

# High-speed Hyperspectral Camera SWIR



SWIR is a high-speed hyperspectral camera that operates within the short-wave infrared range (1000-2500 nm). Its temperature-stable optical components offer excellent stability and sensitivity, meeting the demands of various demanding chemical imaging applications, including pharmaceutical quality monitoring as well as food and agricultural analysis applications.

## Applicable scenarios

- Chemical and material sorting
- Pharmaceuticals
- Resource recycling and waste management
- Mineral mapping
- Food and agriculture
- Moisture content distribution
- Art research and archiving

The SWIR hyperspectral camera is compatible with LUMO software, and the data cube is compatible with ENVI, supporting further hyperspectral data processing.

## Accessories

### • Front objective lens:

OLES 15 field of view 34°

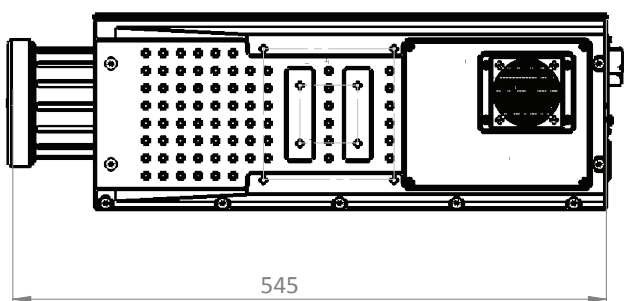
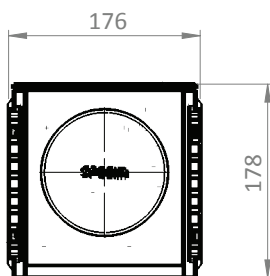
OLES 22,5 field of view 23°

OLES 30 field of view 17°

OLES 56 field of view 9°

- With the help of fiber optic lenses, hyperspectral cameras can be converted into multi-point spectrometers. All points can be measured simultaneously without moving the multiplexer.
- The rotating platform can be used for scanning static targets and outdoor scenes, and the X-axis sample mover can be used for desktop and microscope applications.

## Size



Optical characteristics	
Spectral range	1000 - 2500 nm
Spectral resolution (FWHM)	12 nm (30 µm slit)
Spectral sampling/pixel	5.6 nm
Aperture value	F/2.0
Slit width	30 µm (Optional 50 or 80 µm)
Effective slit length	9.2 mm
Electrical characteristics	
Sensor	Low-temperature cooled MCT detector
Spatial pixel count	384
The number of spectral bands	288
Pixel size	24 x 24 µm
Detector cooling	Stirling 25 000 h MTTF
Signal-to-noise ratio	1050:1(When the maximum signal level is reached)
Camera output	16-bit CameraLink
The length of the data cable	5m
Camera control	USB/RS232
Image acquisition card	NI-1433 Epix Image Acquisition Card E4*
Frame rate	450 fps (The maximum value of full-band acquisition)
Exposure time range	0.1 - 20 ms
Power consumption	Nominal value < 500,000
Input voltage	18 - 36 V
Mechanical characteristics	
Size (L x W x H)	Sensor 545 x 176 x 178 mm PSU and control unit 300 x 190 x 130 mm
Weight	14 kg and approximately 5 kg
Fuselage	Anodized aluminum, with installation screw holes
Lens interface	Standard C interface
Shutter speed	Electromechanical
Environmental characteristics	
Storage	-20... +50 °C
Work	+5... +40 °C No condensation

\*Lumo 2022 Update 1 is required