



# Spectrophotometers

Variety & Reliability

PEAK Instruments Inc.

# About Us

PEAK Instruments Inc. is located in Houston, TX-77084, where our head office and warehouse are also located, which is a high tech enterprise integrated with R&D, production, sales and service of spectrophotometers, pH/conductivity/DO/ion meter, electrode, balance colorimeter and turbidity meter, which have wide applications in the following areas: metallurgy, pharmacy, food, health, institutes, biological chemistry, life science, petrochemical industry, quality control, environmental protection, electrochemistry and water quality analysis, etc..

We adopt the newest microcomputer technology and electronic control system, optimize optical system and structure which can both extend new functions and ensure the accuracy, sensitivity, stability and durability. We have full ranges of spectrophotometers like UV, visible, single beam, double beam, adjustable slit, xenon and big capacitive touch screen with high resolution (1024\*600) and high sensitivity, and many kinds of electrochemical & water quality analyzers.

We have professional teams for management, R&D, production, QC, sales and technical support, which make sure to provide excellent products, good prices and efficient service for our global customers. Our factory has obtained 46 patents and CE, ISO9001, ISO14001 certificates driven by innovation and joint efforts of all staff.

**We** continuously absorb new ideas, promote product quality and improve our service in accordance with the concept of Innovation, quality and service. We have steady growth and good reputation in the markets of more than 30 countries, like USA, Canada, Mexico, Spain, Poland, Turkey, Russia, Argentina, Brazil, Chile, Peru, Ecuador, India, Indonesia, Pakistan, Korea, Saudi Arabia and South Africa.



- ◆ Our Promise  
Answer customers and provide solutions within 24 hours.
- ◆ Our Mission  
Provide high quality products and services.
- ◆ Our Vision  
To be a well-known brand for analytical instruments.

PEAK Instruments Inc. looks forward to cooperating with you.

# E-1000 Series



## Introduction

- ◆ Smooth appearance design
- ◆ Ingenious color assortment
- ◆ White backlit LCD screen
- ◆ Oval buttons
- ◆ Easy parameter setting and microprocessor make the operation more convenient

## Main Features

- 70\*40 mm backlit LCD screen can show complete parameters like T,A,C,K.
- Calibrate 0%A and 100%T automatically.
- Large sample compartment can hold various cells from 5mm to 100mm and meet different test requirements.
- RS232 output port and professional analysis software UV-PRO1.0 with the functions of quantitative analysis.
- Automatic lamp switches and manual wavelength setting.
- Save and read out the test data and values of K and B.

# E-1000 Series



## Specifications

MODEL	E-1000V	E-1000UV
Display	70*40mm backlit LCD	
Wavelength Range	320 - 1020nm	190 - 1020nm
Slit Width	4nm	
Wavelength Accuracy	±2nm	
Wavelength Repeatability	≤1nm	
Photometric Accuracy	0.5%T	
Photometric Repeatability	0.2%T	
Stray Light	≤0.15%T@360nm	
Stability	0.002A@500nm	
Output Port	RS232	
Light Source	Tungsten Halogen Lamp	Tungsten Halogen/Deuterium Lamp
Power Requirements	110-220V, 50-60Hz	
Photometric Range	0-200%T, -0.3-3A, 0-9999C(0-9999F)	
Shipping Dimensions And Weight	530*460*320mm, 9 kg	

# C-7000 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.
- 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.
- Standard RS232,USB(A) and USB(B) port.
- High-efficiency holographic grating of 1200 lines/mm and low stray light.
- The equipment has long-life socket type tungsten-halogen and deuterium lamps , 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 can realize scanning function.

# C-7000 Series

## Specifications

MODEL	C-7000V	C-7000UV
Display	7-inch TFT screen	
Wavelength Range	320 - 1100nm	190 - 1100nm
Slit Width	2nm	2nm
Wavelength Accuracy	±0.3nm	±0.3nm
Wavelength Repeatability	≤0.2nm	
Photometric Accuracy	0.3%T (0-100%T), ±0.002A(0-0.5A), ±0.004A(0.5-1A)	
Photometric Repeatability	≤0.15%T (0-100%T), 0.001A(0-0.5A), 0.002A(0.5-1A)	
Stray Light	≤0.05%T@220 nm, 360nm	
Stability	±0.002 A/h@500nm	
Baseline Flatness	±0.002A	±0.002A
Noise	±0.0005A	
Working Mode	T,A,C,E	
Wavelength Setting	Automatic	
Photometric Range	0-200%T, -0.3 - 3A, 0-9999C(0-9999F)	
Detector	Solid Silicon Photodiode	
Software	Optional with scanning function	
Printer	Optional	
Keypad	Silicone Buttons	
Data Port	USB	
Light Source	Tungsten Halogen Lamp	Tungsten Halogen/Deuterium Lamp
Power Requirements	110-220V, 50-60Hz	
Humidity Range	Less than 85%	
Shipping Dimensions and Weight	770*630*340mm, 27kg	

