UV-VIS Miniature Spectrometer YSM-8101

Introduction

YSM-8101 series miniature spectrometers, with a miniature business card-size optical platform, are very convenient to carry. The optimized optical path design enables a 0.35nm-5nm optical resolution.
The YSM-8101-02 series adopts more sensitive and higher-quality sensing elements; achieves a dynamic range of 10000:1, an integration time as low as 0.5ms, and a signal-to-noise ratio of 600:1; supports RS232/RS422 communication; has better anti-interference performance; is suitable for both industrial and scientific applications.

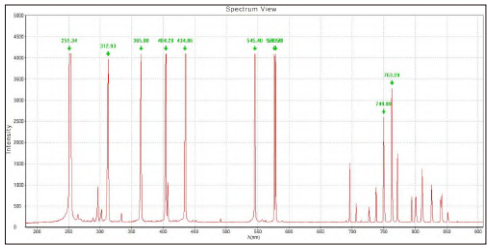
Features

- Business card-size, easy to carry
- Crossed asymmetric C-T optical path structure with interference filter eliminates secondary diffraction
- SMA905 fiber connector for easy connection to other devices
- Customizable wavelength range and optical resolution
- USB 2.0 data transmission and power supply; support RS232/RS422 communication; support multiple trigger modes
- Powerful software with automatic peak wavelength and bandwidth calculation functions
- Support secondary development— bottom and side fixing holes facilitate system integration

Applications

- Online water and gas quality monitoring
- Transmissivity, absorbance and concentration measurement
- Reflectivity and color measurement
- LED chromaticity measurement
- Solar energy spectroscopy testing
- Fluorescence spectroscopy measurement
- Raman spectroscopy measurements
- Laser spectroscopy measurement

Typical Test Data



Mercury lamp spectrum

Grating Selection Reference

Slit (μm)	Grating (grooves/mm)	Wavelength width(nm)	Resolution (nm)
25	500	800	~1.5
	600	700	~1
	1200	350	~0.5
	1800	233	~0.35
50	500	800	~3
	600	700	~2
	1200	350	~1
	1800	233	~0.7
100	500	800	~6
	600	700	~4
	1200	350	~2
	1800	233	~1.4
200	500	800	~12
	600	700	~8
	1200	350	~4
	1800	233	~2.8

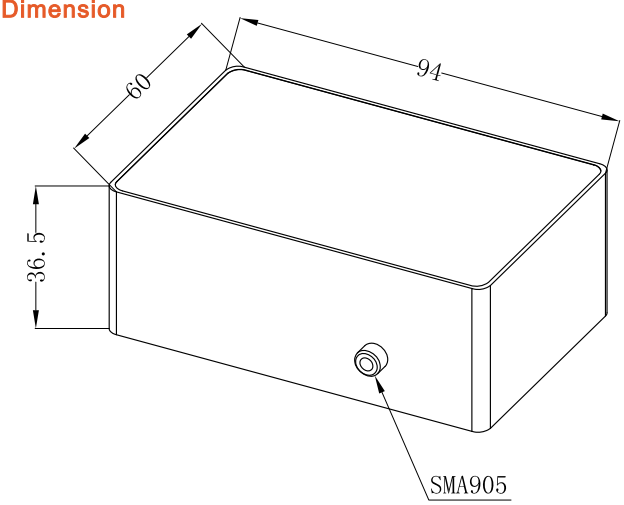
Note: When using 1800-groove grating, the wavelength width in the long-wave direction may not reach 233nm.

UV-VIS Miniature Spectrometer YSM-8101

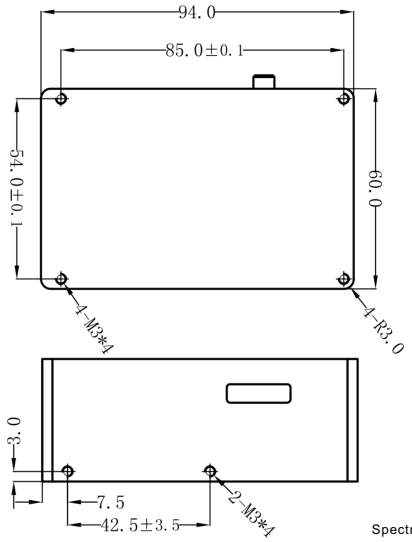
Specifications

Model	YSM-8101-02	YSM-8101-01
Size	94 mm×60 mm×34.5 mm	94 mm×60 mm×34.5 mm
Weight	0.3 Kg	0.3 Kg
Wavelength Range	180nm-1100nm optional	315nm - 1100nm optional
Optical Resolution	Optimal~0.35nm	Optimal~0.35nm
Fiber Connector	SMA905	SMA905
Detector	Hamamatsu S11639 2048 Line Array CMOS	Toshiba TCD1304Line Array CCD
Pixel	2048 pixels, 14 μm x 200 μm per pixel	3648 pixels, 8 μm x 200 μm per pixel
Signal to Noise Ratio	600:1 full spectrum	300:1 full spectrum
A/D Resolution	16 bit	16 bit
Integration time	0.5ms - 65 s	4ms - 65 s
Dynamic range	10000 : 1	300 : 1
Trigger modes	Software, hardware, synchronous	Software, hardware, synchronous
Power consumption	250 mA, 5 VDC	250 mA, 5 VDC
Ambient temperature	5°C -35°C (25°C recommended)	5°C -35°C (25°C recommended)
Communication	USB2.0 (12Mbps)	USB2.0 (12Mbps)
	Rs232 (115200bps)	Rs232 (115200bps)
Operating system	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11
Fixing hole	4xM3 holes on the bottom 2xM3 holes on the side	4xM3 holes on the bottom 2xM3 holes on the side
Power supply	USB or 5VDC	USB or 5VDC

Dimension



Fixing Hole



UV-VIS High-Resolution Spectrometer YSM-8102

Introduction

YSM-8102 series spectrometers, with high-resolution optical-mechanical platforms, are lighter but of better performance (up to 0.06nm optical resolution). Users can obtain different optical resolutions and wavelength responding ranges by selecting different gratings and slits. YSM-8102-02 spectrometer is equipped with a Hamamatsu S11639 line array detector; achieves a dynamic range of 10000:1, an integration time as low as 0.5ms, and a signal-to-noise ratio of 600:1; supports RS232/RS422 communication; has better anti-interference performance; is suitable for both industrial and scientific applications.

