

Modular Raman Spectrometer with VPH Holographic Grating and Deep-Cooling CCD for High-Sensitivity Gas Detection

Our Product Introduction

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Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE
- Model Number: ST90S
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: International Shipping Package
- Delivery Time: 60-70 working days
- Payment Terms: T/T, Western Union
- Supply Ability: 100 PCS/60-70working days



Product Specification

- Wavelength Range: 540nm~686nm Corresponds To 260~4200cm⁻¹
- Grating Type: VPH Volume Holographic Transmission Grating
- Diffraction Efficiency: >85%
- Dimensions: 348.7mm×222.8mm ×126mm
- Weight: <6kg (including Camera)
- Fiber Length: Φ10mm Multi-core Optical Fiber
- Integration Time: 1ms-60s
- Power Supply: 12V DC



More Images



Product Description

ST90S Raman Transmission Imaging Spectrometer

With its VPH holographic grating (90% efficiency), the JINSP transmission spectrometer achieves exceptional sensitivity—5x greater than reflective systems. Its precision optics double standard resolution while maintaining high stability. The included deep-cooling CCD offers excellent SNR and quantum efficiency in a compact, industry-ready design.

Ideal for 532nm Raman systems, the ST90S delivers superior gas detection capabilities. Its 4200 cm^{-1} range and 4 cm^{-1} resolution provide precision matching large research spectrometers in a compact design.

Technical Parameters:

	Performance Indicators	Parameters
Detector	-	See model table for details
Optical Parameters	Wavelength Range	ST90S1: 540nm~686nm corresponds to 260~4200 cm^{-1} ST90S2: 532nm~670nm corresponds to 0~3850 cm^{-1}
	Optical Resolution(ST90S1)	0.25nm, corresponds to 8 cm^{-1} (50 μm slit) 0.14nm, corresponds to 5 cm^{-1} (25 μm slit)
	Grating Type	VPH volume holographic transmission grating
	Diffraction Efficiency	>85%
	Fiber Interface	SMA905 or Φ 10mm multi-core optical fiber
	Numerical Aperture	0.25
Electrical Parameters	Integration Time	1ms-3600s
	Data Output Interface	USB2.0
	ADC Bit Depth	16-bit
	Power Supply	DC12V (ST90S1~ST90S4) DC5V (ST90S5)
	Operating Current	3A (typical value 2A)
	Operating Temperature	-20°C ~60°C
	Storage Temperature	-30°C ~70°C
	Operating Humidity	<90%RH (no condensation)
Physical Parameters	Dimensions	348.7mm × 222.8mm × 126mm
	Weight	<6kg (including camera)

Product Model List:

Product Model	ST90S1	ST90S2	ST90S3	ST90S4
Detector Brand or Model	AndoriVac 316	PI PIXIS 100BX	Raptor261FI	Raptor261BI
Chip Type	Deep depletion of back illuminated	Back illuminated	Front illuminated	Back illuminated
Quantum Efficiency	80%@600nm	90%@600nm	45%@600nm	80%@600nm
Number of Pixels	2000*256	1340*100	2048*256	2048*256
Pixel Size (μm)	15*15	20*20	15*15	15*15
Image Area (mm)	30*3.8	26.8*2.0	30*3.8	30*3.8
Cooling Temperature ()	-70	-80	-70	-70
* Customization available for other ranges				

Technical Characteristics:

Highly Stable No adjustable components, applicable to labs and industries

High Flux High flux, numerical aperture is 0.25

High Diffraction Efficiency VPH grating, diffraction efficiency up to 90%

Support Multiple Channels Compatible with SMA905 optical fiber and Φ 10mm multi-core optical fiber input interface

Applications:

The JINSP ST90S spectrometer is perfect for a variety of application occasions and scenarios. It has a wavelength range of 540nm~686nm, which corresponds to 260~4200cm⁻¹. The product category is fiber optic spectrometers, and it weighs less than 6kg (including camera). The numerical aperture is 0.25, and the integration time ranges from 1ms-3600s.