# 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

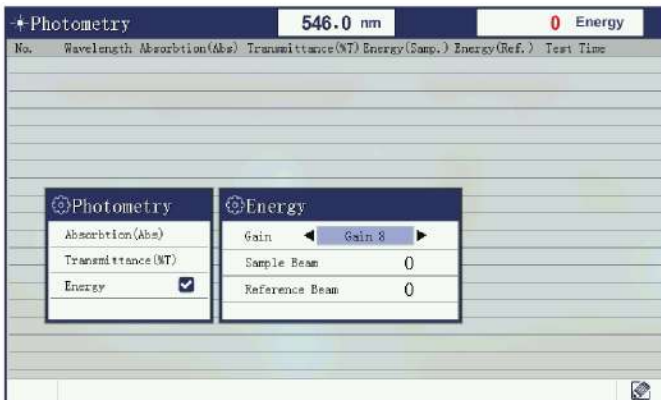
- 7 inch TFT screen and long life, more comfortable and sensitive silicone buttons. The instrument can show various scanning curves and charts for users to complete various tests without computers.
- Support USB storage and different data formats such as Excel, txt and image (PC software). Users can 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

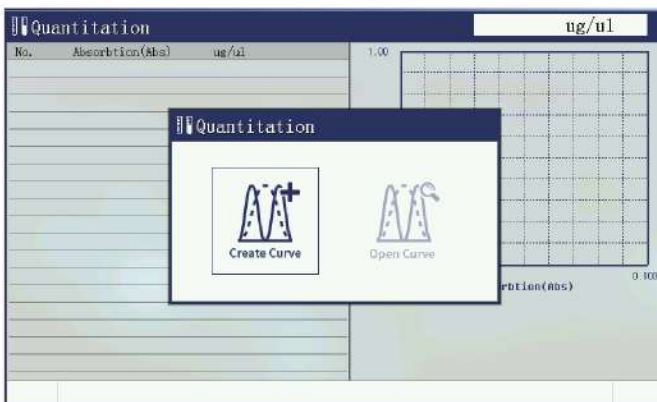
MODEL	C-7100	C-7100S	C-7100A	C-7200	C-7200S	C-7200A
Display	7 inch TFT					7 inch TFT
Keyboard Control	Silicone Buttons					Silicone Buttons
Optical System	Single Beam			Double Beam		
	Holographic grating, 1200 lines/mm					
Slit Width	2nm	1nm	0.5,1,2,4nm	2nm	1nm	0.5,1,2,4nm
Wavelength Range	190 - 1100nm					
Wavelength Accuracy	±0.3nm					
Wavelength Repeatability	≤0.2nm					
Photometric Accuracy	0.2%T (0-100%T), ±0.002A(0-0.5A), ±0.004A(0.5-1A)					
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_M3, 120Mhz					
Power Requirements	AC 110-220V 50-60Hz					
Shipping Dimensions and Weight	770*630*340mm		880*690*530mm		770*630*340mm	
	27kg		45kg		27kg	
						880*690*530mm
						45kg



**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.



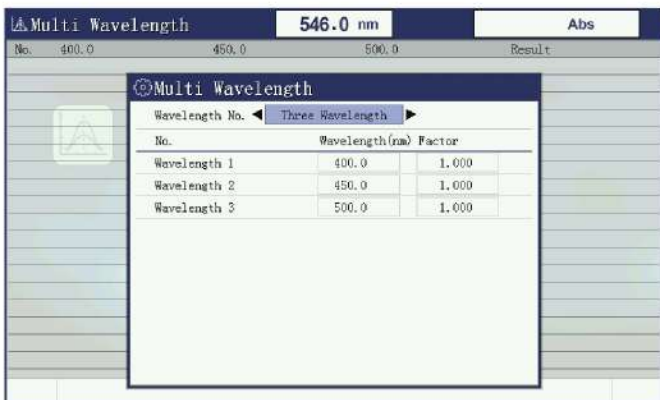
**Kinetics Measurement(Time Scanning)**

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.