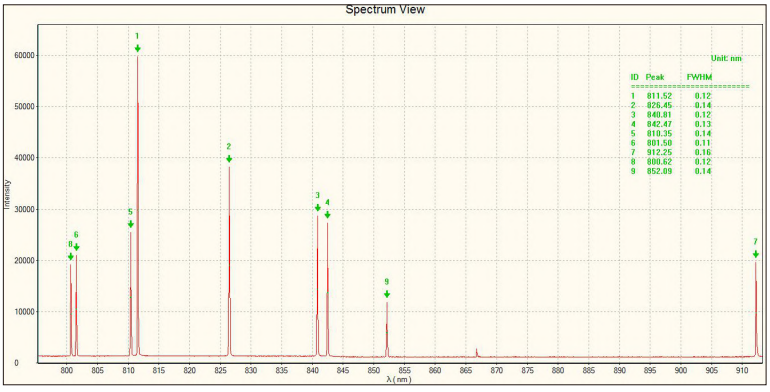
Features

- Up to 0.06nm optical resolution
- Compact size and easy operation
- Crossed asymmetric C-T optical structure with interference filters eliminates secondary diffraction
- SMA905 fiber connector for easy connection to other devices
- Customizable wavelength range and optical resolution
- USB 2.0 for data transmission and power supply
- Support RS232/RS422 and multiple trigger modes
- Powerful software with automatic peak wavelength and bandwidth calculation functions
- Support OEM and in-depth customization

Applications

- Laser's central wavelength, FWHM, and stability measurement
- LED measurement
- LIBS applications
- Solar spectra analysis
- Fluorescence spectra analysis
- Color measurement

Typical Test Data

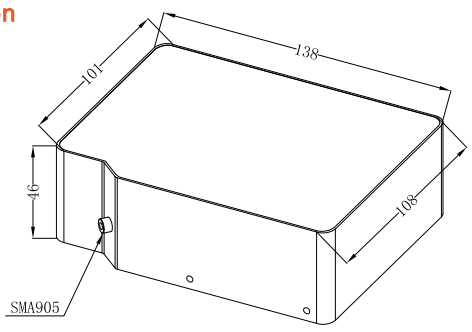


UV-VIS High-Resolution Spectrometer YSM-8102

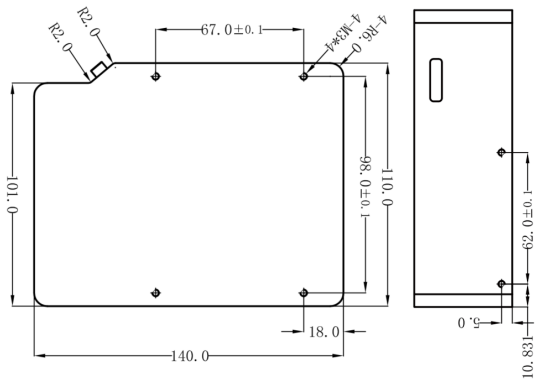
Specifications

Mode	YSM-8102-02	YSM-8102-01
Size	140mm×110 mm×46mm	140 mm×110 mm×46 mm
Weight	0.7 Kg	0.7 Kg
Wavelength Range	180nm-1100nm selectabie	315nm - 1100nm selectabie
Optical Resolution	Best~0.06nm	Best~0.06nm
Pixel Resolution	Best ~0.04nm	Best ~0.02nm
Fiber Connector	SMA905	SMA905
Detector	Hamamatsu S11639 2048 Line Array CMOS	Toshiba TCD1304Line Array CCD
Pixel	2048 pixels, 14 μm x 200 μm per pixel	3648 pixels, 8 μm x 200 μm per pixel
Signal to Noise Ratio	600:1 full spectrum	300:1 full spectrum
Linearity	>99%	>99%
Stray Light	<0.1% (600 nm, 435 nm)	<0.1% (600 nm, 435 nm)
A/D Resolution	16 bit	16 bit
Integration time	0.5ms -10 s	4ms - 65 s
Dynamic range	10000 : 1	300 : 1
Trigger modes	Software, hardware, synchronous	Software, hardware, synchronous
Power consumption	250 mA, 5 VDC	250 mA, 5 VDC
Ambient temperature	5°C -35°C (25°C recommended)	5°C -35°C (25°C recommended)
Communication	USB2.0 (12Mbps)	USB2.0 (12Mbps)
	Rs232 (115200bps)	Rs232 (115200bps)
Operating system	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11
Power supply	USB or 5VDC	USB or 5VDC

Dimension



Fixing Hole



UV-VIS High-Resolution Area Array Spectrometer YSM-8102-03

Introduction

YSM-8102-03 series spectrometers adopt a high-resolution optical-mechanical platform and a Hamamatsu S16010 2048 × 64-pixel area array CCD. They are featured with a high optical resolution (up to 0.1nm), a high S/N ratio (up to 800:1), a high dynamic range (up to 50000:1), and a high sensitivity in the range of 700-1100nm, which make them ideal for NIR laser spectrum analysis.

With alterable gratings and slits, YSM-8102-03 can adjust to the different spectral ranges and optical resolutions in Raman spectrum measurements and can better suffice for both industrial and scientific needs.

