIR

	R-Series	X-Series
Wavelength Range (nm)	900-1700	
Aperture	F/2.0	
Entrance Slit Width	25 μ m	
Dispersion/Pixel (nm/pixel)	4.8	
FWHM Slit Image	4 nm	
Slit Length	12 mm	
Spectral Bands	166	
Spatial Bands	320	
Smile - Aberration-corrected	Yes	
Keystone - Aberration-corrected	Yes	
FPA Detector	InGaAs	
Camera Control Interface	Base CameraLink	USB
Max. Frame Rate (Hz)	340	100
Weight (lb / kg)	6.4 / 2.9	11.2 / 5.1
Max. Power (W)	13	30

All-Reflective Concentric Imager

Headwall's hyperspectral sensors deliver aberration-corrected imaging characterized by high spatial and spectral resolution, a wide field of view, and very high signal throughput. Headwall's own application-specific diffraction gratings are fundamental to these key specifications, which are crucial for all hyperspectral sensors. Headwall's all-reflective, concentric sensor design is robust and thermally stable.



About Headwall Photonics: Headwall 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 advanced, patented optics technology, Headwall enjoys a market-leading position through the design and manufacture of spectral instrumentation that is customized for application-specific performance.

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