

NIR Spectrometer YSM-8105

Introduction

YSM-8105 series NIR spectrometers adopt compact optical path and structure designs, which are easy for system integration. Replaceable slit design meets the varied resolution and sensitivity demands among different fields. Equipped with Hamamatsu InGaAs detectors (128/ 256/ 512 pixels, wavelength range of 900nm-1700nm), the YSM-8105 series has low power consumption and is ideal for food, biopharmaceutical, and life science applications.

Features

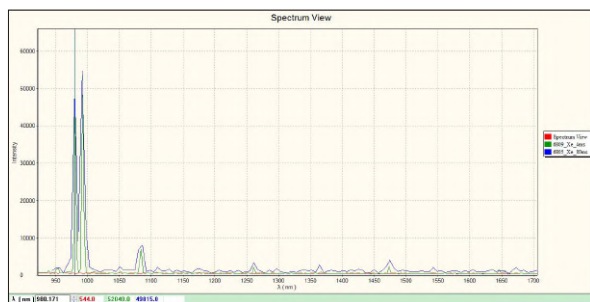
- Hamamatsu InGaAs detectors (128/256/ 512 pixels) of low power consumption
- Compact structure design
- Replaceable slit design for different applications
- Customizable wavelength range and optical resolution
- Powerful software with automatic peak wavelength and bandwidth calculation functions

Applications

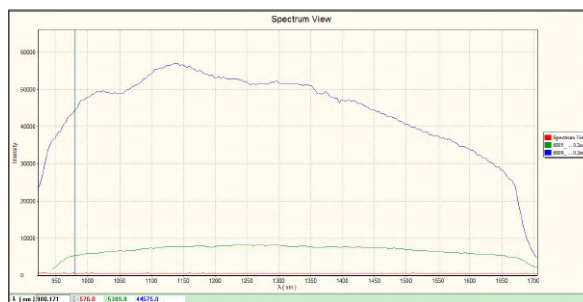
- 950nm ~ 1700nm light source testing, including wavelength, stability, intensity stability, and FWHM measurements
- Fruits and vegetables freshness and sugar testing; meat fat and protein content determination; grains and seeds quality assessment; oil plants composition analysis.
- Life sciences and pharmaceuticals, including drug composition analysis and process monitoring
- Composition analysis, material screening, and quality control for plastics industry



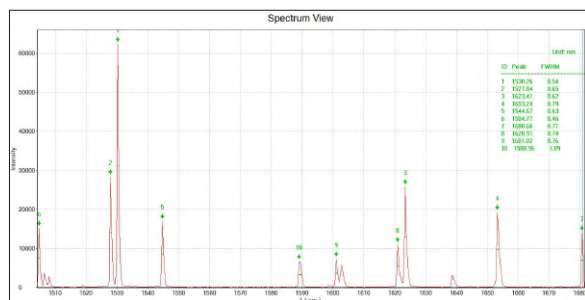
Typical Data



Standard xenon lamp spectrum comparison (YSM-8105-09 has a better optical resolution than YSM-8105-05)



Tungsten light spectrum comparison (YSM-8105-09 has better sensitivity than YSM-8105-05)



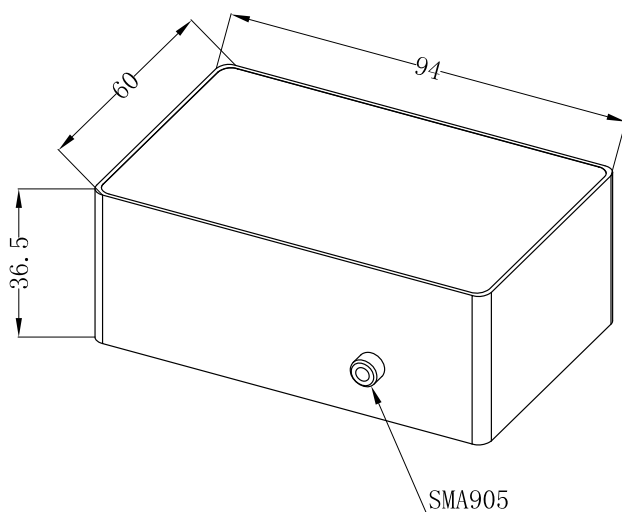
Standard mercury lamp spectrum (YSM-8105-10)