Features

- Hamamatsu S16010 2048 x 64-pixel area array CCD
- Linear variable filter or long wave pass filter to eliminate secondary and advanced diffractions
- SMA905 fiber connector for easy connection
- Customizable wavelength range and optical resolution
- Excellent sensitivity to 700nm-1100nm
- USB 2.0 data transfer and power supply
- Support USB2.0, RS232, RS485 modes
- Real-time display of peak wavelength and FWHM
- Support OEM and in-depth customization

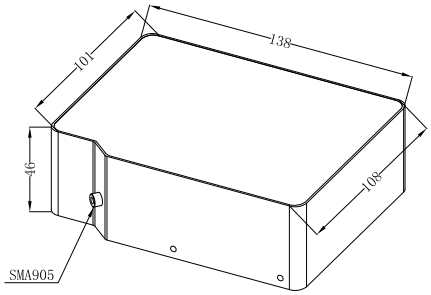
Applications

- Raman spectrum
- Fluorescence
- Laser's CWL and line width
- 700-1100nm weak spectral measurement

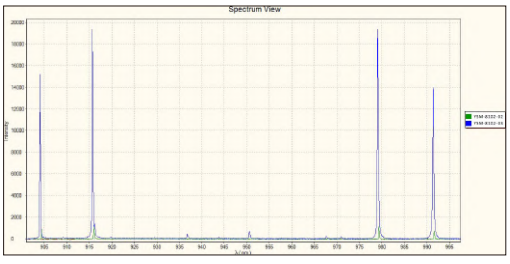
Specifications

Model	YSM-8102-03
Size	140mm×110mm×46mm
Wavelength Range	200 nm-1100 nm
Optical Resolution	Up to ~0.1 nm
Fiber Connector	SMA905
Detector	Hamamatsu S16010back-illuminated area array CCD
Pixel	2048 × 64 pixels, pixel size 14μm × 14μm
S/N Ratio	800:1
Linearity	>99%
Stray Light	<0.1% (600nm)
A/D Resolution	16bit
Integration Time	1ms-10s
Dynamic Range	50,000:1 (typical)
Trigger Mode	Software, hardware, synchronous
Power Consumption	5VDC ,500mA
Operating Temperature	5°C-35°C (25°C recommended)
Communication	USB2.0, RS232/RS422
Operating System	Win XP, 7, 8, 10, 11
Power Supply	USB

Dimension



Typical Testing Data



Xe lamp spectrum. Compared with YSM-8102-02 series, while maintaining high resolutions, YSM-8102-03's sensitivity has significantly improved.

UV-VIS 4096-Pixel High-Resolution Spectrometer YSM-8102-06

Introduction

YSM-8102-06 series high-resolution spectrometers adopt Hamamatsu 4096-pixel S13496 CMOS detector, whose pixel resolution has increased by one time compared with an S11639 detector. It vastly improves the accuracy of spectrometers and is ideal for LIBS and other laser spectral measurements.

Features

- Up to 4096 pixels resolution
- Cross-symmetric C-T optical structure
- Filters eliminate secondary and advanced diffractions
- Customizable wavelength range and optical resolution
- USB2.0 data transfer and power supply
- Support USB2.0, RS232, RS485
- Support OEM and in-depth customization

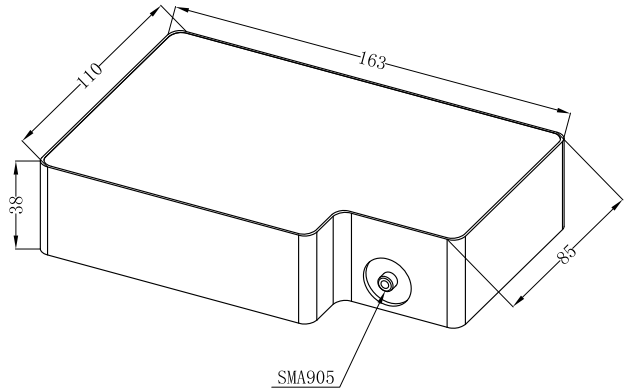
Applications

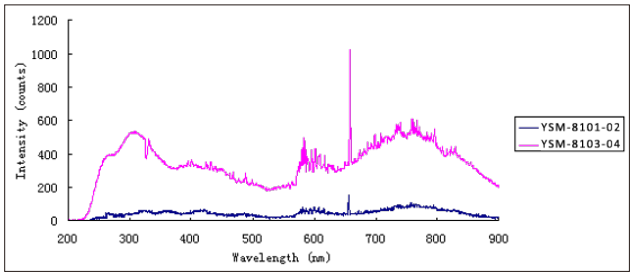
- Laser central wavelength, FWHM and stability measurement
- LIBS multi-channel monitoring

Specifications

Model	YSM-8102-06
Detector	Hamamatsu S13496
	Line matrix CMOS 4096 pixels
	Pixel size 7μm×200μm
	Wavelength response range 200nm-1100nm
Size	140mm×110mm×46mm
Optical Resolution	Determined by the specific configuration of the grating and slit
Wavelength Range	Determined by the specific grating configuration
Fiber Connector	SMA905
S/N Ratio	600:1full spectrum
Linearity	>99%
A/D Resolution	16bit
Integration Time	0.5ms-65s
Dynamic Range	10000:1
Trigger Mode	Software, hardware, synchronous
Power Consumption	5VDC ,300mA
Operating Temperature	5°C-35°C (25°C recommended)
Communication	USB2.0, RS232/RS422
Operating System	Win XP, 7, 8, 10, 11
Power Supply	USB

Dimension





Xe lamp spectrum. In the same tests, 4096-pixel spectrometers own twice pixel resolution as 2048-pixel counterparts.

