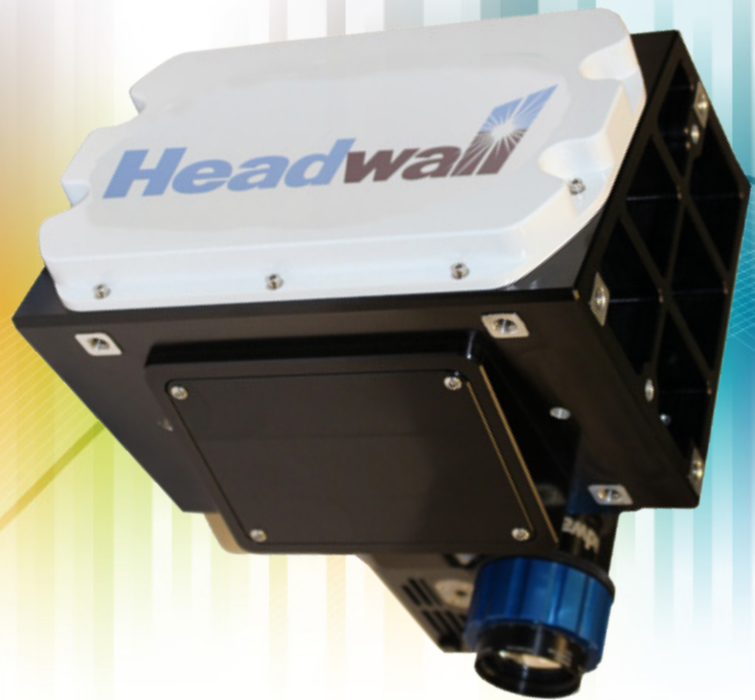




PRODUCT DATA SHEET

Chlorophyll Fluorescence Sensor



- Designed for Chlorophyll Fluorescence Imaging
- All-reflective concentric imager design
- SNR: 120:1, *unbinned*
- Spectral resolution: 0.1 - 0.2nm (FWHM)
- Spatial pixels: 1,600
- Spectral pixels: 2,160
- Scientific-grade data for O₂-A and O₂-B
- Spectral passband: 670-780nm
- Weight including lens: 6.3kg / 13.9 lb.
- Size in mm: ≤ 300 x 200 x 200

PRODUCT DATA SHEET

Headwall's chlorophyll fluorescence imaging sensor targets the very narrow passband from 670-780nm, but does so with exceptionally high FWHM spectral resolution between 0.1-0.2nm. This allows the sensor to collect data present in the Oxygen-A and Oxygen-B bands where these weak signals are found.

With this data, environmental scientists can gain a better understanding of plant physiology and stress in near real-time.

Hyperspec® High-Resolution Chlorophyll Fluorescence Sensor

Spectral Passband (nm)	670-780
Spectral Sampling Interval (SSI) (nm/pixel)	0.051
Spectral Resolution (nm, Full Width at Half Maximum-FWHM)	0.1 - 0.2
Signal to Noise (unbinned)	120:1
Working f-Number	f/2.5
Spectral pixels	2,160
Number of un-binned spatial pixels	1,600
FPA Technology	TE-cooled sCMOS
Angular FOV (swath width)	23.5°
Maximum Frame Rate with on-camera spatial bin of 2, or 800 spatial pixels (Hz)	66**
Camera Bit Depth	16
Operational Temperature Range (° C)	+10 to +40
Athermalization	Passive by design; soak @ equilibrium assumed
Operational Humidity	10 - 95% RH
Weight (including 25mm VNIR telecentric lens)	6.3kg / 13.9 lb.
Size in mm (inches)	≤ 300 x 200 x 200 (12 x 8 x 8)
Continuous Power Consumption (W)	≤ 30 (exclusive of data system)
Shutter	electro-mechanical
Lens	Headwall 25mm VNIR Telecentric
Camera Interface	Full Cameralink, 80 Bit
** Specified using Headwall's Compact HDPU suitable for specific UAV applications. Faster frame rates can be achieved with Headwall's larger HDPU, suitable for manned aircraft deployment.	

April 2018