

## High Sensitivity Back-illuminated CCD Fiber Optic Spectrometer with Large Sensing Area and Optimal Spectral Resolution

Our Product Introduction

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### Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: ISO9001 CE
- Model Number: SR100B
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: International Shipping Package
- Delivery Time: 30-400 working days
- Payment Terms: T/T, Western Union
- Supply Ability: 100PCS/30-40 days



### Product Specification

- Spectral Range: 200nm - 1100nm
- Effective Pixels: 2048\*64
- Pixel Size: 28.672\*0.896mm
- Integration Time: 4ms~900s
- Dimensions: 180mm\*120mm\*50mm
- Weight: 1.2kg
- Highlight: Back-illuminated CCD Fiber Optic Spectrometer , High Sensitivity Fiber Optic Spectrometer, Large Sensing Area Fiber Optic Spectrometer



### More Images



## Product Description

### Backlit array CCD UV enhanced High Sensitivity Modular Spectrometer

The SR100B spectrometer is a device that stands out for its high-performance capabilities, particularly when equipped with a back-illuminated CCD sensor. It is designed to excel in a variety of settings, including industrial, laboratory, and research environments. One of the key components that contribute to its exceptional performance is the Hamamatsu S10420 CCD chip, which is integrated into the device. This chip offers a large sensing area, which is crucial for capturing a wide range of data, and it ensures stable spectral readings, which are essential for accurate analysis.

The SR100B spectrometer is equipped with a 2048x64 pixel array, which is a significant factor in its ability to deliver superior quantum efficiency and sensitivity. Each pixel measures 14x14μm, which allows the device to operate effectively in the 200-1100nm wavelength range. This range is particularly important because it covers a significant portion of the electromagnetic spectrum that is relevant for many scientific and industrial applications.

Another feature that makes the SR100B spectrometer highly versatile is its ability to accommodate customizable gratings and slit widths. This customization capability means that users can tailor the spectral resolution and sensitivity to meet the specific requirements of their applications. Whether it's for detailed analysis in a research lab or for quality control in an industrial setting, the SR100B can be adjusted to provide the necessary precision.

At the heart of the SR100B spectrometer's performance is its high-resolution optical path. This optical path is engineered to deliver impeccable spectrum signals, ensuring that the data captured is of the highest quality. Additionally, the spectrometer employs advanced FPGA signal processing technology. This technology is responsible for processing the signals from the CCD sensor in real-time, which is crucial for maintaining a stable and reliable performance. The FPGA technology ensures that the spectrometer can handle complex data processing tasks efficiently, without compromising on accuracy or speed.

In summary, the SR100B spectrometer is a robust and adaptable device that is well-suited for a wide range of applications where high-performance spectral analysis is required. With its advanced CCD sensor, customizable settings, and cutting-edge signal processing technology, it stands as a top choice for professionals seeking precise and reliable spectral data.

#### Product Parameters:

Detector	Chip Type	Back-illuminated cooling Hamamatsu S10420
	Effective Pixel	2048*64
	Pixel Size	14*14μm
	Sensing Area	28.672*0.896mm
Optical Parameters	Optical Design	F/4 cross type
	Numerical Aperture	0.13
	Focal Length	100mm
	Entrance Slit Width	10μm,25μm,50μm,100μm,200μm (customizable)
	Fiber Interface	SMA905,free space
Electrical Parameters	Integration Time	4ms~900s
	Data Output Interface	USB3.0,RS232,RS485,20pin connector
	ADC Bit Depth	16-bit
	Power Supply	5V
	Operating Current	<3.5A
Physical Parameters	Operating Temperature	10 ~40
	Storage Temperature	-20 ~60
	Operating Humidity	<90%RH(no condensation)
	Dimensions	180mm*120mm*50mm
	Weight	1.2kg

#### List of Product Models:

Model	Spectral Range(nm)	Resolution(nm)	Slit(μm)
SR100B-G21	200~1100	2.2	50
		1.5	25
		1.0	10
SR100B-G23	200~875	1.6	50
SR100B-G24	350~1025	1.0	25
		0.7	10
SR100B-G28	200~345	0.35	50
		0.2	25
		0.14	10
SR100B-G25	532~720(4900cm <sup>-1</sup> )*	13cm <sup>-1</sup>	50
SR100B-G26	638~830(3200cm <sup>-1</sup> )*	10cm <sup>-1</sup>	25

SR100B-G27	785~1080(3200cm-1)*	11cm-1	50
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**Note:**The\*are primarily designed for Raman applications, with the corresponding Raman.

#### Technical Characteristics:

High sensitivity-Fitted with area array back-illuminated detector with high quantum efficiency,optimizable ultraviolet band  
 High resolution -Resolution<1.0nm@10μm (200~1100nm)  
 High flexibility-180~1100nm,compatible with multiple interfaces including USB3.0,RS232 and RS485  
 High reliability -Ultra-high SNR and excellent thermal

#### Typical Applications:

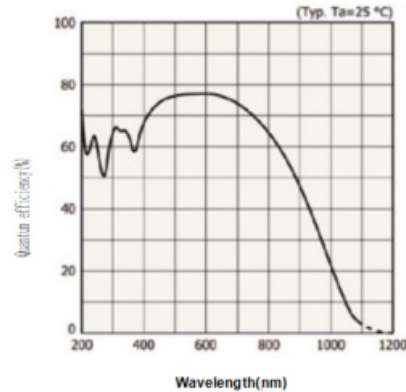
Detect absorption, transmittance and reflection Spectrum  
 Light source and laser wavelength characterization  
 OEM product module:Fluorescence spectrum,Raman spectrum,etc.

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CCD Quantum Efficiency Curve

#### Company Introduction:

JINSP Company Limited, abbreviated as "JINSP", is a professional supplier with over 17 years of experience in spectral detection technology products, including Raman, FT-IR, LIBS technologies, etc. After 17 years of technology accumulation, the company's core key technologies have reached the international leading position at the level, and the cumulative number of patent applications exceeded 200.

In addition to its main headquarters located in the bustling city of Beijing, JINSP has established a fully owned subsidiary manufacturing facility situated in the province of Jiangsu, China.

JINSP Company received ISO9001:2015, ISO14001:2015, and ISO45001:2018 certifications. JINSP can provide required certifications, such as certification by the Ministry of Public Security or National Institute of Metrology, Environmental Level Certification, IP Level Certification, CE Certification, Transport Identification Report, EU ECAC certification, German ICT Security Testing, etc.

# Company Profile





# Exhibition



# Certifications



## FAQ

Q1: This is the first time I use, is it easy to operate?

A1:We will send you manual and guide video in English,it can teach you how to operate the spectrometer.Also our technicians will offer professional technical operation meetings.

Q2:Can you offer a operation training?

A2:Your technicians can come to our factory for a training. Jinsp engineers can go to your place for local support ( installation , training, debugging, maintenance ).

Q3:What's your website?

A3:You can visit:[www.jinsptech.com](http://www.jinsptech.com)

Q4:What about your quality assurance?

A4:We have a quality inspection team. All goods will go through quality inspection before shipment. We can send you pictures for inspection.



JINSP

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