UV-VIS Area Array Spectrometer YSM-8103

Introduction

YSM-8103 series spectrometers adopt Hamamatsu area array back-illuminated CCD (UV-sensitive or IR-sensitive version). They are very cost-effective for weak spectral measurements. The wavelength range and optical resolution are customizable; the OEM and in-depth customization are supported. YSM-8103-03 series spectrometers, equipped with Hamamatsu S16010 2048 x 64- pixel area array CCD, have higher sensitivity in 700-1100nm and are suitable for fluorescence and Raman spectral measurement. YSM-8103-04 series spectrometers, equipped with Hamamatsu S10420 2048 x 64-pixel area array CCD have higher sensitivity in 200-500nm and are suitable for water quality and gas monitoring and fluorescence spectral measurement.

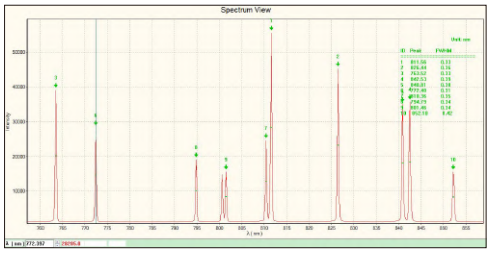
Features

- Area array back-illuminated CCD
- Compact size for system integration
- Filters eliminate secondary and advanced diffractions
- Replaceable slit design
- Support USB 2.0 and RS232/485
- USB 2.0 for data transfer and power supply
- Powerful software with automatic peak wavelength and bandwidth calculation functions
- Support OEM and in-depth customization

Applications

- Raman and fluorescence
- Water and gas quality monitoring
- UV-VIS weak spectral measurement

Typical Test Data



Mercury lamp spectrum

Grating Selection Reference

Slit (μm)	Grating (grooves/mm)	Wavelength range width(nm)	Resolution (nm)
25	500	800	~1.5
	600	700	~1
	1200	350	~0.5
	1800	233	~0.35
50	500	800	~3
	600	700	~2
	1200	350	~1
	1800	233	~0.7
100	500	800	~6
	600	700	~4
	1200	350	~2
	1800	233	~1.4
200	500	800	~12
	600	700	~8
	1200	350	~4
	1800	233	~2.8

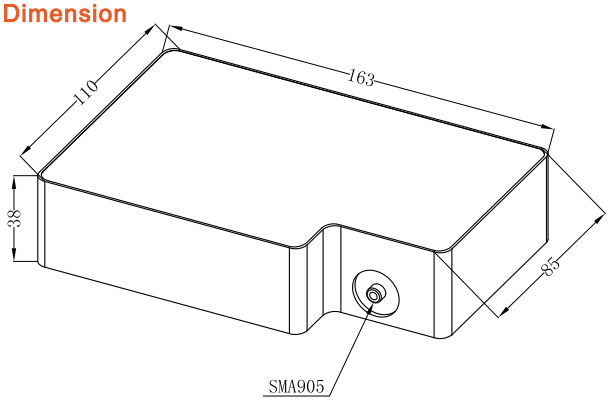
Note: When using 1800-groove grating, the wavelength range width in the long-wave direction may not reach 233nm.

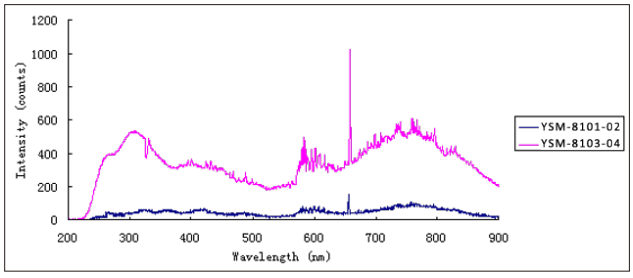
UV-VIS Area Array Spectrometer YSM-8103

Specifications

Model	YSM-8103-04	YSM-8103-03
Size	165mm × 110mm × 38mm	165mm × 110mm × 38mm
Weight	0.7Kg	0.7Kg
Wavelength Range	200nm-1100nm	200nm-1100nm
Sensitive Range	200nm - 500nm	700nm-1100nm
Wavelength Range Width	700nm, 350nm, 233nm optional	700nm, 350nm, 233nm optional
Optical Resolution	Optimal ~0.35nm	Optimal ~0.35nm
Fiber Connector	SMA905	SMA905
Detector	Hamamatsu S10420-01 Series area array back-illuminated TE-cooling CCD	Hamamatsu S16010 Series area array back-illuminated TE-cooling CCD
Pixel	2048×64 pixels, pixel size 14μm×14μm	2048×64 pixels, pixel size 14μm×14μm
S/N Ratio	800:1	800:1
Linearity	>99%	>99%
Stray Light	≤0.05% (600nm)	≤0.1% (400nm)
A/D Resolution	16bit	16bit
Integration Time	1ms-65s	1ms-65s
Dynamic Range	50,000:1 (typical)	50,000:1 (typical)
Trigger Mode	Software, hardware, synchronous	Software, hardware, synchronous
Power Consumption	5VDC, 500mA	5VDC, 500mA
Ambient Temperature	5°C-35°C (25°C recommended)	5°C-35°C (25°C recommended)
Communication	USB2.0, RS232	USB2.0, RS232
Operating System	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11
Power Supply	5V DC ,2A	5V DC ,2A

Dimension





Deuterium-tungsten lamp spectrum. Comparison of YSM-8103-04 area array series and YSM-8101-02 miniature series (in the same conditions).