NIR Spectrometer YSM-8105

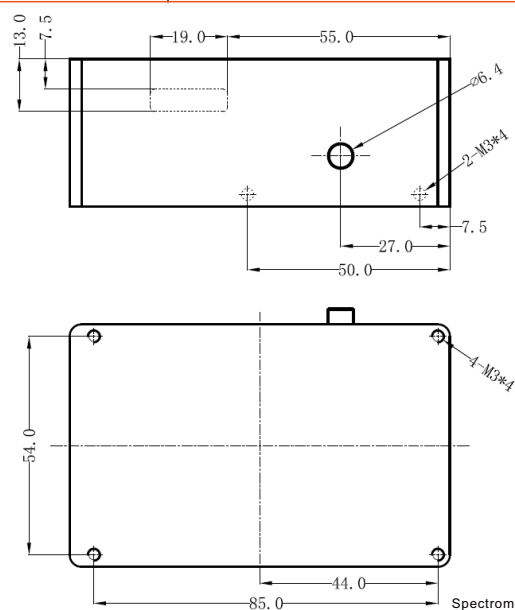
Specifications

Model	YSM-8105-05	YSM-8105-09	YSM-8105-10
Detector	InGaAs 128-pixel detector	InGaAs 256-pixel detector	InGaAs 512-pixel detector
	Pixel size 50μm×250μm	Pixel size 50μm×500μm	Pixel size 25μm×500μm
Size	94mm×60mm×36.5mm	94mm×60mm×36.5mm	94mm×60mm×36.5mm
Wavelength Range	950nm-1700nm	920nm-1700nm	920nm-1700nm
Optical Resolution	Optimal ~5nm	Optimal ~1.5nm	Optimal ~1nm
Slit	Replaceable	Replaceable	Replaceable
A/D	16bit	16bit	16bit
S/N Ratio	10000: 1	16666: 1	16666: 1
Dynamic Range	14667: 1	16666: 1	16666: 1
Integration Time	0.1ms-65s	0.1ms-65s	0.1ms-65s
Trigger Mode	Software, hardware, synchronous	Software, hardware, synchronous	Software, hardware, synchronous
Power Consumption	5VDC, 250mA	5VDC, 250mA	5VDC, 250mA
Fiber Connector	SMA905	SMA905	SMA905
Operating Temperature	5°C-35°C (25°C recommended)	5°C-35°C (25°C recommended)	5°C-35°C (25°C recommended)
Communication	USB2.0, RS232	USB2.0, RS232	USB2.0, RS232
Operating System	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11
Power Supply	USB	USB	USB

Dimension



Fixing Hole



NIR TE-Cooling Spectrometer YSM-8106

Introduction

YSM-8106 series NIR spectrometers adopt compact optical path and structure designs, which are easy for systematic integration. Replaceable slit design meets the varied resolution and sensitivity demands among different fields. YSM-8106 series is equipped with Hamamatsu's high-performance TE-cooling 256/512-pixel NIR detector, featuring a high S/N ratio, low power consumption, and millisecond data transmission speed. YSM-8106-12's wavelength range is 900-1700nm, while YSM-8106-19 has a boarder range of 900nm-2500nm, covering the entire NIR range. They are ideal for laboratory, food, biopharmaceutical, and life science applications.

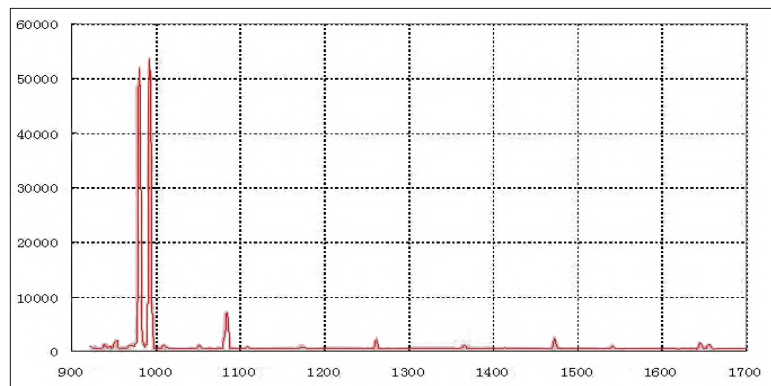
Features

- Hamamatsu TE-cooling InGaAs detectors (256/512 pixels)
- High S/N ratio, low power consumption, and millisecond data transmission speed
- Compact optical design, easy for system integration
- Replaceable slit design for different applications
- Customizable wavelength ranges and resolutions
- Powerful software with automatic peak wavelength and bandwidth calculation functions

