



Electro Optical Components, Inc.

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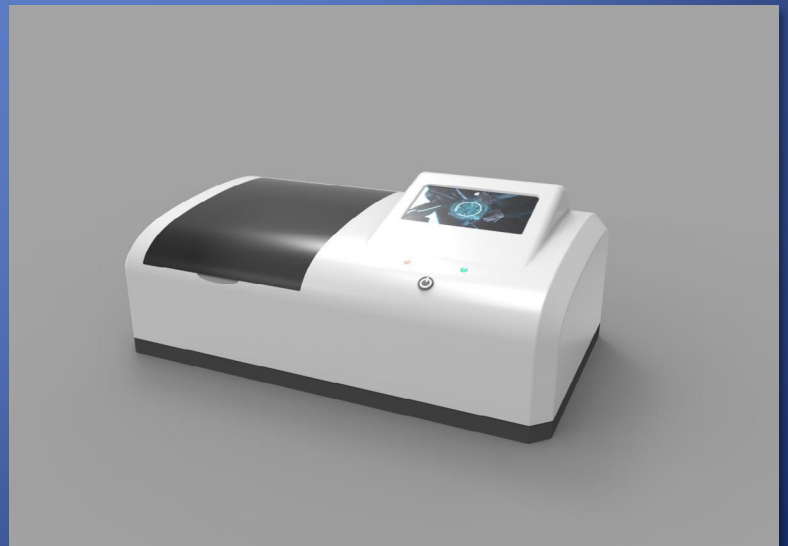
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2016

EOC-SI-7000
Fully-automated, Rapid
Spectrophotometer



Description

EOC-SI-7000 Fully-automated, Rapid spectrophotometer is designed in order to improve detect throughput, reduce work load and protect operator health. It employs accurate sampling pump, anti-corrosive sampling pin and fluid tube, and in combination with the cutting-edge fluid control technology.

EOC-SI-7000 set replace manual adding, mixing, warm-bath testing, calculation, determination, displaying, printing and cleaning etc. with fully-automated procedure.

It can detect maximum 44 pieces of samples per time, including reagent adding, raising temperature, sample switching, all programing setting, automatic completion, and buzz warning after measurement.

EOC-SI-7000 employs long lifespan, high reliability light source, non-breakdown operating hours as long as 4000 hrs. With characteristics of high reliability, ultra-high speed, cost-effective and high cost-performance ratio, it can apply for online measurement.

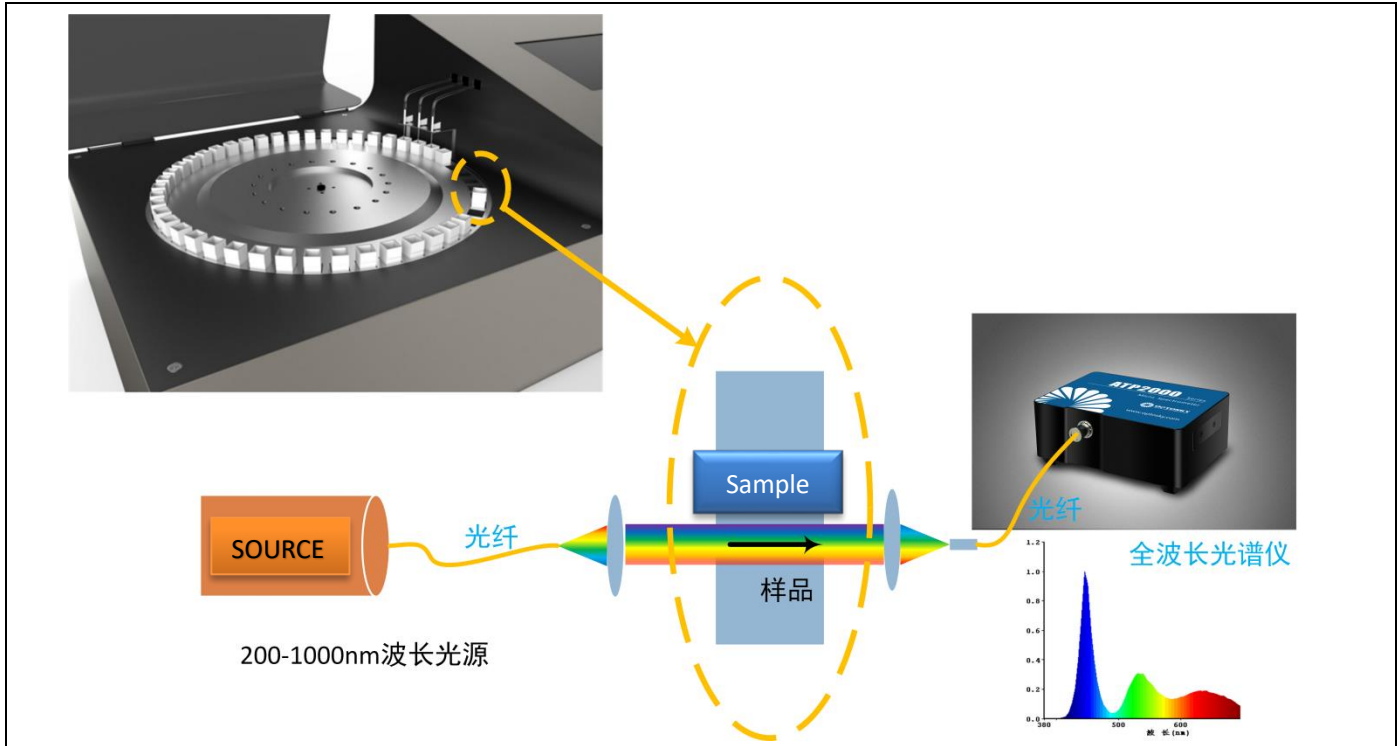
EOC-SI-7000 divides into UV and VIS version, and they use Tungsten Halogen and Deuterium Halogen Light Sources in separate version.

