

## Research Grade SR100Q CCD Fiber Optic Spectrometer Ultra High Sensitivity

Our Product Introduction

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### Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE ISO9001
- Model Number: SR100Q
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: Customized Packaging
- Delivery Time: 50-70 working days
- Payment Terms: T/T, Western Union
- Supply Ability: 50PCS/50-70 working days



### Product Specification

- Detector: Back-illuminated TE-cooled Hamamatsu S7031
- Effective Pixel: 1024\*122
- Pixel Size: 24\*24μm
- Sensing Area: 24.576\*2.928mm
- Quantum Efficiency: QE92%peak@650nm,83%@232nm
- Spectral Range: 185~1100nm(can Be Customized)
- Resolution: 1.2~7.7nm(can Be Customized)
- SNR: 1000:1
- Highlight: **Fiber Optic Spectrometer Ultra High Sensitivity, Research grade Fiber Optic Spectrometer, Research grade fiber optic spectrum analyzer**



### More Images



## Product Description

### Research-grade SR100Q CCD Fiber Optic Spectrometer Ultra High Sensitivity Fiber Optic Spectrometer

The JINSP SR100Q spectrometer is meticulously integrated with the Hamamatsu S7031, a scientific-grade TE-cooled area array CCD chip, ensuring exceptional performance. This advanced spectrometer boasts a pixel size of up to  $24 \times 24 \mu\text{m}$ , coupled with an impressive quantum efficiency that reaches up to 92%. This remarkable quantum efficiency guarantees a high level of response in the ultraviolet band, thereby significantly enhancing the sensitivity and signal-to-noise ratio (SNR) of even the weakest signals. Furthermore, the SR100Q spectrometer is capable of delivering outstanding spectrum signals, all while maintaining stable and reliable performance. This is achieved through its sophisticated high-resolution optical path and the utilization of a low-noise, high-speed FPGA signal processing chip.

The CCD chip, which is cooled using thermoelectric (TE) cooling technology, greatly diminishes dark noise, making it an ideal choice for the detection of weak light in various scientific research applications. The SR100Q spectrometer is versatile, offering multiple spectrum ranges that cover a wide array of applications, including ultraviolet, visible light, and near-infrared bands. It is particularly well-suited for applications such as fluorescence, absorption, and Raman spectroscopy.

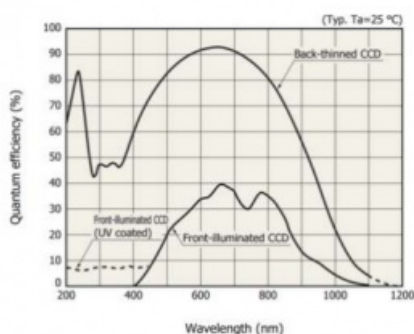
### Features:

- A peak quantum efficiency of 92% at 650nm and 83% at 232nm, ensuring high sensitivity across different wavelengths.
- A high SNR ratio, with ultra-low dark noise, reaching an impressive 1000:1, which allows for the detection of even the faintest signals with clarity.
- A low-noise and high-speed circuit design, featuring USB 3.0 connectivity, which enables rapid data transfer and integration into various systems.
- Capabilities for detecting absorption, transmittance, and reflection spectra, making it an invaluable tool for light source and laser wavelength characterization.
- An OEM product module that is highly adaptable, and suitable for a range of applications including fluorescence spectrum and Raman spectrum analysis.

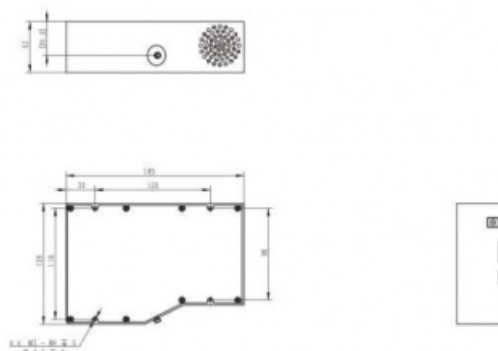
In summary, the JINSP SR100Q spectrometer, with its cutting-edge technology and robust features, stands as a premier choice for researchers and professionals seeking high-performance spectral analysis across a diverse array of scientific and industrial applications.

## Typical Applications

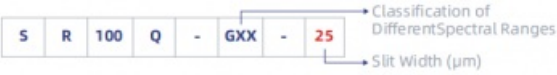
- ◆ Detect absorption, transmittance and reflection Spectrum
- ◆ Light source and laser wavelength characterization
- ◆ OEM product module: Fluorescence spectrum, Raman spectrum, etc.



CCD Quantum Efficiency Curve



List of Product Models

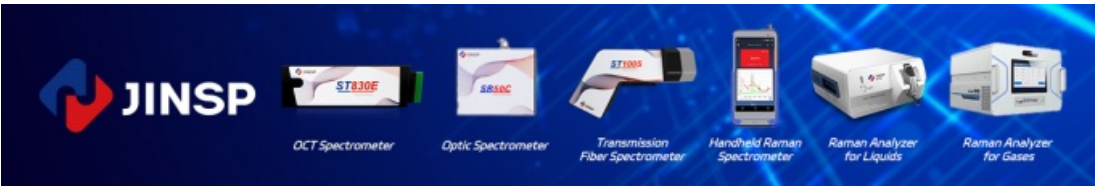


Model	Spectral Range (nm)	Resolution (nm)	Slit (μm)
SR100Q-G21	200~950	6.9nm	200μm
		2.5nm	50μm
SR100Q-G22	350~1100	1.7nm	25μm
		1.6nm	10μm
SR100Q-G23	200~775	1.9nm	50μm
SR100Q-G24	350~925	1.3nm	25μm
		1.2nm	10μm
SR100Q-G25	532~696(4400cm <sup>-1</sup> )	0.4nm/13cm <sup>-1</sup>	25μm
SR100Q-G26	644~800(3200cm <sup>-1</sup> )	0.4nm/9cm <sup>-1</sup>	25μm
SR100Q-G27	785~1030(3200cm <sup>-1</sup> )	0.6nm/9.1cm <sup>-1</sup>	25μm
		0.71nm/11cm <sup>-1</sup>	50μm

Note: The resolution value is a theoretical value, and a 20% deviation is allowed in practice.

Technical Parameters:

Product Attribute	Value
Spectrometer Type	SR100Q CCD Fiber Optic Spectrometer
Chip type	Area array back-illuminated refrigeration, Hamamatsu S7031
Focal length	≤100mm
Dimensions	180mm*120mm*50mm
Data output interface	USB3.0, RS232, RS485, 20pin connector
Entrance slit width	10μm ,25μm ,50μm ,100μm ,200μm
Weight	1200g



Applications:

- Absorption, transmittance and reflectance detection
  - Light source and laser wavelength detection
  - OEM product module:
- Fluorescence spectrum analysis
- Raman spectroscopy - petrochemical monitoring, food additive testing

# Company Profile



## FAQ:

**Q1: What is the brand name of this product?**

A1: The brand name of this product is JINSP.

**Q2: What is the model number of this product?**

A2: The model number of this product is SR100Q CCD Fiber Optic Spectrometer.

**Q3: Where is this product made?**

A3: This product is made in China.

**Q4: Is the price of this product negotiable?**

A4: Yes, the price of this product is negotiable.

**Q5: What are the payment terms for this product?**

A5: The payment term for this product is T/T.



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