NWSPEC (Xiongan) Co., Ltd.
Add. 15-051# Xiongan Pilot
FreeTrade Zone Area, Hebei,

NWS6000 Spectrometer

NWS6000: The High-Resolution Spectrometer You Can Scale

The NWS6000 series offers unmatched flexibility: combine multiple units to cover your precise wavelength range, all while maintaining high spectral resolution. Its long optical path, high-groove density grating, and synchronized multi-channel operation deliver the performance of a large benchtop system in a compact, customizable form factor.

Features

- **Ultra-High Resolution:** Distinguishes closely spaced wavelengths for detailed spectral analysis.
- **Flexible Configuration:** Modular design allows customization with different gratings, detectors, and light sources.
- **High-Speed Data Acquisition:** Captures rapid spectral changes for dynamic measurements.
- **Synchronous Control**: Precisely coordinates measurements with external devices or events.
- **Low Stray Light:** Minimizes unwanted light for accurate quantitative analysis, especially with weak signals.
- **Low Temperature Drift:** Ensures stable and reliable performance under varying temperatures.

Resolution

Wavelength Range	Wavelength Resolution (nm)	30μm slit	40μm slit	50μm slit	60μm slit	70μm slit	100μm slit	150μm slit	200μm slit
200-330nm	0.06	0.3	0.45	0.5	0.6	0.7	1.08	1.5	2.2
200-500nm	0.19	0.7	1	1.2	1.4	1.9	2.7	3.85	5.5
380-800nm	0.25	0.9	1.1	1.2	1.85	2	3.5	5.5	7.2
800-900nm	0.07	0.4	0.45	0.5	0.75	0.9	1.3	1.5	2.5

Application

- Laser Peak Detection
- Gas Absorption Detection
- Raman Spectroscopy Applications
- Environmental Monitoring
- Material Composition Analysis

- Metrology Instrument Applications
- Metal Composition Analysis
- Biological Research
- Gemstone Identification
- LIBS (Laser-Induced Breakdown Spectroscopy),
- Plasma Emission Detection

Specification

Items	Specification
Wavelength Range	200~1100 nm (Depending on model)
Wavelength Resolution	Up to 0.03 nm
Optical Resolution	Up to 0.10 nm FWHM (Depending on model)
Higher-Order Diffraction Filter	Adds higher-order diffraction filter (Optional)
Stray Light	< 0.1 %
Detector	
Detector Type	Hamamatsu CMOS linear array sensor
Detector Wavelength Range	200~1100 nm
Pixel Count	2048 pixels
Pixel Size	14 μm x 200 μm
High Sensitivity	1300 V/(lx*s)
Max Speed	10 MHz
Optical Platform	
Optical Path	F/4, Symmetrical Crossed Czerny-Turner
Focal Length	100 mm / 110 mm
Input Slit	Regular 30 μm (Optional)
Optical Fiber	SMA905 0.22 NA
Electrical Specification	
Signal-to-Noise Ratio	1000:1
Linearity	> 99.8 %
Integration Time	0.1 ms - 1 s
Dynamic Range	1000000
AD	Lossless 16-bit
Testing Speed	2.8 ms + Integration Time
Communication Interface	USB 2.0 / RS232 / RS485
Expansion Interface	16-PIN external expansion interface; with external trigger function
Power Consumption	300 mA @ 5 VDC
Physical Specification	
Supported Systems	Windows / Android / Linux / Wince
Dimensions (L x W x H)	157 mm x 110 mm x 50 mm
Weight	1150 g
Fixing/Mounting	3-Direction Standard Mounting Holes