

iRainbow Hyperspectral Line Scan



KEY FEATURES

Vision Datum Hyperspectral Camera covers a spectral range of 400-2500nm with a spectral resolution better than 2.5nm, supporting up to 1200 spectral channels. It is available in both area scan and line scan models, supports USB3.0, GigE, and CameraLink interfaces, and is compatible with standard C-mount imaging lenses. The maximum image resolution reaches 1920×1920.

- 400 to 2500 nm spectrum
- Exceptional stability and sensitivity
- High spectral resolution for detailed material characterization and analysis
- Ultra-low power consumption with temperature-stable optics

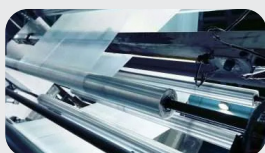
TYPICAL APPLICATIONS



Food and Agriculture



Pharmaceuticals



Chemical and Material Sorting



Moisture Distribution

► CAMERA PARAMETERS

Model	iRb7UVL36KM	iRb10UVN36KM-1
Scan Type	Line Scan	
Spectroscopic method	Grating	
Spectral region	400–700nm	400–1000nm
Spectral band	600	1200
Spectral FWHM	2.5nm	
Slit width	25μm	
Transmission efficiency	> 50%	> 60%
Stray light	< 0.5%	
Spatial pixel number	1920	
Pixel size	5.86μm	
Imaging speed	Full band 41Hz 390Hz can be achieved after ROI	
Detector	CMOS	
SNR(Peak)	500/1	600/1
Interface	USB3.0	
Interface Lens	C-Mount	
ROI	Single area	
Dimension	22.8 x 7 x 8.6 cm (1250g)	
Power dissipation	5W	



iRainbow Hyperspectral Line Scan

► CAMERA PARAMETERS

Model	iRb10UVN36KM-2	iRb17UVN16KM	iRb17USW16KM	iRb17CSW04KM-1
Scan Type	Line Scan			
Spectroscopic method	Grating			
Spectral region	400–1000nm	400–1700nm	900–1700nm	900–1700nm
Spectral band	1200	680	1024	512
Spectral FWHM	2.5nm	13nm	6nm	< 6nm
Slit width	25μm			
Transmission efficiency	> 60%			
Stray light	< 0.5%	1%	< 0.5%	< 0.5%
Spatial pixel number	1920	1280	1280	640
Pixel size	5.86μm	5μm	5μm	15μm
Imaging speed	Full band 128Hz 3300Hz can be achieved after ROI	579fps	1800fps can be achieved after ROI	Ultra High Speed: 740fps
Detector	CMOS	InGaAs	InGaAs	InGaAs
SNR(Peak)	600/1			
Interface	USB3.0	USB3.0	USB3.0	Cameralink
Interface Lens	C-Mount			
ROI	Multiple area	Single area	Multiple area	Single area
Dimension	22.8 x 7 x 8.6 cm (1250g)	/	16.6 x 7.5 x 7.4 cm (625g)	/
Power dissipation	5W	/	5W	/

iRainbow Hyperspectral Line Scan

► CAMERA PARAMETERS

Model	iRb17CSW04KM-2	iRb17CSW04KM-3	iRb25USW01KM
Scan Type	Line Scan		
Spectroscopic method	Grating		
Spectral region	900–1700nm	900–1700nm	1400–2500nm
Spectral band	150	100	210
Spectral FWHM	< 9nm	< 13nm	12nm
Slit width	25μm		
Transmission efficiency	> 60%		
Stray light	< 0.5%		
Spatial pixel number	640	640	320
Pixel size	15μm	15μm	20μm
Imaging speed	Ultra High Speed: 2400fps	Ultra High Speed: 3500fps	509fps
Detector	InGaAs	InGaAs	InGaAs
SNR(Peak)	600/1	600/1	300/1
Interface	Cameralink	Cameralink	USB3.1
Interface Lens	C-Mount		
ROI	Single area	Single area	/
Dimension	/	/	/
Power dissipation	/	/	/

iRainbow Hyperspectral Area Scan

► CAMERA PARAMETERS

Model	iRb7UVL36M	iRb10UVN36M-1	iRb10UVN36M-2	iRb17USW16M
Scan Type	Area Scan			
Spectroscopic method	Grating			
Spectral region	400–700nm	400–1000nm	400–1000nm	900–1700nm
Spectral band	600	300	1200	1024
Spectral FWHM	2.5nm	5nm	2.5nm	6nm
Slit width	25μm			
Transmission efficiency	60%	60%	60%	> 60%
Stray light	0.5%	0.5%	0.5%	< 0.5%
Spatial pixel number	1920*1920	1920*1920	1920*1920	1280*1280
Pixel size	5.86μm	5.86μm	5.86μm	5μm
Imaging speed	≤ 15S	≤ 15S	≤ 5S	≤ 5S
Detector	CMOS	CMOS	CMOS	InGaAs
SNR(Peak)	600/1			
Interface	USB3.0			
Interface Lens	C-Mount			
ROI	Single area	Single area	Multiple area	Multiple area
Dimension	25.5 x 13.8 x 10.7 cm (< 2800g)	25.5 x 13.8 x 10.7 cm (< 2800g)	25.5 x 13.8 x 10.7 cm (< 2800g)	24.8 x 14.5 x 14.5 cm (2535g)
Power dissipation	Built-in battery power 50W	Built-in battery power 50W	Built-in battery power 50W	Built-in battery power 50W

FOR MORE INFORMATION CONTACT



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