

SPECIM FX50



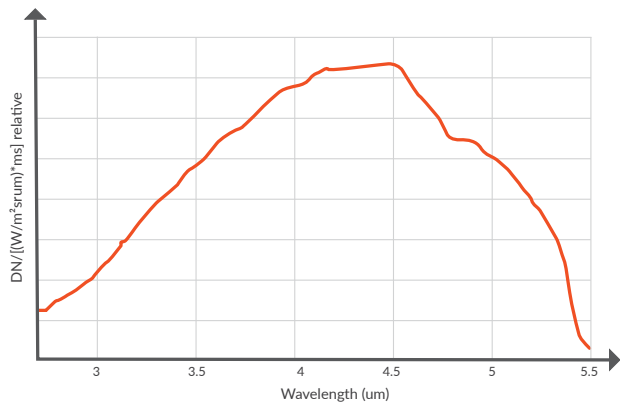
IMPROVE ACCURACY AND REDUCE COSTS

Specim FX50 is a high-speed, accurate and efficient spectral camera specifically designed for industrial environments. It operates on MWIR region and can be used to identify and sort the difficult black plastics, analyze hydrocarbons and minerals, and detect contamination on metal surfaces quickly and reliably.

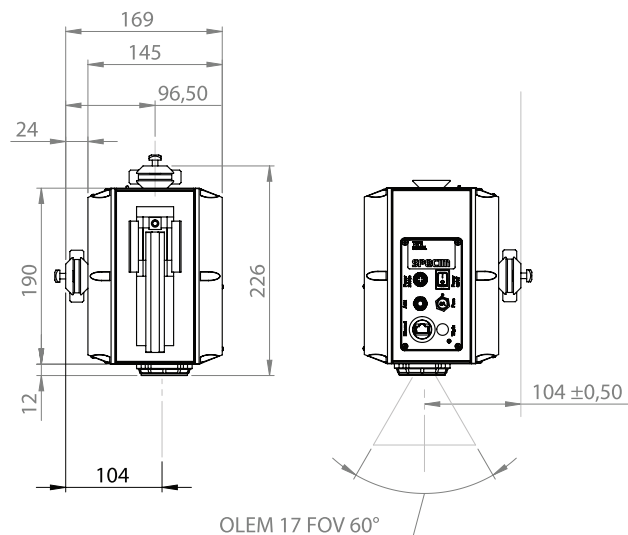
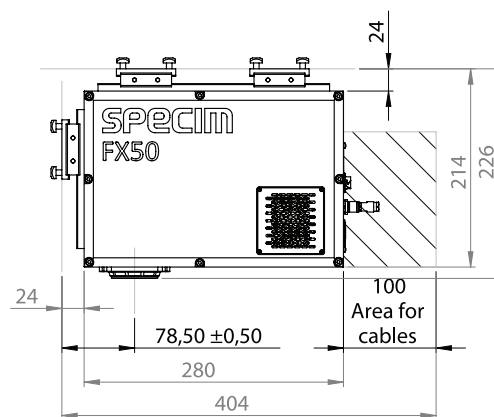
FEATURES

- Complete spectral camera with compact form factor
- Spectral range of 2.7 - 5.3 μm
- High spatial resolution of 640 pixels
- High image speed of 380 Hz
- Temperature stabilized optics
- Built-in image correction
- Unified spectral calibration between units
- GigE Vision standard interface
- Easy mounting to industrial environment

SPECTRAL RESPONSE



DIMENSIONS



| | | |
|---|--|--|
| Spectral Range | 2.7 - 5.3 μm | |
| Spectral resolution (FWHM) | 35 nm | |
| Spectral sampling/pixel | 8.44 nm | Without binning |
| Spectral bands | 154 | With default binning |
| Numerical aperture | 2.0 | |
| Optics magnification | 0.5 | |
| Effective pixel size | 30 μm | At fore lens image plane |
| Effective slit width | 104 μm | At fore lens image plane |
| Effective slit length | 19.2 mm | At fore lens image plane |
| Dynamic Range | 1600:1 with 1.5 ms exposure time | Usable dynamic range / noise |
| Spatial samples | 640 | |
| Bit depth | 16 | |
| Maximum frame rate | 380 fps | Full image with default binning |
| Binning | 1,2,4 spectral and spatial | Default: 2 spectral x 1 spatial |
| ROI | Freely selectable multiple bands of interest | Minimum height of ROI is two 1-binned rows. Maximum frame rate is determined by total number of rows between first row of first mROI and last row of last mROI – not the total number of rows included in the mMROI's. |
| Pixel operability | Number of operable pixels >99.7% Allowed clusters: Size 4-8 pixels: <= 12 Size 9-12 pixels: 2 Size 13-19 pixels: 1 Size >19 pixels: 0 | |
| Image corrections | Non uniformity correction Bad pixel replacement Automatic Image Enhancement (AIE) | One point NUC AIE: Unified spectral calibration + corrected smile and keystone aberrations |
| Sensor material | InSb | |
| Integrated cooler | Stirling (MTTF 25 000 h) | |
| Full well capacity | 5.1 Me- | |
| Read-out modes | IWR / ITR | |
| Optics temperature | TEC-stabilized | Default is 20 degrees Celsius |
| Lens mount | Custom mount | |
| Fore lens options | OLEM43, OLEM23, OLEM17 | |
| Field of view | 24 deg, 45 deg, 60 deg | |
| Camera digital data output/control interface | GigE Vision, Custom ethernet | |
| Camera control protocols | GenICam, JSON-RPC | |
| Power input | 24 V DC | |
| Power consumption | Max 90 W Typical 40 W | During simultaneous cool-down of optics and detector |
| Connectors | Ethernet Aux - 0306423 (09-0428-90-08) binder 8pin Power - 0306627 (LF10WBR-4P) hirosen 4pin Trigger in | |
| IP | IP40 | |
| Dimensions (L x W x H) | 280 x 202 x 169 mm | Mounting surface option on three sides. Mounting kit adds 24 mm distance on mounting side. |
| Weight | 7 kg | |
| Storage temperature | -20 ... +50 $^{\circ}\text{C}$ | |
| Operating temperature | +5 ... +40 $^{\circ}\text{C}$ | |
| Relative humidity | 5% – 95% (non-condensing) | |