One of the most common scenarios where the JINSP ST90S is used is in 532 Confocal Raman microscopy. This technique is used to study the chemical and structural properties of molecules. The ultra-high resolution spectrometer makes it possible to detect even the smallest signals with great precision, which is essential for this type of research.

Overall, the JINSP ST90S is a versatile and reliable spectrometer that can be used in a variety of applications. Its ultimate sensitivity and high resolution make it a valuable tool for researchers and scientists who need to study the properties of molecules in great detail.

Transmission Imaging Spectrometer

Ultimate sensitivity Ultra-high resolution

ST90S



Technical Characteristics



Highly Stable

No adjustable components, applicable to labs and industries

High Flux

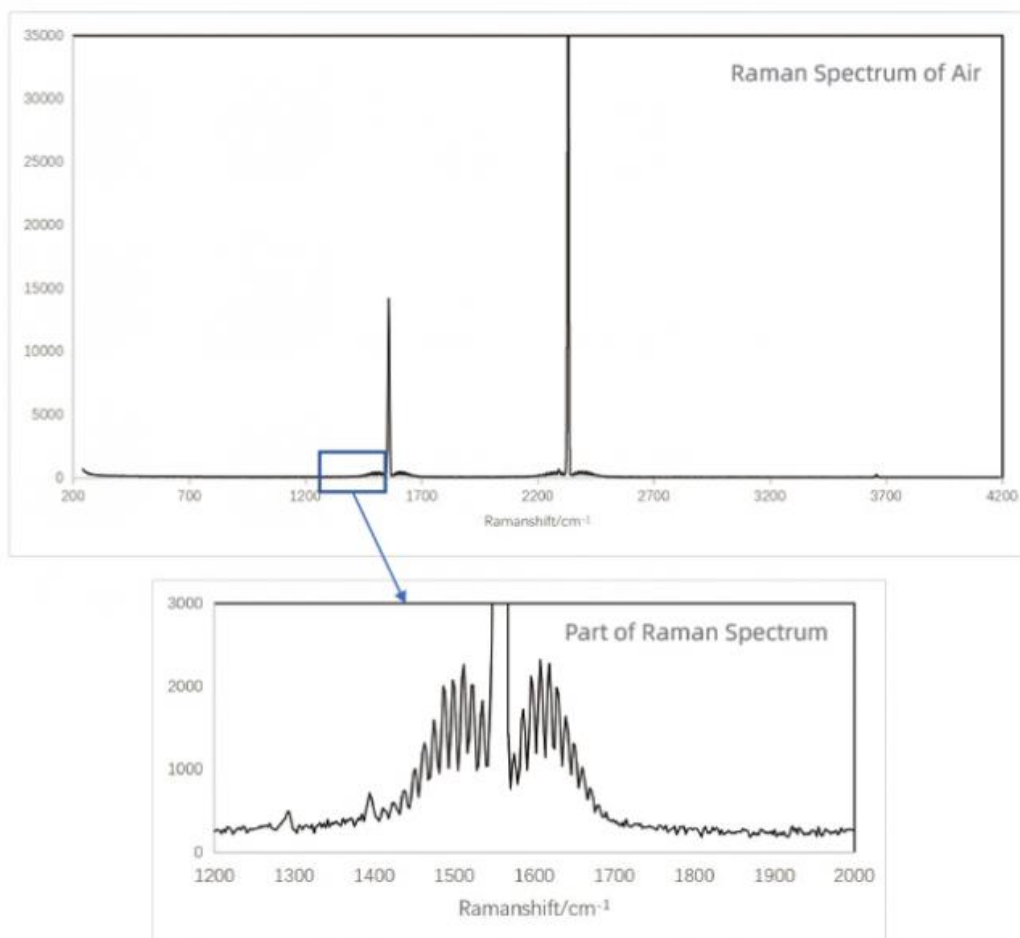
High flux, numerical aperture is 0.25

High Diffraction Efficiency

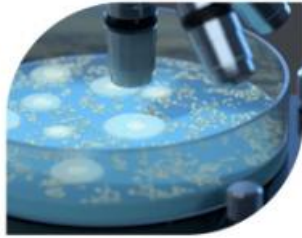
VPH grating, diffraction efficiency up to 90%