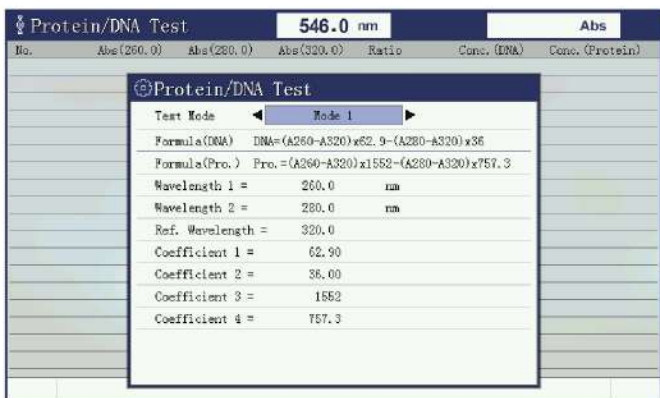
To test sample solution absorbance peak, can scan the sample characteristic curve of any wavelength range between 190 and 1100nm. You can look up the peak value on the standalone device.

## Wavelength Scanning(Qualitative Test)



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



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

## DNA/Protein Measurement

# X-8200



## Introduction

International advanced xenon light (Hamamatsu) source makes the instrument more stable and reliable. Three years warranty. 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 or capacitive touch screen. 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 xenon lamp which can work up to 5 years. Socket type lamp makes 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.

# X-8200

## Specifications

MODEL	X-8200	X-8200S	X-8200T	X-8200TS
Display	7 inch TFT		7 inch TFT	
Keyboard Control	Silicone Buttons		Touch Screen	
Optical System	Double Beam			
	Holographic grating, 1200 lines/mm			
Slit Width	2nm	1nm	2nm	1nm
Wavelength Range	190 - 1100nm			
Wavelength Accuracy	±0.6nm			
Wavelength Repeatability	≤0.2nm			
Photometric Accuracy	0.3%T (0-100%T) , ±0.005A(0-0.5A) , ±0.01A(0.5-1A)			
Photometric Repeatability	≤0.2%T (0-100%T), 0.003A(0-0.5A), 0.005A (0.5-1A)			
Stray Light	≤0.1%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	0.002A@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	Xenon Lamp			
Data Output	RS232 Serial, USB Drive, USB HOST			
Processor	Cortex_M3, 120Mhz			
Power Requirements	AC 110-220V 50-60Hz			
Shipping Dimensions and Weight	770*630*340mm		770*630*340mm	
	27kg		27kg	

## Introduction

Excellent optical system, high level mechanical system, advanced circuit control system, rigorous production process, friendly and intuitive software interface, good technical specifications, stable and reliable performance can meet the analysis requirements from high level and professional customers.



## Main Features

### ***Appearance and internal structure***

Modern and elegant appearance, extendable design, separate structure design for optical and circuit system can efficiently avoid the loss of photometric energy.

### ***Convenient and intuitive operation interface***

This series has 7-inch high resolution color capacitive touch screen and newly developed UV-SUPER2.0 software with strong functions, which make the operation simple and easy.

### ***Excellent performance and stability***

Totally enclosed monochromator and optical mirror coated with SiO<sub>2</sub> guarantee the optical components are not influenced by environment.

- ① Philips and Milas lamps.
- ② Newly improved screw pole drive structure makes good wavelength repeatability and high wavelength accuracy.
- ③ Totally new design, superior materials and rigorous production process.

### ***Advanced photoelectric test system***

- ① 32 bit ARM11 microcontroller with clock speed up to 533MHz.
- ② 20 bit analog digital device specialized for photoelectric data collection and processing from BB company.
- ③ Support internal data storage, there are standard RS232, USB(A) and USB(B) port.

### ***Simple and convenient maintenance***

- ① Socket type lamps make the optical adjustment not necessary and maintenance much easier.
- ② Separated optical and circuit system has no cross influence and make the instrument more reliable.

