C-7100/7200 Series



Introduction

Steady, modern and elegant appearance design. Adopt the newest microcomputer technology and electronic control system. Optimized optical system and structure can both extend new functions and ensure the accuracy, stability and durability.

Main Features

- 7 inch TFT screen and long life, more comfortable and sensitive silicone buttons. The instrument can show various scanning curves and charts for users to complete various tests without computers.
- Support USB storage and different data formats such as Excel, txt and image (PC software). Users can output test data to flash memory, open and edit them on computers directly without any auxiliary software.
- Advanced hardware and 32-bit Cortex_M3 processor with the clock speed 120MHz. The equipment can store 5000 pieces of data and 500 curves.
- High-efficiency holographic grating of 1200 lines/mm and low stray light.
- The equipment has long-life socket type tungsten-halogen and deuterium lamps which can work up to 2000 hours, can switch the lamps according to test needs and record its working time automatically. Socket type lamps make the replacement much easier.
- Excellent silicon photodiode can guarantee the equipment is highly sensitive and stable.
- · Huge sample chamber and various accessories can meet all kinds of needs.
- · Can be connected to printer directly and output test charts and data.
- Powerful PC software.
- Standard RS232,USB(A) and USB(B) port.

C-7100/7200 Series

Specifications

MODEL	C-7100	C-7100S	C-7100A	C-7200	C-7200S	C-7200A	
Display	7 inch TFT 7				7 inch TFT		
Keyboard Control	Silicone Buttons			Silicone Buttons			
	Ę	Single Beam			Double Beam		
Optical System	Holographic grating, 1200 lines/mm						
Slit Width	2nm	1nm	0.5,1,2, 4nm	2nm	1nm	0.5,1,2, 4nm	
Wavelength Range			190 - 1	100nm	-		
Wavelength Accuracy			±0.1	3nm			
Wavelength Repeatability			≤0.2	2nm			
Photometric Accuracy	0.	2%T (0-100%	6T), ±0.002A	(0-0.5A), ±0.	004A(0.5-1A	N)	
Photometric Repeatability	≤0.15%T (0-100%T), 0.001A(0-0.5A), 0.002A (0.5-1A)						
Stray Light	≤0.03%T@220nm, 360nm						
Stability	±0.002A/h@500nm						
Photometric Range	0-200%T, -0.3-3.0A, 0-9999C(0-9999F)						
Baseline Flatness	±0.002A (200-1000nm)						
Noise	0.0003A@500nm						
Working Mode	T,A,C,E						
Wavelength Setting	Automatic						
Scanning Speed	Low, Medium, High (up to 3000nm/min)						
Detector	Solid Silicon Photodiode						
Light Source	Tungsten Halogen/Deuterium Lamp						
Data Output	RS232 Serial, USB Drive, USB HOST						
Processor			Cortex_I	//3, 120Mhz			
Power Requirements			AC 110-22	0V 50-60Hz			
Shipping Dimensions and Weight		0*340mm ?7kg	880*690*530mm 45kg)*340mm 7kg	880*690*530mm 45kg	

UI Design (Silicone Buttons)

hotometry	546.0 nn	n	0 Energy
Wavelength Absorbtion	(Abs) Transmittance(%T)En	ergy(Samp.) Ener	gy(Ref.) Test Time
	The second state of the se		
<pre></pre>	@Energy	_	
Absorbtion(Abs)	Gain ┥ Gain	8 🕨	
Transmittance(%T)	Sample Beam	0	
Energy 🗹	Reference Beam	0	

Photometry

There are three test modes. Absorbance, transmittance and energy.



Quantitative Measurement

To test sample solution concentration, you can choose different methods like coefficient, standard curve, linearity, linearity through zero and quadratic. Up to 15 standard samples can be used to create a curve. Advanced arithmetic makes curvilinear regression more precise and test data more accurate.

∦ Kinetiα	s		546.0	nm		Abs	
3.000							
2.5 Kinet	ties	Sean	Setup				
	n Setup ord List	Test	Time		180	Seconds	
	pe Calculate	Test	Node	•	Absorbtio	n(Abs)	
Absorbtion(Abs 1.0		Top S	Scale		3.000	Abs	
(Ab ₅ 1.0		Botto	om Scale		-0.300	Abs	
0.5		. Time	Interval	•	1 Seco	ond 🕨	
		Smoo	th Data		Smooth D	ata	
-0.3		-					180
			Time	(s)			

Kinetics Measurement(Time Scanning)

To test the sample chemical reaction process by fixed time scanning the sample solution with fixed wavelength. The equipment can calculate its changing rate after entering the corresponding parameters.

₩Wavelength Scan	546.0 nm		Abs
3.000			
2.5 Wavelength Scan	Scan Setup		
Scan Setup	Start Wavelength	190.0	າກ
2.0 Look Up Peak	End Wavelength	1100.0	13m
Baseline	Test Mode	Absorbtion(Abs)	▶
Baseline 1.5 Record List 1.0	Top Scale	3.000	Abs
2 2	Bottom Scale	-0.300	Abs
	Wavelength Interval ◀	l 1nm	▶
0.5	Scan Speed 🚽	Normal Speed	
	Smooth Data	🖌 Smooth Data	
-0.3	Wavelength(nm)		1100

Wavelength Scanning(Qualitative Test)

To test sample solution absorbance peak, can scan the sample characteristic curve of any wavelength range between 190 and 1100nm. You can look up the peak value on the standalone device.

⊾Multi Wave	length	546.0 nm		Abs
o. 400.0	450.0	500, 0		Result
	⊚Multi Wavele	ıgth		_
	Wavelength No. ◀	Three Wavelength	•	
	No.	Wavelength(nm)	Factor	
	Wavelength 1	400.0	1.000	
	Wavelength 2	450.0	1.000	
	Wavelength 3	500.0	1.000	

It is much more convenient for users to test the absorbance of several wavelengths for the same sample solution, which is much simpler than single wavelength testing.

Multi Wavelength Measurement

otein/DNA		546.0 חי			Abs
Abs(26	0.0) Abs(280.0)	Abs(320.0)	Ratio	Conc. (DNA)	Conc. (Protein
8	⊖Protein/DNA	Test			100
					100
	Test Mode	Mode 1	•		
	Formula(DNA) DNA	= (A260-A320) x62	2.9-(A280-	A320) x36	L
	Formula(Pro.) Pro	o. = (A260-A320) x1	552-(A280	-A320) x757. 3	
1	Wavelength 1 =	260.0	nm		
	Wavelength 2 =	280.0	nm		
	Ref. Wavelength =	320.0			
	Coefficient $1 =$	62.90			
	Coefficient 2 =	36.00			
	Coefficient 3 =	1552			
	Coefficient 4 =	757.3			

There are two test modes and formulas based on absorbance ratio 260nm/280nm or 230nm with substracted absorbance at 320nm.

DNA/Protein Measurement