

As light in the shortwave infrared region (SWIR, 900-1700 nm) penetrates deeper and is not interfered by visible light, SWIR hyperspectral imaging offers a number of advantages compared to visible light when used for remote sensing, inspection, sorting, surveillance, quality control, and a host of other applications.

The **OCI™-F-SWIR** (OCI is a phonetic spelling of "All Seeing Eye") camera is a miniaturized push-broom hyperspectral camera covering the full SWIR (900-1700 nm) wavelength range. It features ultra-compactness (17 cm x 7 cm x 9 cm) and light weight (~820 g) with fast data transfer rates (up to 50 fps). As an innovative "true push-broom" imager: one can simply use a hand to move the imager or sample to finish the scan. Not depending on a constant scanning speed has enabled OCI-F-SWIR versatility on vast platforms such as UAVs, with perfect hyperspectral image stitching. Compactness, fast imaging, simple operation, and intuitive software make the OCI-F-SWIR very straightforward for varieties of applications.

Applications:

- Remote Sensing
- Chemical Detection
- Pharmaceuticals
- Airborne/UAV
- Security
- Precision Agriculture
- Food Quality
- Sorting
- Anti-Counterfeiting
- Biomedical Diagnostics
- Forensics
- Counterfeit Detection
- Mineral Discovery

About BaySpec, Inc.

BaySpec, Inc., founded in 1999 with 100% manufacturing in the USA (San Jose, California), is a vertically integrated spectral sensing company. The company designs, manufactures and markets advanced spectral instruments, from UV-VIS spectrometers, bench-top and portable NIR and Raman analyzers, Hyperspectral imagers to confocal Raman microscopes, for the biomedical, pharmaceuticals, chemical, food, semiconductor, homeland security, and the optical telecommunications industries.



OCI-F-SWIR hyperspectral camera with a standard lens. The package is easy to mount on tripods or gimbals. Total weight ~820 g

KEY FEATURES:

- Real-time sample preview
- Extremely compact and light-weight
- No moving parts, high reliability
- "True push-broom": scanning with random speed
- Easy integration on different platforms

Performance Specifications:

	Specifications¹
Operation Mode	Push-broom
Spectral Range	900-1700 nm
Number of Spectral Bands	Up to 80
Spectral Resolution	< 10 nm FWHM
Spatial Pixels	250 pixels X scan-length
Standard Lens	16 mm (28° FOV), SWIR optimized
Objective Lens Interface	C-mount
Frame Rate	Up to 50 frames/sec
Software	Included with BaySpec's SpecGrabber for camera control and data acquisition, and CubeCreator for hyperspectral data processing
Data Format	ENVI-BSQ hyperspectral cube, Band Image (BMP format), ROI spectra (CSV format)
Operating Temperature	0°C to 50°C
Power Consumption	< 5 W (USB 2.0 power)
Weight	~ 820 g (including standard lens)
Size	17 cm x 7 cm x 9 cm (including standard lens)
Camera Interface	USB 2.0
Trigger	External trigger signal, software time delayed start