# T-9100/9200

## Specifications

MODEL	T-9100	T-9200	T-9200S	T-9200A
Display	7 inch TFT color capacitive touch screen			
Wavelength Range	190 - 1100nm			
Optical System	Single Beam	Double Beam		
Spectral Bandwidth	2nm	2nm	1nm	0.5,1,2,4nm
Wavelength Accuracy	±0.3nm	±0.3nm	±0.3nm	±0.3nm
Wavelength Repeatability	≤0.2nm	≤0.2nm	≤0.2nm	≤0.2nm
Photometric Range	0-200%T, -0.3-3.0A, 0-99999C (0-9999F)			
Photometric Accuracy	0.2%T (0-100%T), ±0.002A(0-0.5A), ±0.004A(0.5-1A)			
Photometric Repeatability	≤0.15%T (0-100%T), 0.001A(0-0.5A), 0.002A(0.5-1A)			
Scanning Speed	Low, Medium, High (up to 3000nm/min)			
Stray Light	≤0.05%T@220nm,360nm			
Baseline Flatness	±0.003A	±0.002A	±0.002A	±0.002A
Drift	0.003A/30min @500nm	0.002A/30min @500nm	0.002A/30min @500nm	0.002A/30min @500nm
Noise	0.0003A@500nm			
Working Mode	T,A,C,E			
Wavelength Setting	Automatic			
Detector	Solid Silicon Photodiode			
Light Source	Tungsten Halogen/Deuterium Lamp			
Output Port	USB HOST, USB DRIVE, RS232			
Power Requirements	AC 110-220V 50-60Hz			
Humidity Range	Less Than 85%			
Shipping Dimensions and Weight	770*630*340mm, 27kg			880*690*530mm, 45kg



There are three test modes.

Absorbance, transmittance and energy.

## Photometry



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.

## Quantitative Measurement



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.

## Kinetics Measurement(Time Scanning)





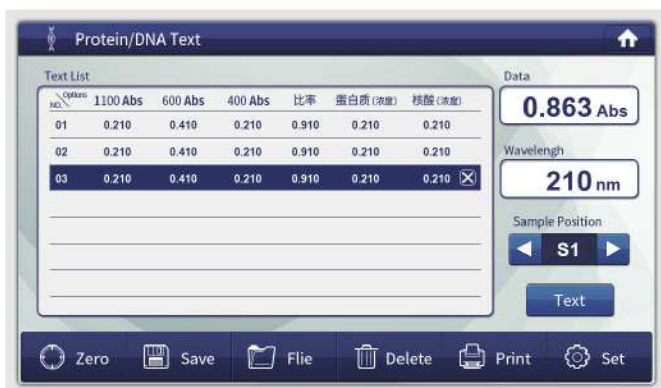
To test sample solution absorbance peak, can scan the sample characteristic curve of any wavelength range between 190 and 1100nm. You can look up the peak value on the standalone device.

## Wavelength Scanning(Qualitative Test)



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



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

## DNA/Protein Measurement

# Accessories



Manual 4-position cell holder (standard for single beam)



Single-hole cuvette holder (standard for double beam)



Automatic 8-position round cell holder



Manual 4-position 10cm cell holder



Manual 4-position film holder



Single hole film holder



Single hole 5cm cell path holder



Tube rack



Adjustable micro cell holder

# Comparison Table

	UV/Vis.	Optical System	Display	Slit Width	Wavelength Accuracy	Wavelength Repeatability	Stray Light	Light Source	Page
E-1000V	Vis.	Single	70*40mm LCD	4 nm	±2 nm	≤1 nm	≤0.15%T@360nm	Tungsten Halogen Lamp	1/2
E-1000UV	UV							Tungsten Halogen /Deuterium Lamp	
C-7000V	Vis.	Single	7 inch FTF	2 nm	±0.3 nm	≤0.2 nm	≤0.05%T @220nm,360nm	Tungsten Halogen Lamp	3/4
C-7000UV	UV							2 nm	
C-7100									
C-7100S									
C-7100A				0.5,1,2,4nm					
C-7200							2 nm		
C-7200S								Double	1 nm
C-7200A	0.5,1,2,4 nm								
X-8200	UV			Double			7 inch FTF	2 nm	±0.6 nm
X-8200S		1 nm							
X-8200T		Touch Screen	2 nm						
X-8200TS			1 nm						
T-9100	UV	Single	Touch Screen	2 nm	±0.3 nm	≤0.2 nm	≤0.05%T @220nm,360nm	Tungsten Halogen /Deuterium Lamp	11/14
T-9200		Double		1 nm					
T-9200S					±0.3 nm	≤0.2 nm			
T-9200A									

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