EOC-SI-7000 employs customized Android operating system, including USB, serial communication interface, optional 4G communication mode, and measuring results can be reported directly to supervisors.

Principle

As shown in Fig. below, fully-automated, rapid spectrophotometer is used to measure specific chemical composition bases on photoelectric colorimeter principle. It can greatly improve time-efficiency and cost-efficiency due to rapid, accurate, and low consumption reagent.

Optical system: EOC-SI-7000 consists of light source (Tungsten halogen & Deuterium halogen), optic fiber, collimating mirror, spectrometer etc. Light source sends out beam going through collimating mirror, it becomes parallel light with bright light spot, then parallel light shoots cuvette via SMA905 optic fiber, filter coating on the cell holder can filter stray light, then transmitted light being shot on cuvette enters spectrometer via SMA905 optic fiber, then spectrometer splits light, optical signal is transmitted to electrical signal via CCD, data is transmitted to PC via PCB, and spectrum is displayed via PC software.

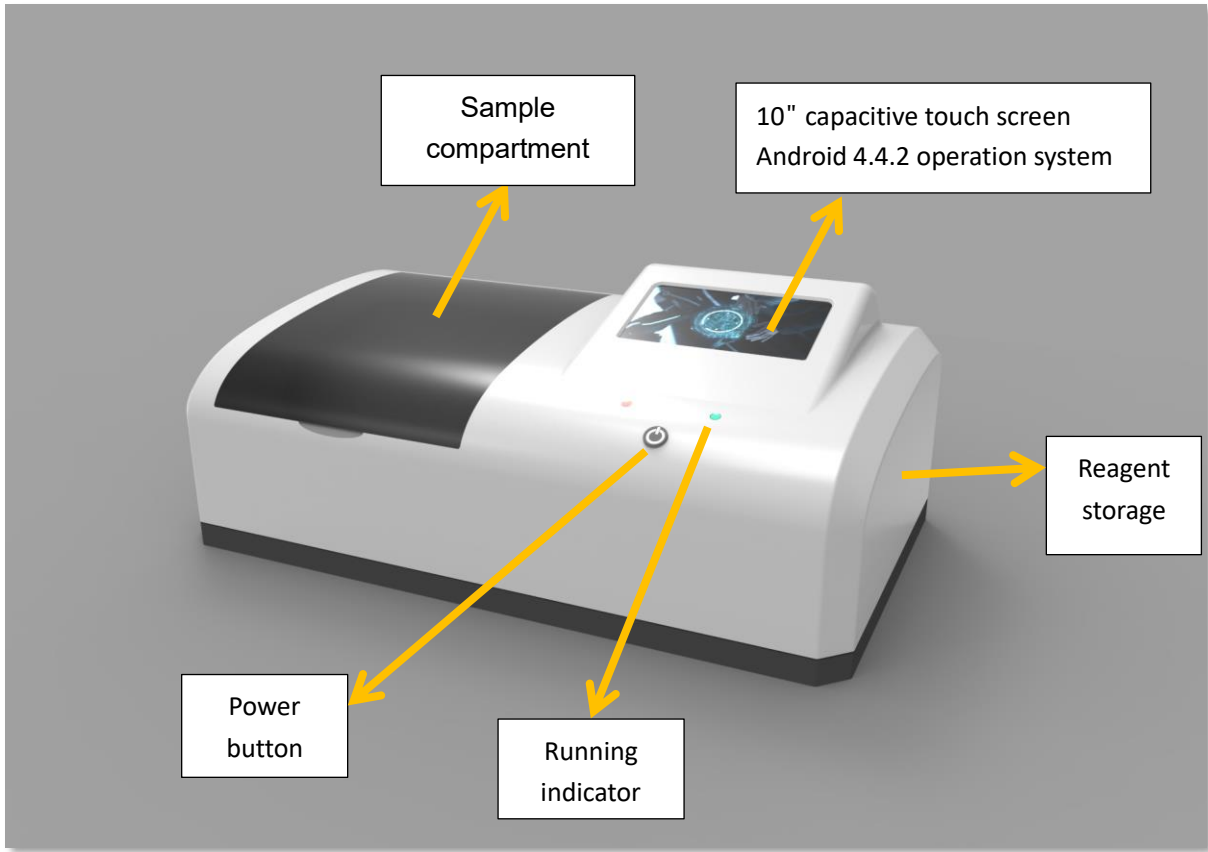


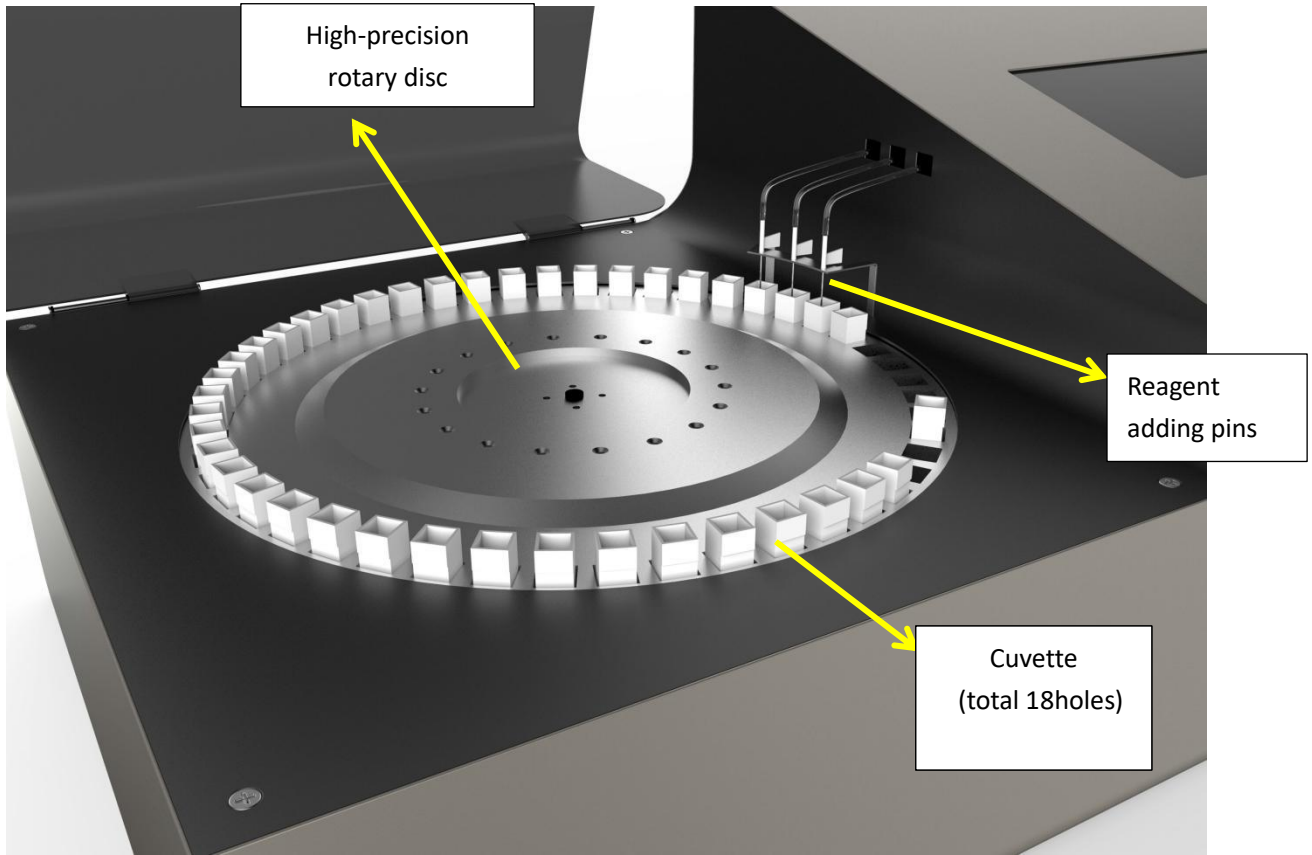
Feature

Detect maximum 44 pieces of samples per time;
 Fully-automated reagent adding;
 Light source: Tungsten halogen or Deuterium halogen;
 Cutting-edge optical path;
 High-sensitivity back-thinned CCD;
 Absorbance range: 0.000—3.000 above
 repeatability: $\pm 1\%$ (A)
 Absorbance stability: photoelectronic shift (A) ± 0.002
 (3minutes)
 Absorbance accuracy: $\pm 1.0\%$
 Linear error: $\pm 1.0\%$ 。
 Embedded miniature thermal printer
 10" TFT touch screen, handwriting input
 Android 4.4.2 operation system;
 Warn in sound and light

Application

Universities, scientific research lab
 Food safety detection
 Water quality detection
 Metallurgy process control
 QC/QA
 The third party lab





	VIS-spectrophotometer		UV-VIS	
	EOC-SI-7000-VIS	EOC-SI-7000HS-VIS	EOC-SI-7000-UVIS	EOC-SI-7000HS-UVIS
Sample channels	46			
Reagent types	3 types			
Reagent adding speed	3 mL/min			
Reagent adding accuracy	5 μ L			
Light source	Tungsten Halogen	Deuterium halogen	Tungsten Halogen	Deuterium halogen