Support Multiple Channels

Compatible with SMA905 optical fiber and $\Phi 10\text{mm}$ multi-core optical fiber input interface



Technical Features



Research-grade Raman spectroscopy detection system

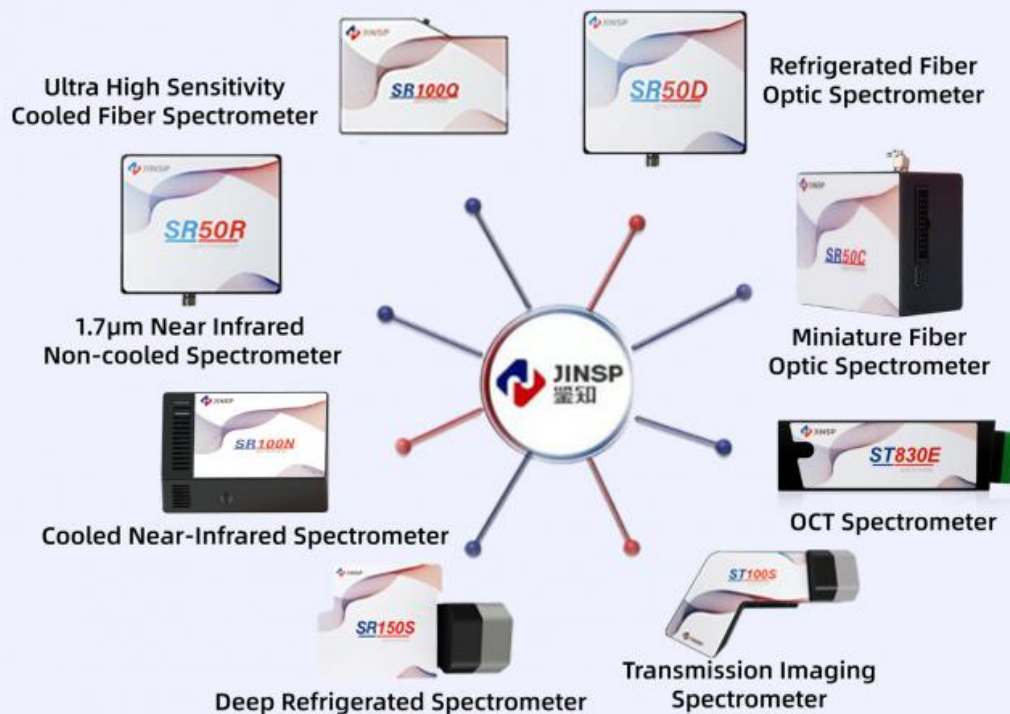
532 Confocal Raman microscopy



Integration of industrial Raman system

Capable of online gas detection and process analysis

Spectrometer Series



Packing and Shipping:

The High-Throughput Transmission Fiber Spectrometer comes in a sturdy cardboard box to ensure safe delivery.

Package



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.

JINSP offers over twenty spectroscopic products across various fields, including pharmaceutical and chemical industries, public security, and customs. Products are available nationwide and are exported to over 30 countries, with cumulative sales exceeding 3,000 units.

Benefit from 30+ R&D engineers, including 4 Ph.D., JINSP is deeply rooted in the field of personalized product customization, and is committed to meeting the diverse and unique needs of customers with excellent professional technology and innovative design capabilities.

Company Profile





FAQ:

1. What is the brand name of the product?
JINSP is our brand name.

2. What is the model number of the product?
ST90S Transmission Imaging Spectrometer.
3. What is the minimum order quantity for the product?
The minimum order quantity is 1 PC.
4. What are the payment terms for the product?
The payment terms are T/T and Western Union.
5. What is the delivery time for the product?
The delivery time is 60-70 working days.



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