DRAWELL
Artist of Science

Nano Spectrophotometer

DW-K5500 DW-K5500C DW-K5500F



Specifications

Technical Parameters	
★Optical path	Ultra-Micro Module:1mm、0.2mm、0.1mm、0.03mm、0.02mm (automatic optical path switching); Cuvette Module: 10mm, 5mm, 2mm, 1mm
Volume requirements	Ultra-Micro Module: 0.3～2μL Cuvette Module: Volume≥1000μL (for 10mm optical path standard cuvettes) or liquid height ≥8.5mm;
Light Source	Ultra-Micro Module: Long-life pulsed xenon flash lamp (10^9 flashes); Cuvette Module: Long-life pulsed xenon flash lamp (10^9 flashes)
Detector	Ultra-Micro Module: 3864-element linear siliconized CCD array; Cuvette Module: 3864-element linear siliconized CCD array
Detection Wavelength Range	Ultra-Micro Module: 220～800nm Cuvette Module: 220～800nm
Wavelength Accuracy	Ultra-Micro Module: ±1nm Cuvette Module: ±1nm
Wavelength Resolution	Ultra-Micro Module: ≤2nm (FWHM at Hg 254nm); Cuvette Module: ≤2nm (FWHM at Hg 254nm)
Detection Repeatability	Ultra-Micro Module: ≤0.002A (1mm optical path) or ≤1%CV, whichever is larger; Cuvette Module: ≤0.002A (1mm optical path) or ≤1%CV, whichever is larger;
Absorbance Accuracy	Ultra-Micro Module: ≤1% (0.988 absorbance at 257nm) Cuvette Module: ≤1% (0.988 absorbance at 257nm)
Absorbance Range	Ultra-Micro Module: 0～300 Abs
★Concentration Measurement Range	Ultra-Micro Module: 2～15000 ng/μL (dsDNA); 0.06～447mg/mL (BSA);
Detection Time	Ultra-Micro Module: Less than 3 seconds Cuvette Module: Less than 3 seconds

Ultra-Micro Module：Equipped with automatic measurement and automatic zero-adjustment functions; instant detection is achievable by lowering the detection arm.

Cuvette Module： Equipped with automatic measurement and automatic zero-adjustment functions; instant detection is achievable by

lowering the detection arm

★Cuvette Detection Module Includes: Nucleic Acid Detection Module, Protein Detection Module, OD600 Module, Full Wavelength, Standard Curve, Kinetics.

★Flexible Kinetics Module: Supports kinetic detection in 5 stages, with customizable delay time, interval time, and number of detections for each stage.

Functional Parameters	
Ultra-Micro Module	dsDNA, ssDNA, RNA, User-defined, oligoDNA, oligoRNA, A280, BCA, Bradford, Lowry, Pierce 660, UV-VIS, Standard Curve Method
Cuvette Module	dsDNA, ssDNA, RNA, User-defined, oligoDNA, oligoRNA, A280, BCA, Bradford, Lowry, Pierce 660, OD600, UV-VIS, Standard Curve Method, Kinetics
Fluorescence Module	dsDNA, RNA, microRNA, RNA IQ, ssDNA, Protein Quantitation Kits, Ion Sphere, Fluorometer, Standard Curve, Kinetics.
Hardware Parameters	
Display	8-inch touch screen, multi-point capacitive touch
Operating System	LINUX
Supported Languages	9 languages including Chinese, English, French, German, Arabic, Spanish, Russian, Japanese, and Korean;
Data Output	Supports USB data export and Ethernet connection
Data Output Ports	2 USB-A ports, 1 Type-C port, 1 HDMI port, and 1 Ethernet port, enabling connection with various devices such as mice, keyboards, and desktop computers;
Data Storage	Measurement results are automatically saved in spreadsheet format and can be exported via USB.
Other Parameters	
Instrument Dimensions (L*W*H)	230mm×320mm×190mm
Instrument Weight	4 kg
Operating Conditions	Temperature10～45℃; Humidity: Below 85%
Operating Voltage	24V 2.5A 60W

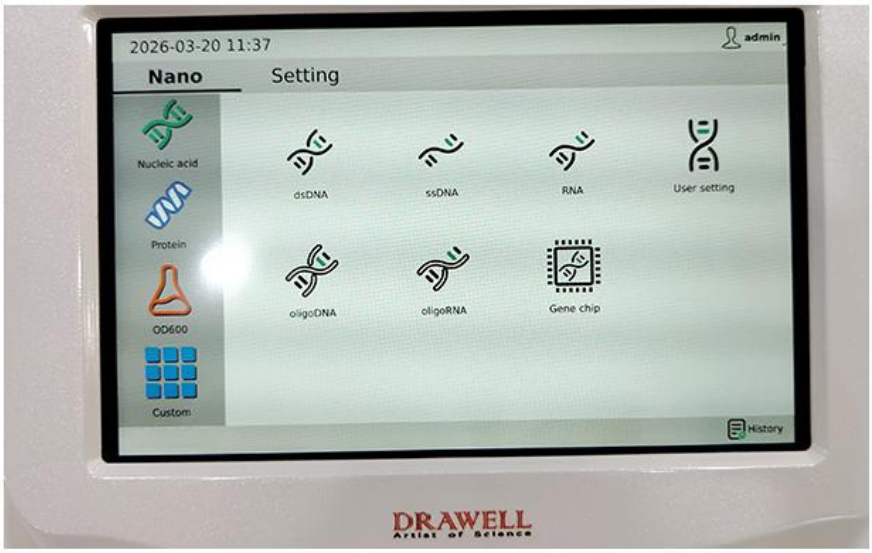
Fluorescence

Light source	Blue LED、 Red LED
Excitation filters	Blue excitation 430~495nm, Red excitation 590~640nm
Shutter filter	Green emission 510~580nm, Red emission 660~725nm
Detector	Photodiode (320~1100nm)
Sample throughput	1 sample;
Sample volume	1-20 μL
Tube type	0.5ml PCR tube
Tube Loading volume	≥100 μL
Preheating time	No preheating required
Measurement speed	≤3s/tube
Linearity	R^2>0.995
Linear range	≥ 5 orders of magnitude
Built-in Reagent Calculator: Calculates the required amounts of dye and buffer for working solutions;	

Includes Fluorometer Mode: Directly measures the fluorescence intensity of samples;
Includes Ion Sphere Mode;
★Includes Fluorescence Standard Curve Module: Allows free selection of excitation and emission light sources, curve types, standard sample volume, and total reagent volume;
★Includes Fluorescence Kinetics Module: Supports customization of delay time, interval time, and number of detections for up to 5 stages.

Model	DW-K5500	DW-K5500C	DW-K5500F
Ultra-Micro Module	√	√	√
Cuvette Module	/	√	√
Fluorescence Module	/	/	√
Automatic detection	√	√	√

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History
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