

SWIR

SWIR Series

SPECIM-SWIR



- SWIR 1000–2500 nm with 270–288 spectral bands
- Up to 450 FPS, 384 spatial pixels, 16-bit dynamics, SNR 1050:1
- Cryogenic cooled MCT detector with Stirling cooling and temperature-stabilized optics
- Six interchangeable fore lenses from macro to 54° FOV, C-mount, fiber optics for multi-point metering
- 16-bit CameraLink with NI-1433 / Epix E4 frame grabber, USB/RS232 control, 18-36 V DC

PRODUCT DESCRIPTION

Specim SWIR is a high-speed hyperspectral camera for the short-wave infrared range 1000-2500 nm, with cryogenically cooled MCT detector for demanding chemical imaging and material analysis.

PRODUCT DESCRIPTION

Specim SWIR – High-speed hyperspectral camera for demanding chemical imaging

Specim SWIR is a high-speed hyperspectral line scanner camera for the short-wave infrared range 1000–2500 nm. The camera is developed for the most demanding chemical imaging applications, from quality assurance in pharmaceutical manufacturing to food and agricultural product analysis, as well as recycling, mineral mapping, and art research.

High spectral resolution and flexible data acquisition

Specim SWIR offers 270-288 spectral bands with 12 nm spectral resolution (FWHM) and 5.6 nm sampling per pixel, reaching up to 450 FPS at full spectral range with 384 spatial pixels. Exposure time can be adjusted from 0.1 to 20 ms to adapt to lighting and band speed. The camera is controlled via USB/RS232 and is compatible with the LUMO software, where data cubes are stored in ENVI-compatible format for further hyperspectral data processing via 16-bit CameraLink with NI-1433 or Epix E4 frame grabber.

Cryogenically Cooled MCT Detector with Temperature Stabilized Optics

With a cryogenically cooled MCT detector with Stirling cooling and temperature-stabilized optics, SWIR delivers high-quality spectral data with SNR 1050:1 at maximum signal level and 16-bit dynamics. The stability and sensitivity are sufficient even for long production runs in demanding environments.

Six interchangeable fore lenses (OLES9 54°, OLES15 34°, OLES22 23°, OLES30 17°, OLES56 9° and OLESMACRO) on standard C-mount provide flexibility for everything from macro imaging to wider scene measurements. Via fiber optics, the camera can also be converted into a multipoint spectrometer where all points are measured simultaneously without a moving multiplexer. With an anodized aluminum body with threaded mounting holes, 18-36 V DC supply, and operation up to +40°C non-condensing, Specim SWIR is designed for stable operation in laboratories, production lines, and research environments

TECHNICAL DATA

3612_Pixel size (µm)	24
Approvals	CE

Connector	CameraLink (5 m datakabel), USB/RS232 (styrning), Power
Frame rate max	450 fps
Height	178 mm
Input voltage	18–36 V DC
Length	545 mm
Lens Barrel	C-Mount
Line speed max	0.5 kHz
Operating temperature	+5 ... +40°C (icke-kondenserande)
Pixel size min	24 µm
Power consumption	50 W
Resolution max	384 spatiala pixlar
Sensor length	9.2 mm
Storage temperature	-20 ... +50°C
Supply voltage	36 V
Supply voltage dc max	36 V DC
Supply voltage dc min	18 V DC
User interface	CameraLink
Wavelength	1000–2500 nm
Weight	19 kg
Width	176 mm