UV-VIS Area Array TE-Cooling Spectrometer YSM-8104

Introduction

YSM-8104 series high-performance spectrometers adopt Hamamatsu back-illuminated TE-cooling area array CCD (1024 and 2048-pixel versions). They have research-grade sensitivity. The optimized low-noise circuit, 18-bit A/D converter, and excellent CT optical structure vastly improve the S/N ratio, sensitivity, and thermal stability of the spectrometers, which are an ideal choice for Raman and fluorescence spectral measurement. YSM-8104-07 series spectrometers adopt Hamamatsu S7031-1006s series 1024 x 58-pixel TE-cooling CCD which is of excellent sensitivity. YSM-8104-08 series spectrometers adopt Hamamatsu S10141-1107S-01 series 2048 x 122-pixel TE-cooling CCD, which is of higher pixel resolution.

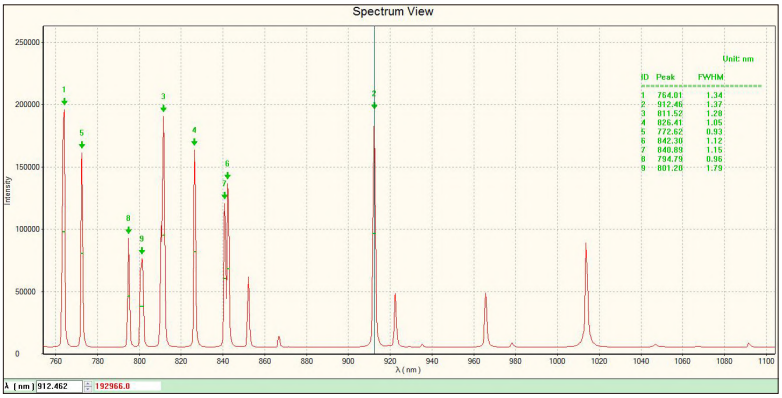
Features

- Hamamatsu back-illuminated TE-cooling area array CCD with 1000:1 S/N ratio
- 18-bit A/D conversion with 100000:1 dynamic range (typical)
- Replaceable slit design (5μm, 10μm, 25μm, 50μm, 100μm, and 200μm)
- 1024 pixels and 2048 pixels versions
- Up to 24μm x 24μm pixel size
- Crossed asymmetric C-T optical structure and interference filters eliminate secondary diffraction
- SMA905 fiber connector for easy connection
- Customizable wavelength range and optical resolution
- USB 2.0 data transmission and power supply; support RS232/RS422 and trigger modes
- Powerful software with automatic peak wavelength and bandwidth calculation functions
- Support OEM and in-depth customization

Applications

- Raman
- Fluorescence
- UV-VIS weak spectral measurement

Typical Test Data

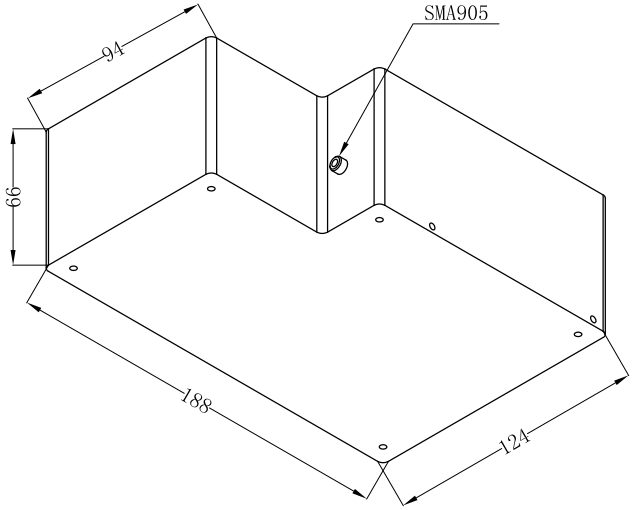


UV-VIS Area Array TE-Cooling Spectrometer YSM-8104

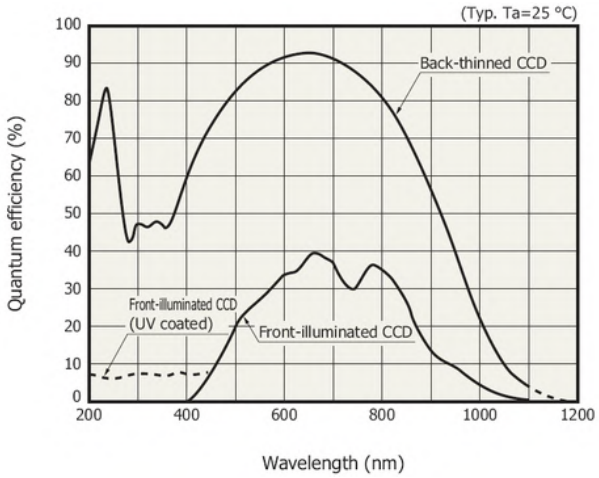
Specifications

Model	YSM-8104-07	YSM-8104-08
Size	190mm × 120mm × 66mm	190mm × 120mm × 66mm
Weight	1.5Kg	1.5Kg
Wavelength Range	200nm-1100nm	200nm-1100nm
Detector	Hamamatsu S7031-1006s series back-illuminated TE-cooling area array CCD	Hamamatsu S10141-1107S-01 series back-illuminated TE-cooling area array CCD
	1024×58 pixels, image element size 24μm×24μm	2048×122 pixels, image element size 12μm×12μm
Optical Resolution	Optimal ~0.35nm	Optimal ~0.35nm
S/N Ratio	1000:1	1000:1
A/D Resolution	18-bit	18-bit
Integration Time	8ms-3600s	8ms-3600s
Dynamic Range	10000:1	10000:1
Trigger Mode	Software, hardware, synchronous	Software, hardware, synchronous
Fiber Connector	SMA905	SMA905
Operating Temperature	5°C-35°C (25°C recommended)	5°C-35°C (25°C recommended)
Communication	USB2.0, RS232	USB2.0, RS232
Operating System	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11
Power Supply	5V DC ,2A	5V DC ,2A

