Specim ENHANCE YOUR PERCEPTION

Spectral Imaging Ltd.
POB 110
Teknologiantie 18 A
FIN–90571 Oulu, Finland

Tel. +358 (0)10 4244 400
Fax +358 (0)8 388 580
Email info@specim.fi
www.specim.fi

spectral camera V10M

SPECIM's new ImSpector M-series imaging spectrographs are designed to respond to market demand. Spectral Camera V10M, based on this new design, provides very high resolution hyperspectral imaging performance and exceptionally compact format required for Unmanned Aerial Vehicles (UAV) and other demanding applications.

» COMPACT AND LIGHTWEIGHT WITH SUPERIOR PERFORMANCE «

Performance Specifications

SPECTRAL CAMERA	PFD2-CL-35-V10M-OEM
Optical characteristics	
Spectral range	350 - 1000 nm
Dispersion	111 nm/mm
Spectral resolution *	1.5 nm (with 18µm slit)
Image size	max. 7.0 (spectral) x 24.0 (spatial) mm
Spatial resolution *	RMS spot diam. < 13µm *
Aberrations	No astigmatism
Bending of spectral lines across spatial axis	Smile < 2µm
Bending of spatial lines across spectral axis	Keystone < 2µm
Numerical aperture	F/2.4
Slit width options	18 µm or 30 µm
Slit length	30.0 mm
Total efficiency (typical)	> 50% independent on polarization
Stray light	< 0,5% /halogen lamp, 590nm LPF)
Electrical characteristics	
Sensor	CMOS
Pixels in full frame	2080 x 2080(spectral)
Active pixels	2080 x 735 (spectral)
Pixel pitch	8.0 µm
Camera output	Digital 12 bit
Interface	Base CameraLink
Camera control	CameraLink
Frame rate	35 fps (full frame) up to 95 fps (with Active resolution)
Additional features	Asymmetric binning up to x 8 Multiple Region-of-Interest either in spatial or spectral direction
Exposure time range	0.1 - 100 ms
Power consumption	< 5W
Input voltage	12V
Mechanical characteristics	
Size, OEM (W x H x L)	90 x 127 x 205 mm, without lens
Weight	900 g, without lens
Body, OEM	Anonized aluminium tube
Lens mount	M42 universal thread (Pentax)
User adjustments	None
Environmental characteristics	
Storage	-20... +50 °C
Operating	+5... +40 °C non-condensing

* System spectral and spatial resolutions also depend on the discrete imaging nature of detector and lens quality.

Patent pending

Key benefits

- Superb spectral and spatial image quality
- Negligible, sub-pixel smile and keystone
- Superior light throughput for high signal-to-noise ratio
- Athermalized design for operation in harsh conditions
- User exchangeable fore optic
- Small footprint and weight

Spectral Camera V10M integrating ImSpector V10M spectrograph with fore optics and high resolution camera.

Applications

UAV and UGV applications
Plant and vegetation research
Environmental monitoring

SPECTRAL CAMERA V10M