

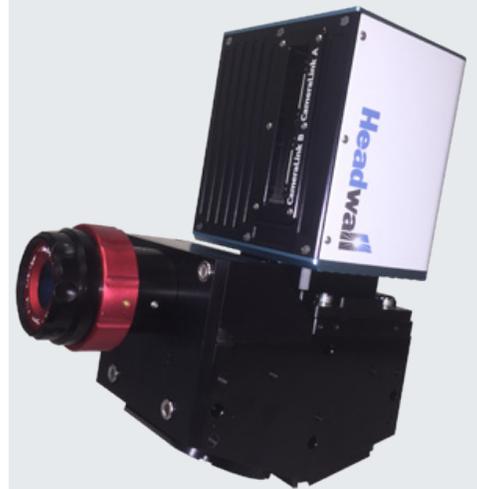
## Hyperspec® SWIR imaging sensor for the 900nm to 2500nm spectral range

Headwall's Hyperspec® SWIR integrated hyperspectral sensors offer outstanding hyperspectral imaging performance in the shortwave infrared range of 900-2500nm. Application areas for Hyperspec SWIR include remote sensing (UAVs, aircraft and satellites), advanced process vision, and medical.

Hyperspec® SWIR 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. It provides 384 Spatial bands, 266 Spectral bands, and both Base CameraLink and RS232 connectivity.

Headwall's imaging sensors minimize stray light and aberrations by eliminating transmissive optical components such as prisms. In addition to airborne applications, Hyperspec® SWIR 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:

- Airborne environmental monitoring
- LCD/display quality control
- Process monitoring
- Pharmaceutical manufacturing
- Mining & mineral exploration
- Semiconductor inspection
- Remote sensing & analysis
- Waste recycling & sorting

#### Key Benefits:

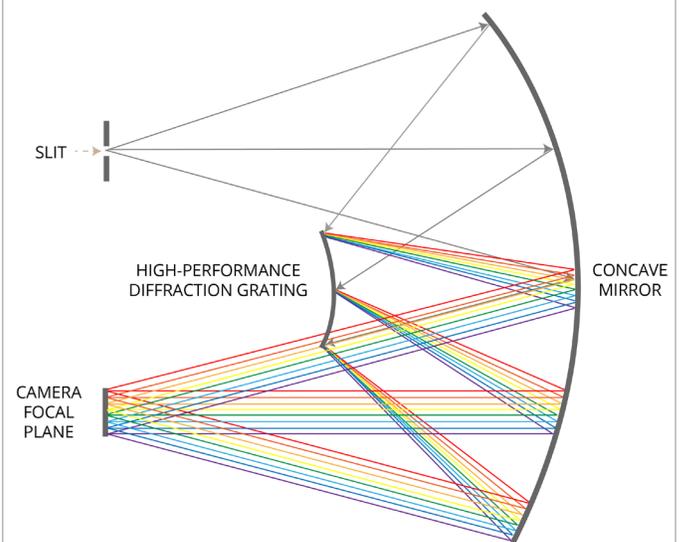
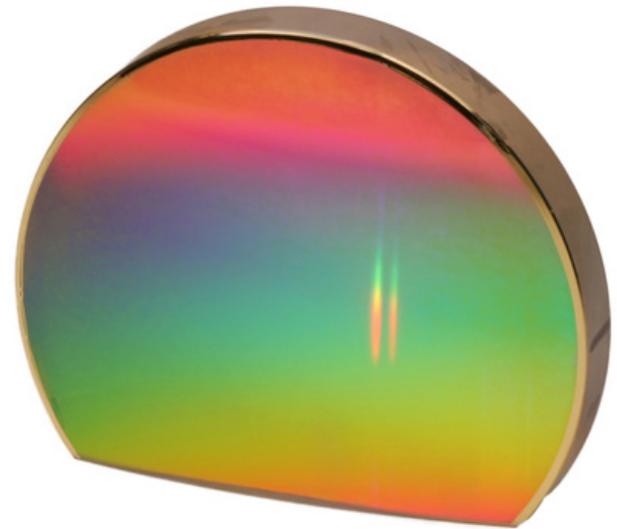
- Broad spectral range
- Superb imaging performance
- Exceptional spectral & spatial resolution
- Ideal for low light, low signal applications
- Accurate, consistent spectral measurement
- Compact with very wide field of view
- Extremely high signal-to-noise
- Low scatter or stray light
- Rugged design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

## Hyperspec® SWIR

Wavelength Range (nm)	900-2500
Aperture	F/2.0
Entrance Slit Width	25 µm
Dispersion/Pixel (nm/pixel)	6
FWHM Slit Image	6.3 nm
Slit Length	12 mm
Spectral Resolution	12 nm
Spectral Bands	267
Spatial Bands	384
Smile - Aberration-corrected	Yes
Keystone - Aberration-corrected	Yes
Detector	Stirling-cooled MCT
Max. Frame Rate (Hz)	450
Pixel Pitch	24 µm
Read A/D	16-Bit
Camera Control Interface	Base CameraLink and RS232
Weight (lb / kg)	9.6 / 4.4
Max. Power (W)	14.4

## 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 airborne 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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