

## The Hyperspec® Inspector™ provides spectral & spatial imaging for the most demanding process inspection and manufacturing applications

Headwall's Hyperspec® Inspector™ is a fully integrated hyperspectral inspection instrument providing reliable, repeatable spectral and spatial measurement for in-line or at-line, high volume manufacturing process lines. When process analysis requires spectral measurement in a high throughput environment, the Hyperspec® Inspector is a powerful imaging instrument that is easily customized for application-specific performance.

Designed and built for operation in harsh manufacturing and processing environments, Hyperspec® Inspector instruments offer many advantages for process analysis and inspection. The Hyperspec Inspector also includes a data processing and storage hardware unit.

Hyperspec® Inspector instruments are available for key spectral ranges:

<b>VNIR</b>	<b>400 - 1000 nm</b>
<b>Extended VNIR</b>	<b>550 - 1650 nm</b>
<b>NIR</b>	<b>900 - 1700 nm</b>
<b>SWIR</b>	<b>900 - 2500 nm</b>



### Applications:

- In-line or at-line process inspection
- Food quality & safety
- Agriculture commodity screening
- Pharmaceutical manufacturing
- Advanced Machine vision
- Waste recycling & sorting
- Process monitoring & control
- Semiconductors & photovoltaics

### Key Imaging Spectrometer Benefits:

- Superb imaging performance
- Designed for harsh environments
- 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

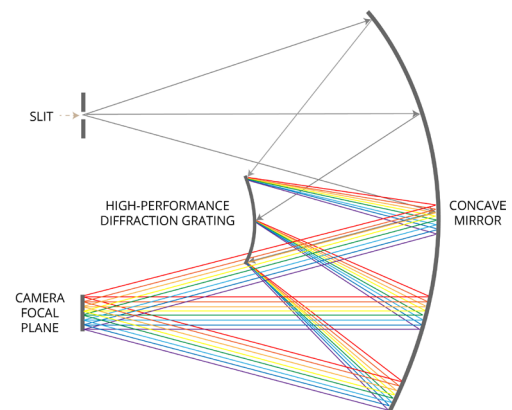
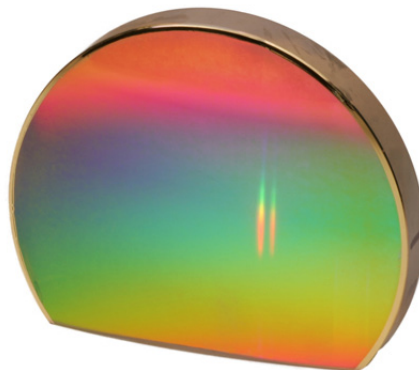
Application-Specific Solutions For Critical Environments

## SPECIFICATIONS

Hyperspec® INSPECTOR™ Configurations	VNIR	Extended VNIR	NIR	SWIR
Wavelength Range (nm)	400-1000	550-1650	900-1700	900-2500
Focal Plane Array	sCMOS	InGaAs	InGaAs	Stirling-cooled MCT
Pixel Pitch (microns)	6.5	30	30	24
Aperture	f/2.0			
Slit Length (mm)	12			
Dispersion/Pixel (nm per pixel)	0.7	4.8	4.8	6.0
Entrance Slit Width (µm)	25			
FWHM Slit Image (nm)	2.5	4.0	4.0	6.3
Spectral Bands	923	229	168	267
Spatial Bands	1600	320	320	384
Aberration-Corrected Design	Yes			
Maximum Frame Rate (Hz)	100	100	100	450
Digital Output Format	Full CameraLink, 80-Bit	USB	USB	Base CameraLink and RS232
Weight including lens (lb / kg)	29.5 / 13.4	30.40 / 13.8	33.20 / 15.1	31.60 / 13.3
Max Power (W)	180	200	200	180

## All-Reflective Concentric Optical Design

*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 precise hyperspectral imaging performance. 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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