Dimension



CCD Quantum Efficiency



YSM-8101-01 Series # UV-VIS Miniature Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8101-01-02	400-1100nm	16S03L00F05G02	~1nm	25μm	600g/mm, 650nm	F05	--
YSM-8101-01-03	350-700nm	16S03L00F00G03	~0.5nm	25μm	1200g/mm, 400nm	--	--
YSM-8101-01-04	350-583nm	16S03L00F00G04	~0.35nm	25μm	1800g/mm, 400nm	--	--
YSM-8101-01-05	750-1100nm	16S03L00F08G05	~0.5nm	25μm	1200g/mm, 850nm	F08	--
		16S04L00F08G05	~1nm	50μm	1200g/mm, 850nm	F08	--
YSM-8101-01-06	350-1050nm	16S03L00F05G02	~1nm	25μm	600g/mm, 650nm	F05	--
		16S03L01F05G02	~1nm	25μm	600g/mm, 650nm	F05	L01
YSM-8101-01-07	315-1015nm	16S03L00F06G02	~1nm	25μm	600g/mm, 650nm	F06	--
		16S03L01F06G02	~1nm	25μm	600g/mm, 650nm	F06	L01
YSM-8101-01-08	380-730nm	16S02L00F00G03	~0.4nm	10μm	1200g/mm, 400nm	--	--
YSM-8101-01-09	600-950nm	16S02L01F08G05	~0.4nm	10μm	1200g/mm, 850nm	F08	L01

YSM-8101-02 Series # UV-VIS Miniature Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8101-02-01	200-900nm	16S03L00F06G01	~1nm	25μm	600g/mm, 400nm	F06	--
		16S03L02F06G01	~1nm	25μm	600g/mm, 400nm	F06	L02
		16S04L00F06G01	~2nm	50μm	600g/mm, 400nm	F06	--
		16S04L02F06G01	~2nm	50μm	600g/mm, 400nm	F06	L02
		16S04L02F06G17	~2nm	50μm	600g/mm, 250nm	F06	L02
		16S04L02F06G02	~2nm	50μm	600g/mm, 650nm	F06	L02
		16S05L02F06G01	~5nm	100μm	600g/mm, 400nm	F06	L02
YSM-8101-02-02	200-550nm	16S03L00F00G03	~0.5nm	25μm	1200g/mm, 400nm	--	--
YSM-8101-02-03	200-433nm	16S03L00F00G06	~0.35nm	25μm	1800g/mm, 250nm	--	--
YSM-8101-02-04	750-1100nm	16S02L00F08G05	~0.35nm	10μm	1200g/mm, 850nm	F08	--
		16S04L01F08G05	~1nm	50μm	1200g/mm, 850nm	F08	L01
		16S03L01F08G05	~0.5nm	25μm	1200g/mm, 850nm	F08	L01
YSM-8101-02-05	350-1050nm	16S03L00F05G02	~1nm	25μm	600g/mm, 650nm	F05	--
		16S03L01F05G02	~1nm	25μm	600g/mm, 650nm	F05	L01
		16S04L00F05G02	~2nm	50μm	600g/mm, 650nm	F05	--
		16S04L01F05G02	~2nm	50μm	600g/mm, 650nm	F05	L01
		16S04L01F05G18	~2nm	50μm	600g/mm, 500nm	F05	L01
		16S05L01F05G02	~4nm	100μm	600g/mm, 650nm	F05	L01
		16S05L01F05G18	~4nm	100μm	600g/mm, 500nm	F05	L01
YSM-8101-02-06	260-493nm	16S03L00F00G04	~0.35nm	25μm	1800g/mm, 400nm	--	--
YSM-8101-02-07	500-850nm	16S03L00F00G03	~0.5nm	25μm	1200g/mm, 400nm	--	--
YSM-8101-02-08	180-413nm	16S03L00F00G06	~0.35nm	25μm	1800g/mm, 250nm	--	--
		16S04L00F00G06	~0.7nm	50μm	1800g/mm, 250nm	--	--
YSM-8101-02-09	180-530nm	16S03L00F00G07	~0.5nm	25μm	1200g/mm, 250nm	--	--
YSM-8101-02-10	300-1000nm	16S03L00F06G02	~1nm	25μm	600g/mm, 650nm	F06	--
		16S03L02F06G02	~1nm	25μm	600g/mm, 650nm	F06	L02
		16S04L02F06G01	~2nm	50μm	600g/mm, 400nm	F06	L02
YSM-8101-02-11	200-1000nm	16S03L00F06G13	~1.5nm	25μm	500g/mm, 330nm	F06	--
		16S03L02F06G13	~1.5nm	25μm	500g/mm, 330nm	F06	L02
		16S04L02F06G16	~3nm	50μm	500g/mm, 560nm	F06	L02
YSM-8101-02-12	350-700nm	16S03L00F00G03	~0.5nm	25μm	1200g/mm, 400nm	--	--
		16S04L00F00G03	~1nm	50μm	1200g/mm, 400nm	--	--
YSM-8101-02-13	400-1100nm	16S03L00F05G02	~1nm	25μm	600g/mm, 650nm	F05	--
		16S03L01F05G02	~1nm	25μm	600g/mm, 650nm	F05	L01
		16S04L01F05G02	~2nm	50μm	600g/mm, 650nm	F05	L01
YSM-8101-02-14	650-1000nm	16S03L01F08G15	~0.5nm	25μm	1200g/mm, 750nm	F08	L01
YSM-8101-02-15	300-650nm	16S03L00F00G03	~0.5nm	25μm	1200g/mm, 400nm	--	--
YSM-8101-02-16	700-1050nm	16S03L00F08G05	~0.5nm	25μm	1200g/mm, 850nm	F08	--
YSM-8101-02-17	260-960nm	16S04L02F06G01	~2nm	50μm	600g/mm, 400nm	F06	L02
YSM-8101-02-18	300-1100nm	16S03L02F06G16	~1.5nm	25μm	500g/mm, 560nm	F06	L02
YSM-8101-02-19	450-800nm	16S07L01F00G20	~4nm	200μm	1200g/mm, 600nm	--	L01
YSM-8101-02-20	535-760nm	16S04L01F05G31	~0.6nm	50μm	1800g/mm, 500nm	F05	L01
		16S03L01F05G31	~0.3nm	25μm	1800g/mm, 500nm	F05	L01
YSM-8101-02-21	400-850nm	16S03L00F05G19	~0.8nm	25μm	964g/mm, 520nm	F05	--
YSM-8101-02-24	430-780nm	16S03L00F00G20	~0.5nm	25μm	1200g/mm, 600nm	--	--
YSM-8101-02-25	180-880nm	16S03L02F06G17	~1nm	25μm	600g/mm, 250nm	F06	L02

