

NWS2000 Spectrometer

Description

Powerful spectral analysis in a compact form factor with the NWS2000. Designed for easy integration into portable devices and equipment with limited space, this miniature spectrometer combines exceptional optical and electrical performance with NWSPEC Technology's proprietary chromaticity dynamic library algorithm. Delivering measurement parameters that meet or exceed international standards, the NWS2000 provides a clear performance advantage over competing solutions.

Application

Color Science: Spectrophotometric radiometry, handheld color difference meters, specular colorimeters, color luminance meters, color detection.

Light Measurement: Portable photometers.

Environmental Monitoring: Environmental inspection.

Integrated Systems: Integration of confined space equipment.

Features

Miniature Design: Small and lightweight for effortless integration into portable and handheld devices – ideal for field applications.

Broad Application Coverage: Rich functionality to address a wide range of spectroscopic needs, from basic measurements to advanced analysis.

Rapid Data Acquisition: Quick sampling ensures fast and efficient spectral capture.

Simplified Integration: Comprehensive dynamic link library (DLL) for seamless integration with existing systems.

Advanced Color Analysis: A dedicated color dynamic link library empowers sophisticated colorimetric measurements.

Exceptional Stability: Low drift design guarantees consistent and reliable performance over extended periods.

Cost-Optimized Solution: Provides outstanding performance and versatility at a highly competitive price point.

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μ m slit	40 μ m slit	50 μ m slit	60 μ m slit	70 μ m slit	100 μ m slit	150 μ m slit	200 μ m slit
200-500nm	0.22	1.00	1.10	1.20	1.40	1.60	2.10	3.20	4.20
200-850nm	0.45	2.00	2.20	2.30	2.70	3.20	4.20	6.40	8.40
350-1100nm	0.61	3.20	3.40	3.60	4.00	4.30	5.60	8.30	11.2

Note: Optical resolution is based on FWHM at 435.8 nm.

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Spectral Specification

Spectral Range: 200-1100nm
Spectral Resolution: Maximum 0.22 nm
Optical Resolution: Maximum 1.00nm FWHM
Higher-Order Diffraction: Add a high-order diffraction suppression filter
Stray Light: <0.1%
Detector:

Detector Model: Hamamatsu CMOS linear array sensor

Spectral Detection Range: 200~1100nm

Pixel: 2048 pixels

Pixel Size: 14*200um

High Sensitivity: 1300V(Ix*s)

Fastest Speed: 10M

Optical Specification

Optical Path: F/4, symmetrical cross Czerney-Turner optical path

Focal Length: 40mm; 60mm

Incident Slit: Standard 70um (optional)

Optical Fiber: SMA905 0.22NA

Electronical Specification

Signal-to-Noise Ratio: 750:1

Linearity: >99.8%

Integration Time: 0.1ms~1s

Dynamic Range: 500000

AD: No distortion 16-bit

Test Speed: 2.8ms + integration time

Communication Interface: USB 2.0, RS232, RS485

Power Consumption: 10-pin expansion interface; with external trigger function



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

Cooling:	300mA@5VDC
Other Characteristics	
Support System:	Windows, Android, Linux, Wince
Dimensions:	80mm*63mm*34mm
Weight:	320g
Fixed:	3-direction standard installation holes