

Hyperspectral Camera FS1X Series (Line Scan)



FS-10/12/12-HW/13/14/15

Visible light:

- Spectral range: 400-700nm, wavelength resolution better than 2.5nm, up to 600 spectral channels
- Acquisition speed: up to 41fps for the full spectrum, up to 390fps after band selection (supports multi-region band selection)
- Widely used in surface color and texture detection of various industrial products such as printing and textiles. The single pixel repeatability of color measurement can reach $dE^*ab < 0.1$

Visible near infrared (400-1000nm):

- Wavelength resolution better than 2.5nm, up to 1200 spectral channels
- The number of spatial pixels can reach 1920

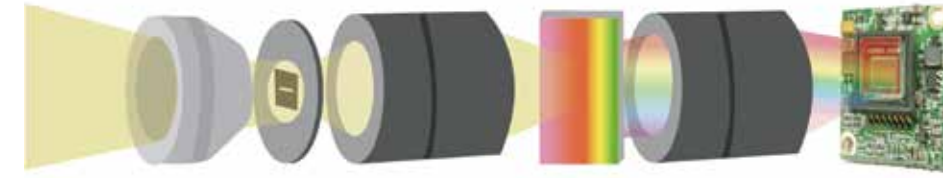
Visible light, near infrared, short wave infrared (400-1700nm):

- Wavelength resolution better than 13nm, up to 680 spectral channels
- Spatial pixel count up to 1280

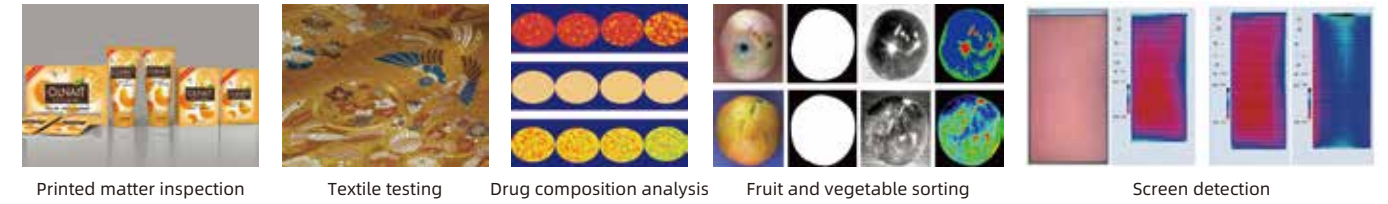
Shortwave infrared (900-1700nm):

- Wavelength resolution better than 6nm, up to 512 spectral channels
- The number of spatial pixels can reach 640

Measurement principle



Typical application



Parameters

Model	FS-10	FS-12	FS-12-HW	FS-13	FS-14	FS-15
Spectroscopic method	Grating	Grating	Reflection grating	Grating	Grating	Grating
Spectral region	400-700nm	400-1000nm	400-1000nm	400-1000nm	400-1700nm	900-1700nm
Spectral band	600	1200	670	1200	680	512
Spectral FWHM	2.5nm	2.5nm	5nm	2.5nm	13nm	6nm
Slit width	25um	25um	25um	25um	25um	25um
Transmission efficiency	50%	60%	60%	60%	60%	60%
Stray light	0.5%	0.5%	0.5%	0.5%	1%	0.5%
Spatial pixel number	1920	1920	1920	1920	1280	640
Pixel size	5.86um	5.86um	5.86um	5.86um	5um	15um
Imaging speed	Full-band 41fps, 390fps after ROI	Full-band 41fps, 390fps after ROI	128fps	Full-band 128fps, 3300fps after ROI	100fps	579fps
Detector	CMOS	CMOS	CMOS	CMOS	InGaAs	InGaAs
SNR(Peak)	500/1	600/1	600/1	600/1	600/1	600/1
Camera output	USB3.0	USB3.0	USB3.0	USB3.0	USB3.0	USB3.0
Camera interface	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount
Accessories	USB3.0 transmission line	USB3.0 transmission line	USB3.0 Transmission line	USB3.0 transmission line	Lens, USB cable, power supply	USB3.0 transmission line
ROI	Single area	Single area	Multiple areas	Multiple area	Multiple area	Single area
Dimension	Length x width x height: 22.8cm x 7cm x 8.6cm	Length x width x height: 22.8cm x 7cm x 8.6cm	Length x width x height: 85mm x 74mm x 45mm	Length x width x height: 22.8cm x 7cm x 8.6cm	Length x width x height: 22cm x 11cm x 9.5cm	Length x width x height: 34.5cm x 12.2cm x 13.6cm
Weight	1250g	1250g	250g	1250g	1.3kg	2.7kg
Power dissipation	5W	5W	5W	5W	5W	5W