YSM-8102-01 Series # UV-VIS High Resolution Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8102-01-01	400-620nm	16S03L00F00G10	~0.3nm	25μm	1200g/mm, 500nm	--	--
YSM-8102-01-02	890-990nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
YSM-8102-01-04	750-870nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
YSM-8102-01-06	355-495nm	16S02L00F00G08	~0.1nm	10μm	1760g/mm, 500nm	--	--
YSM-8102-01-07	510-650nm	16S02L00F00G08	~0.1nm	10μm	1760g/mm, 500nm	--	--
YSM-8102-01-08	900-1000nm	16S01L00F08G08	~0.1nm	5μm	1760g/mm, 500nm	F08	--
YSM-8102-01-09	300-750nm	16S01L00F00G25	~0.25nm	5μm	600g/mm, 500nm	--	--
YSM-8102-01-10	445-655nm	16S01L00F00G10	~0.2nm	5μm	1200g/mm, 500nm	--	--
YSM-8102-01-11	697-1100nm	16S01L00F08G28	~0.3nm	5μm	600g/mm, 1000nm	F08	--
YSM-8102-01-12	725-845nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
YSM-8102-01-13	810-1095nm	16S01L00F08G29	~0.2nm	5μm	900g/mm, 800nm	F08	--
YSM-8102-01-14	380-482nm	16S01L00F00G30	~0.06nm	5μm	2400g/mm, 300nm	--	--
YSM-8102-01-15	360-460nm	16S01L00F00G30	~0.07nm	5μm	2400g/mm, 300nm	--	--
YSM-8102-01-16	510-605nm	16S01L00F00G30	~0.07nm	5μm	2400g/mm, 300nm	--	--
YSM-8102-01-17	800-1000nm	16S01L01F08G27	~0.1nm	5μm	1200g/mm, 1000nm	F08	L01
YSM-8102-01-18	570nm-690nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
YSM-8102-01-19	380nm-900nm	16S02L02F05G12	~0.4nm	10μm	500g/mm, 560nm	F05	L02

YSM-8102-02 Series # UV-VIS High Resolution Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8102-02-01	200-420nm	16S03L00F00G14	~0.3nm	25μm	1200g/mm, 250nm	--	--
YSM-8102-02-02	200-1000nm	16S01L00F06G11	~0.6nm	5μm	333g/mm, 600nm	F06	--
YSM-8102-02-03	380-900nm	16S02L00F05G12	~0.4nm	10μm	500g/mm, 560nm	F05	--
YSM-8102-02-04	305-595nm	16S02L00F00G23	~0.3nm	10μm	900g/mm, 550nm	--	--
YSM-8102-02-05	900-1000nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
		16S02L01F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	L01
		16S03L01F08G08	~0.3nm	25μm	1760g/mm, 500nm	F08	L01
YSM-8102-02-06	600-1100nm	16S01L00F08G26	~0.3nm	5μm	500g/mm, 770nm	F08	--
YSM-8102-02-07	330-770nm	16S02L00F05G25	~0.3nm	10μm	600g/mm, 500nm	F05	--
YSM-8102-02-08	500-720nm	16S02L00F00G10	~0.2nm	10μm	1200g/mm, 500nm	--	--
YSM-8102-02-09	800-1000nm	16S01L01F08G27	~0.2nm	5μm	1200g/mm, 1000nm	F08	L01
YSM-8102-02-10	250-400nm	16S02L00F00G08	~0.1nm	10μm	1760g/mm, 500nm	--	--
YSM-8102-02-11	390-610nm	16S02L00F00G10	~0.2nm	10μm	1200g/mm, 500nm	--	--
YSM-8102-02-12	300-1100nm	16S01L00F06G11	~0.6nm	5μm	333g/mm, 600nm	F06	--
YSM-8102-02-13	340-850nm	16S02L00F05G12	~0.5nm	10μm	500g/mm, 560nm	F05	--
YSM-8102-02-14	795-905nm	16S01L01F08G08	~0.1nm	5μm	1760g/mm, 500nm	F08	L01
YSM-8102-02-15	1005-1080nm	16S02L01F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	L01
YSM-8102-02-16	750-870nm	16S02L00F08G08	~0.1nm	10μm	1760g/mm, 500nm	F08	--
YSM-8102-02-17	250-350nm	16S02L00F00G30	~0.1nm	10μm	2400g/mm, 300nm	--	--
YSM-8102-02-18	350-450nm	16S02L00F00G30	~0.1nm	10μm	2400g/mm, 300nm	--	--
YSM-8102-02-19	660-734nm	16S01L01F08G30	~0.1nm	5μm	2400g/mm, 300nm	F08	L01
YSM-8102-02-20	180-400nm	16S03L00F00G14	~0.3nm	25μm	1200g/mm, 250nm	--	--