Applications

- 900nm ~ 2500nm light source testing, including wavelength stability, intensity stability, and FWHM measurements
- Fruits and vegetables freshness and sugar testing; meat fat and protein content determination; grains and seeds quality assessment; oil plants composition analysis.
- Life sciences and pharmaceuticals, including drug composition analysis and process monitoring
- Composition analysis, material screening, and quality control for plastics industry

Typical Data



Standard xenon lamp spectrum

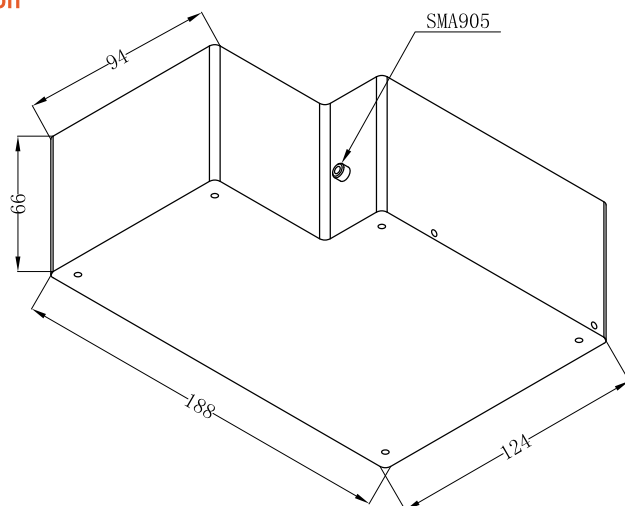


NIR TE-Cooling Spectrometer YSM-8106

Specifications

Model	YSM-8106-12	YSM-8106-19
Detector	InGaAs 512-pixel TE-cooling detector	InGaAs 512-pixel TE-cooling detector
	Pixel size 25μm×250μm	Pixel size 25μm×250μm
Size	190mm×120mm×66mm	190mm×120mm×66mm
Wavelength Range	900nm-1700nm	900nm-2500nm
Optical Resolution	Optimal ~1nm	Optimal ~1nm
Slit	Replaceable	Replaceable
A/D	16bit	16bit
S/N Ratio	1200:1	2500:1
Dynamic Range	14000:1	12700:1
Integration Time	1ms-65s	0.1ms-65s
Trigger Mode	Software, hardware, synchronous	Software, hardware, synchronous
Power Consumption	12VDC, 4A	12VDC, 4A
Fiber Connector	SMA905	SMA905
Operating Temperature	5°C - 35°C (25°C recommended)	5°C - 35°C (25°C recommended)
Communication	USB2.0(Mini), RS232	USB2.0(Mini), RS232
Operating System	Win XP, 7, 8, 10, 11	Win XP, 7, 8, 10, 11

Dimension



NIR

Model	Wavelength Range (nm)	Sub Model	Resolution (nm)	Slit (μm)	Grating	Filter	Lens
YSM-8105-05	950-1700	16S03L00F00G32	~10	25	150g/mm@ 1250nm	—	—
YSM-8105-09	920-1700	16S03L00F00G37	~5	25	300g/mm@ 1200nm		
YSM-8105-10-01	1500-1680	S03L00F00G39	~ 0.8	25	1000g/mm@1310nm		
YSM-8105-10-02	920-1700	S03L00F00G37	~ 3nm	25	300g/mm@1200nm		

NIR TE-Cooling

Model	Wavelength Range (nm)	Sub Model	Resolution (nm)	Slit (μm)	Grating	Filter	Lens
YSM-8104-07-01	200-810	18S03L02F06G01	~1.5	25	600g/mm@400nm	F06	L02
YSM-8104-07-02	780-1060	18S03L01F08G05	~0.8	25	1200g/mm@850nm	F08	L01
YSM-8104-07-03	480-1100	18S03L02F05F02	~1.5	25	600g/mm@650nm	F05	L02
YSM-8104-07-04	530-830	18S03L01F08G20	~0.8	25	1200g/mm@600nm	F08	L01
YSM-8104-07-05	380-1000	18S03L02F05G02	~1.5	25	600g/mm@650nm	F05	L02
YSM-8104-08	750-1090	18S03L01F08G28	~1	25	600g/mm@ 1000nm	F08	L01