

Nano Spectrophotometer UM Series



- Touchscreen Pad interface. Multi-interface design with automatic Bluetooth connection. Real-time data monitoring and automatic performance optimization. Software-aided fault inspection and localization.
- Equipped with multi-color status indicators: blue for ongoing self-test, yellow for standby/preheating, green for normal operation and red for faults such as abnormal light source; colors clearly identify equipment status.
- Support one-click switching between microvolume mode and cuvette mode without additional disassembly/assembly of accessories, truly enabling one instrument to cover analysis from microvolume to regular samples and reducing equipment purchase costs.
- Optimize pre-set program calling to support one-click startup and preloading of frequently-used programs, simplifying operation steps and shortening test startup time.
- Adopts long-life xenon lamp paired with high-pixel linear CMOS sensor, covering a wavelength range of 200–900 nm with high wavelength accuracy. Its absorbance ranges from 0 to 600 Abs (equivalent to 10 mm optical path for some models). Single measurement can be completed within 5 seconds with excellent test repeatability.
- It integrates internationally cutting cutting-edge-edge optical sensing technology and advanced signal processing algorithms. The core light-detecting components use quantum-level sensitive materials, enabling ultra-high sensitivity in capturing photons and accurate analysis of subtle changes in light when passing through samples.
- In case of instrument failure or abnormal test results, it supports real-time push of SMS and emails to notify users. The instrument records application errors, abnormalities, warnings or informational messages in real time.
- The operating software has 21 CFR function, with user roles divided into three types: system administrator, administrator and operator, each with distinct operational permissions for the instrument.
- Cloud interconnection function: The IoT platform enables real-time monitoring and remote control of the instrument, as well as data upload, storage, viewing and sharing on APP, computer and other devices anytime and anywhere.

Features:

- Minimal sample volume required, UV-Vis Full-Wavelength Scanning.
- No preheating required, testable at any time.
- Fast detection speed, Display the concentration value directly
- The sample does not need to be diluted, Data statistics software is easy to master and use.

Specifications:

Model	UM-100	UM-110
Optical Path	1mm	
Light Source	Xenon Lamp (7-year lifespan)	
Detector	1024 (CMOS) linear image sensor	2048 (CMOS) linear image sensor
Wavelength Range	200-900nm	
Wavelength Accuracy	±2.0nm	
Wavelength Repeatability	±1.0nm	
Nucleic acid measurement range	2-750ng/μl	
Protein Measurement Range	1-15mg/ml	
Detection Time	< 5s	

Features:

- Built-in optical fiber prevents fiber breakage caused by external collision, which would otherwise lead to inaccurate

measurement results.

- Data Output Ports: Equipped with multiple data interfaces for free export of test data.
- The software enables remote operations.
- The standard curve features multiple fitting functions: linear, interpolation, second-order polynomial and third-order polynomial.
- Customized modules such as full-wavelength scanning, standard curve quantitative analysis, kinetic module, and photometric measurement.

Specifications:

Model	UM-200	UM-220	UM-300	UM-330
Optical Path	1mm/0.5mm/0.05mm (Manual)	1mm/0.5mm/0.05mm (Auto)	1mm/0.4mm/0.1mm/0.04mm/0.02mm (Auto)	
Light Source	Xenon Lamp (10-year lifespan)			
Detector	2048 (CMOS) linear image sensor		4096 (CMOS) linear image sensor	
Wavelength Range	200-900nm		200-900nm	
Wavelength Accuracy	±1.0nm		±1.0nm	
Wavelength Repeatability	±0.5nm		±0.5nm	
Absorbance Range	Ultra-micro Mode: 0-600Abs (@10mm) Cuvette Mode: 0-3Abs (@10mm)			
Nucleic acid measurement range	2-15000ng/μl (dsDNA)		1-37500ng/μl (dsDNA)	
Protein measurement range	1-400mg/ml (BSA)		1-1120mg/ml (BSA)	
Nucleic acid detection module	dsDNA, ssDNA, RNA, User-Setting, oligoDNA, oligoRNA, and Gene Chip Module			
Protein detection module	A280, Polypeptide, Protein Chip, BCA, Bradford, Lowry, and Pierce 660 Module			
OD600 Module	Cell fluid testing module			
Cuvette Wavelength Range	/	200-900nm	/	200-900nm
Cuvette Specifications		1mm/2mm/5mm/10mm		1mm/2mm/5mm/10mm
Cuvette Type		Micro reusable cuvette		Micro reusable cuvette

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