Absorbance wavelength range	350-800	190-1100	350-800	190-1100
Light source lifespan	2000 hrs	2000 hrs	2000 hrs	2000 hrs
Detector	TE-cooled back-thinned CCD	TE-cooled back-thinned CCD	TE-cooled back-thinned CCD	TE-cooled back-thinned CCD
Absorbance	0.000—3.000	0.000—3.000	0.000—3.000	0.000—3.000
Repeatability	$\pm 1\%$ (A)	$\pm 1\%$ (A)	$\pm 1\%$ (A)	$\pm 1\%$ (A)
Absorbance Stability	photoelectronic shift (A) ± 0.001 (3minutes)	photoelectronic shift (A) ± 0.001 (3minutes)	photoelectronic shift (A) ± 0.001 (3minutes)	photoelectronic shift (A) ± 0.001 (3minutes)
Absorbance accuracy	$\pm 1.0\%$	$\pm 1.0\%$	$\pm 1.0\%$	$\pm 1.0\%$
Linear error	$\pm 1.0\%$	$\pm 1.0\%$	$\pm 1.0\%$	$\pm 1.0\%$
Temperature	40°C	40°C	40°C	40°C
Temp. accuracy	± 1 °C	± 1 °C	± 1 °C	± 1 °C
Light source	110V, 220V	110V, 220V	110V, 220V	110V, 220V
Operating current	0.5 A	0.5 A	0.5 A	0.5 A
Warning	Warn in sound and light	Warn in sound and light	Warn in sound and light	Warn in sound and light
Data output modes	USB,RS232,4G (optional)	USB,RS232,4G (optional)	USB,RS232,4G (optional)	USB,RS232,4G (optional)