



microHSI™ 410 SHARK

This Selectable Hyperspectral Airborne Remote Sensing Kit (SHARK) is an integrated coherent hyperspectral imaging (HSI) sensor system designed specifically for integration with highly compact unmanned aerial vehicles (UAVs) and cost efficient drones.

Features

- This complete turn-key sensor system solution includes a 400-1,200 nm HSI sensor and a high-efficiency microprocessor control and data-acquisition subsystem with solid-state data storage.
- The microHSI™ 410 spectrometer features a high-efficiency reflective and optimally blazed diffraction grating that helps enable optimized throughput and signal-to-noise ratio (SNR) performance combined with exceptional spectral fidelity and spatial resolution.
- The standard system is designed for a minimum of 30-minute mission durations with extended mission-duration options available.

Key Benefits

- Covers 400-1,000 nm
- A compact, lightweight 1.6 lb package.
- Ultra-Low Size, Weight, Power, and Cost (SWaP-C) by using Corning's proprietary diamond turned optics systems for aluminum.
- Optimized for commercial remote sensing applications.
- Processes 12-bits of data upon landing to reduce storage.

Wavelength where this sensor operates

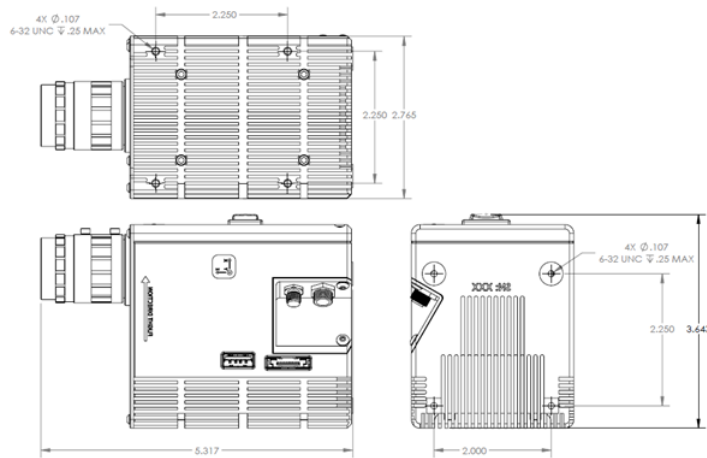


| | Wavelength range covered | Applications | Sensor Weight |
|------------------------|--------------------------|----------------------------|---------------|
| Corning® MicroHSI™ 410 | 400nm - 1,000nm | Agriculture and Industrial | 1.6 lbs |

Technical Characteristics*

| Dimension | Unit |
|--|--|
| Sensor Type | Fully Coherent Line Imaging Spectrograph |
| Spectrograph | Monolithic Spectrometer |
| Grating | Diamond turned and Ruled High-Efficient Reflective Blazed |
| FPA Detector | CMOS |
| FPA Format | 1936 X 1216 pixels with 5.86 μ pitch (1364 X 308 utilized) |
| Spatial Resolution | 1364 pixels (1x spatial bin) |
| Focal length F/# | 16mm, f/1.4 standard |
| Full FOV | 28.6 degrees (500 mrad) standard |
| IFOV | f 366 μrad standard |
| Spectral Range and Spectral Bin Size | 400-1000nm with a 2nm bin size |
| Typical Spectral readout | 8.0 nm (4x spectral pixel bin) |
| Keystone | 4.6 μm (over 1364 X 308 pixels) |
| Smile | 1.5 μm (over 1364 X 308 pixels) |
| Maximum Frame Rate | >400 Hz (profile dependent) |
| Data Readout | 12-bit |
| INS | GPS + Mems IMU+Kalman filtered solution |
| Size (standard lens, processor, data storage, INS) | 5.37"X 3.44"X 2.77" with lens and 3.77" X 3.44" X 2.77" without lens |
| Weight (standard lens, data storage, INS) | 1.6 lbs (0.68 kg) |
| Power Consumption (complete system) | <19 W@12 VDC |
| Temperature range | 5 deg. C to 40 deg. C |

* Performance listed is typical. Individual part configuration may vary. Contact our technical team for more information.



Learn more



Web:
www.corning.com/hyperspectral



Email:
hyper@corning.com