



## IMPROVE ACCURACY AND REDUCE COSTS

Specim FX17 camera is designed for industrial and laboratory use. It works in a line-scan mode, and collects hyperspectral data in the near-infrared NIR region (900 to 1700 nm).

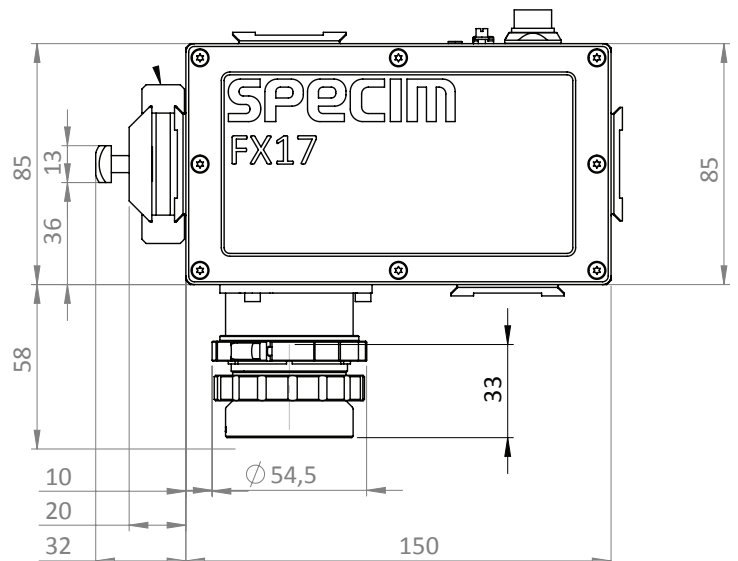
Specim FX17 is best suited for:

- Food & feed quality
- Waste sorting
- Recycling
- Moisture measurement
- Threat detection, Security

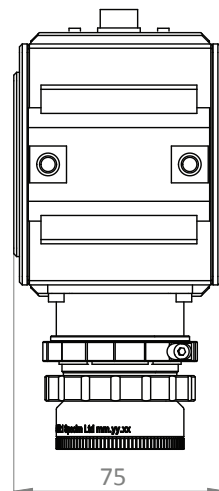
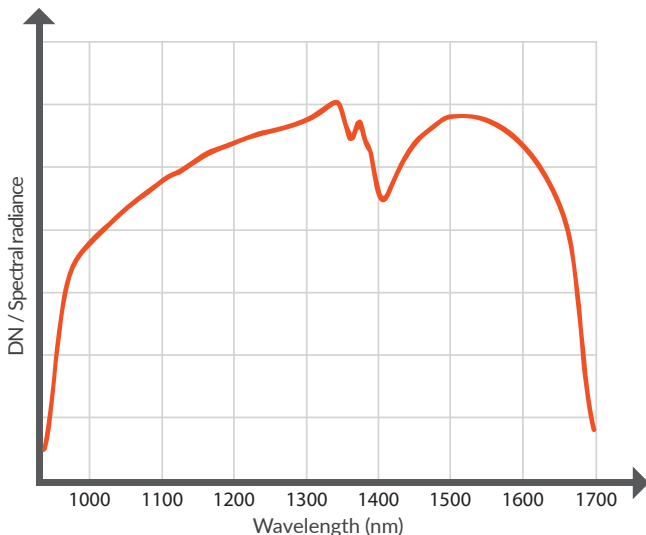
## FEATURES

- Spectral range of 900-1700 nm
- High spatial resolution of 640 pixels
- High image speed  
527 FPS (full range) for GigE version  
670 FPS (full range) for CameraLink version
- Free wavelength selection from 224 bands within the camera coverage
- Built-in image correction
- Unified spectral calibration between units
- GigE or CameraLink standard interfaces
- Easy mounting to industrial environment
- Certificates: CE, RoHS

## DIMENSIONS



## SPECTRAL RESPONSE



|   |  |  |
|---|--|--|
| <b>Spectral Range</b>                               | 900-1700 nm  |  |
| <b>Spectral resolution (FWHM)</b>                   | 8 nm (mean)  |  |
| <b>Spectral sampling/pixel</b>                      | 3.5 nm   |  |
| <b>Spectral bands</b>                               | 224  | With default binning   |
| <b>Numerical aperture</b>                           | 1.7  | With default lens  |
| <b>Optics magnification</b>                         | 0.80   |  |
| <b>Effective pixel size</b>                         | 18.7 $\mu\text{m}$   | At fore lens image plane   |
| <b>Effective slit width</b>                         | Physical width 42 $\mu\text{m}$ .<br>Projection on sensor 32 $\mu\text{m}$ (M=1.3)   | At fore lens image plane   |
| <b>Effective slit length</b>                        | 12.0 mm  | At fore lens image plane   |
| <b>SNR @ max. signal</b>                            | 1000:1   |  |
| <b>Bit depth</b>                                    | 12   |  |
| <b>Maximum frame rate</b>                           | 670 (FX17)<br>527 (FX17e) FPS full range   |  |
| <b>Binning</b>                                      | 1,2,4 spectral and spatial   | Default: 1 spectral x 1 spatial  |
| <b>ROI</b>  | 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 and the total number of rows included in the mMROI's. |
| <b>Pixel operability</b>                            | 99.5%<br>Allowed clusters:<br>Size 2-6 pixels: N/A<br>Size 7-12 pixels: $\leq 6$<br>Size 13-19 pixels: $\leq 2$<br>Size 20-35 pixels: $\leq 1$<br>Size > 35: 0 |  |
| <b>Image corrections</b>                            | Non uniformity correction<br>Bad pixel replacement<br>Automatic Image Enhancement (AIE)  | One point NUC<br><br>AIE: Unified spectral calibration + corrected smile and keystone aberrations  |
| <b>Sensor material</b>                              | InGaAs   |  |
| <b>Sensor cooling</b>                               | TEC  |  |
| <b>Full well capacity</b>                           | 1.44 Me-   |  |
| <b>Read-out modes</b>                               | IWR / ITR  |  |
| <b>Optics temperature</b>                           | Passive  | Default is 20 degrees Celsius  |
| <b>Lens mount</b>                                   | Custom mount   |  |
| <b>Fore lens FOV options</b>                        | 12 deg<br>38 deg (default)<br>53 deg<br>66 deg<br>75 deg<br>90 deg   | Only the default lens is specifically designed for FX17. With other lens options, optical parameters may vary.   |
| <b>Camera digital data output/control interface</b> | GigE Vision, CameraLink  |  |
| <b>Camera control protocols</b>                     | GenICam, ASCII   |  |
| <b>Power input</b>                                  | 12 V DC (+-10%)  |  |
| <b>Power consumption</b>                            | Max 24 W   |  |
| <b>Connectors</b>                                   | Industrial Ethernet OR CameraLink (standard MDR 26-pin)<br>Power – Fischer 12pin DBPLU1031Z012 130G  |  |
| <b>IP</b>   | IP52   |  |
| <b>Dimensions (L x W x H)</b>                       | 150 x 75 x 85 mm   | Mounting surface option on three sides. Mounting kit adds 24 mm distance on mounting side.   |
| <b>Weight</b>                                       | 1.56 kg  |  |
| <b>Storage temperature</b>                          | -20 ... +50 $^{\circ}\text{C}$ (non-condensing)  |  |
| <b>Operating temperature</b>                        | +5 ... +40 $^{\circ}\text{C}$ (non-condensing)   |  |
| <b>Relative humidity</b>                            | 5% – 95% (non-condensing)  |  |