YSM-8102-03 Series # UV-VIS High Resolution Area Array Uncooled Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8102-03-01	800-1000nm	16S01L01F08G27	~0.2nm	5μm	1200g/mm, 1000nm	F08	L01
YSM-8102-03-02	670-1100nm	16S01L01F08G28	~0.3nm	5μm	600g/mm, 1000nm	F08	L01

YSM-8102-06 Series # 4096 Pixels UV-VIS High Resolution Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Pixel Resolution	Slit	Grating	Filter	Lens
YSM-8102-06-01	200-420nm	16S03L00F00G14	~0.3nm	~0.05nm	25μm	1200g/mm,250nm	--	--
YSM-8102-06-02	200-1000nm	16S01L00F06G11	~0.6nm	~0.2nm	5μm	333g/mm,600nm	F06	--
YSM-8102-06-03	380-900nm	16S02L00F05G12	~0.4nm	~0.13nm	10μm	500g/mm,560nm	F05	--
YSM-8102-06-04	305-595nm	16S02L00F00G23	~0.3nm	~0.07nm	10μm	900g/mm,550nm	--	--
YSM-8102-06-05	900-1000nm	16S02L01F08G08	~0.1nm	~0.02nm	10μm	1760g/mm,500nm	F08	L01
YSM-8102-06-06	600-1100nm	16S01L00F08G26	~0.3nm	~0.12nm	5μm	500g/mm,770nm	F08	--
YSM-8102-06-07	330-770nm	16S02L00F05G25	~0.3nm	~0.11nm	10μm	600g/mm,500nm	F05	--
YSM-8102-06-08	500-720nm	16S02L00F00G10	~0.2nm	~0.05nm	10μm	1200g/mm,500nm	--	--
YSM-8102-06-09	800-1000nm	16S01L01F08G27	~0.2nm	~0.05nm	5μm	1200g/mm,1000nm	F08	L01
YSM-8102-06-10	250-400nm	16S02L00F00G08	~0.1nm	~0.04nm	10μm	1760g/mm,500nm	--	--
YSM-8102-06-11	390-610nm	16S02L00F00G10	~0.2nm	~0.05nm	10μm	120g/mm,500nm	--	--
YSM-8102-06-12	300-1100nm	16S01L00F06G11	~0.6nm	~0.2nm	5μm	333g/mm,600nm	F06	--
YSM-8102-06-13	340-850nm	16S02L00F05G12	~0.5nm	~0.12nm	10μm	500g/mm,560nm	F05	--
YSM-8102-06-14	795-905nm	16S01L01F08G08	~0.1nm	~0.03nm	5μm	1760g/mm,500nm	F08	L01
YSM-8102-06-15	1005-1080nm	16S02L01F08G08	~0.1nm	~0.02nm	10μm	1760g/mm,500nm	F08	L01
YSM-8102-06-16	750-870nm	16S02L00F08G08	~0.1nm	~0.03nm	10μm	1760g/mm,500nm	F08	--
YSM-8102-06-17	250-350nm	16S02L00F00G30	~0.1nm	~0.02nm	10μm	2400g/mm,300nm	--	--
YSM-8102-06-18	350-450nm	16S02L00F00G30	~0.1nm	~0.02nm	10μm	2400g/mm,300nm	--	--
YSM-8102-06-19	660-734nm	16S01L01F08G30	~0.1nm	~0.02nm	5μm	2400g/mm,300nm	F08	L01

YSM-8103-03 # UV-VIS Area Array Uncooled Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8103-03-01	350-1050nm	16S03L01F05G02	~1nm	25μm	600g/mm, 650nm	F05	L01
YSM-8103-03-02	750-1100nm	16S04L01F08G05	~1nm	50μm	1200g/mm, 850nm	F08	L01
		16S02L01F08G05	~0.35nm	10μm	1200g/mm, 850nm	F08	L01
YSM-8103-03-03	535-760nm	16S04L01F05G31	~0.6nm	50μm	1800g/mm, 500nm	F05	L01
YSM-8103-03-04	640-850nm	16S04L01F08G31	~0.7nm	50μm	1800g/mm, 500nm	F08	L01

YSM-8103-04 Series # UV-VIS Area Array Uncooled Spectrometer

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8103-04-01	200-900nm	16S03L02F06G01	~1nm	25μm	600g/mm, 400nm	F06	L02
YSM-8103-04-02	200nm-1100nm	16S03L02F06G13	~1.5nm	25μm	500g/mm, 330nm	F06	L02
YSM-8103-04-03	180nm-880nm	16S03L02F06G17	~1nm	25μm	600g/mm, 250nm	F06	L02

YSM-8104-07 Series # High Performance Spectrometer with TE-Cooling

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8104-07-01	200-810nm	18S03L02F06G01	~1.5nm	25 μ m	600g/mm@400nm	F06	L02
YSM-8104-07-02	780nm-1060nm	18S03L01F08G05	~0.8nm	25 μ m	1200g/mm@850nm	F08	L01
YSM-8104-07-03	480nm-1100nm	18S03L02F05G02	~1.5nm	25 μ m	600g/mm@650nm	F05	L02
YSM-8104-07-04	530nm-830nm	18S03L01F08G20	~0.8nm	25 μ m	1200g/mm@600nm	F08	L01
YSM-8104-07-05	380nm-1000nm	18S03L02F05G02	~1.5nm	25 μ m	600g/mm@650nm	F05	L02

YSM-8104-08 Series # UV-VIS High Performance Spectrometer with TE-Cooling

Model	Wavelength Range	Sub Model	Resolution	Slit	Grating	Filter	Lens
YSM-8104-08-01	750-1090nm	18S03L01F08G28	~1nm	25μm	600g/mm，1000nm	F08	L01