SIMTRUM

Multi-Channel Fiber Optical Spectrometer

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Multi-Channel Fiber Optical Spectrometer

This S series multi-channel fiber optical spectrometer with Hamamatsu detector is designed for applications in industry and scientific researches . With optional channels , this spectrometer features high resolution , high sensitivity . What's more, it is very easy to use.

Features

- Support GPIO
- High resolution and high sensitivity
- Portable , high capability in integration
- Various interfaces , available for USB and serial interface
- Optional band channel , design for the whole machine, easy to operate

Recommended Applications ⟹

- Handheld/portable LIBS
- Plasma luminescence
- Detection of coal and metal

Technical Advantages

1.High resolution and high-speed detection

The S series spectrometer features Hamamatsu detector which has optimized resolution for single channel that enables the full band to achieve 0.15 nm limit resolution. This spectrometer's minimum time of spectrum acquisition in one time comes to 22.5us. It is especially suitable for applications where high resolution and high-speed detection are needed.

2.Powerful PC software

The PC software provided with the spectrometer-FLAVOR is powerful software. In addition to the basic spectrum acquisition control functions, it also has functions such as saturation and automatic adjustment of the integration time, recording of the real integration time, and automatic peak finding. At the same time, the software also includes characteristic functions such as wavelet smoothing with patented technology .
SDK supports Windows, Android, and Linux operating systems, and can provide secondary development packages in C#, C++, Java, Python, and other languages.

3.High stability

Within the temperature rage of 0~40℃, the spectral resolution remains unchanged, which is the best choice for industrial applications.

4.Easy to use

No configuration, preheating, plug and play , can be integrated into system and be updated to a portable device.

Technical Specification (list on optional channels)

Wavelength Range	Grating Scribe/Blaze Wavelength	Slit Width				
		10um	25um	50um	100um	200um
200-1000nm	600/200nm or 600/300nm	0.7nm	0. 8nm	1.2nm	2.4nm	4.8nm
180-550nm	1200/250nm or 1200/500nm	0.3nm	0.36nm	0.6nm	1nm	2nm
200-440nm	1800/200nm or 1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
300-1100nm	600/200nm or 600/300nm	0.7nm	0. 8nm	1.2nm	2.4nm	4.8nm
300-800nm	900/500nm	0.4nm	0.5nm	0.7nm	1.3nm	2.6nm
300-650nm	1200/250nm or 1200/500nm	0.3nm	0.36nm	0.6nm	1nm	2nm
300-400nm	1800/400nm	0.2nm	0.36nm	0.6nm	1nm	2nm
420-620nm	1800/200nm or 1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
450-550nm	1800/330nm	0.2nm	0.38nm	0.55nm	1nm	2nm
400-600nm	1200/500nm	0.3nm	0.4nm	0.8nm	1nm	2nm
400-740nm	1200/500nm	0.3nm	0.36nm	0.6nm	1nm	2nm
400-790nm	600/500nm	0.7nm	0. 8nm	1.2nm	2.4nm	4.8nm
400-880nm	900/500nm	0.4nm	0.5nm	0.7nm	1.3nm	2.6nm
500-950nm	900/500nm	0.4nm	0.5nm	0.7nm	1.3nm	2.6nm
500-820nm	1200/500nm	0.3nm	0.36nm	0.6nm	1nm	2nm
500-700nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
600-1040nm	900/500nm	0.4nm	0.5nm	0.7nm	1.3nm	2.6nm
600-900nm	1200/500nm	0.3nm	0.36nm	0.6nm	1nm	2nm
600-780nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
700-985nm	1200/850nm	0.25nm	0.38nm	0.55nm	1nm	2nm
700-840nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
725-1000nm	830/900nm	0.38nm	0.5nm	0.8nm	1nm	2nm
750-880nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
780-1060nm	1200/850nm	0.25nm	0.38nm	0.55nm	1nm	2nm
780-1100nm	600/500nm	0.7nm	0. 8nm	1.2nm	2.4nm	4.8nm
800-1060nm	1200/850nm	0.25nm	0.38nm	0.55nm	1nm	2nm
840-950nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
900-1100nm	1200/850nm	0.25nm	0.38nm	0.55nm	1nm	2nm
940-1030nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm
1020-1100nm	1800/500nm	0.15nm	0.2nm	0.3nm	0.6nm	1.2nm

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Portable System

FilmX provides dual optical paths and excellent human-computer interface , which offers leading detection performance and easy operation . Its built-in balanced deuterium halide light source significantly improves the signal to noise ratio of the whole band .And the application of test optical path , reference optical path and dual optical path results in high accuracy.

FilmX portable film thickness meter
● Portable
● White light interference
● Dual light source
● Easy to operate

Probe

Port for mains electricity

Touch screen

On/off Switch

Protection case with wheels

Product Parameters

Size	425x250x170mm
Weight	19kg
Light source	Balanced deuterium halide light source
Band of light source	200~2500nm
Power of light source	Deuterium lamp：25W；halogen tungsten lamp：9.75W
Band of specgrometer	200~1100nm
Resolution	~2.9nm
Life span of light source	Deuterium lamp：3000hr；halogen tungsten lamp：5000hr
Optical interface	SMA and FC for option
Stability of light source	±0.3% RMS/hr，P-P：superior to 0.005%；
Signal to noise ratio	800:1
Dynamic range	8000:1

A/D	16bit
Source	220V±10%，50/60Hz
Working temperature	0~40℃
Storage temperature	-20~80℃
Working humidity	≤93% without condensatin
Case production grade	IP65
Fiber band	190~1100nm
Fiber length	2~5m for option
IPC	Built-in
IPC MTBF	≥9000hr
Trigger	TTL
SDK	C#，C++，Python，Java，Matlab，Labview