UV Detector
SpectraFlow 501

Description

The **SpectraFlow 501** is the most populare instrument in the SunChrom family of UV-detectors and is designed to be a reliable, single channel scanning system that is easy to operate. It provides all of the important features of more expensive detectors, such as a very broad spectral range (190 to 740 nm), several time constants setting and more than ten flow cells from nano-HPLC (50 nL/min) to super preparative HPLC (up to 10,000 mL/min) are available. An especially useful option is the ability to use fiber optics to position the cell at a distance from the detector. In that way, the SpectraFlow 501 can be used in the same manner as the diode array detector; for example, the cell can be placed in a column oven to minimize the refractive index effects.

Properties

The **SpectraFlow 501** is a single channel spectrophotometer for HPLC that is designed for both general use and for specific applications. The capabilities of the instrument are extremely broad and it's operation is very simple and intuitive, even for untrained users, students, quality control personnel and individuals who are just starting in research. All operating parameters, such as the number of ignitions of the Deuterium lamp, the number of hours of use, various error messages and even the operation of the motors are stored in a GLP file. This file is very useful for laboratories which are subject to regulatory authorities.

The **SpectraFlow 501** includes two independent analog outputs**.** One output is for absorbtion and the other is for transmitting the spectrum so that the signal to each output will not be distorted. The absorbtion signal can be amplified as required and the desired resolution for the spectrum can be selected by choosing a rapid or a slow scan rate. A slow scan rate will provide better specroscopic resolution.

Many operating parameters can be entered into an automated, time based program. These include changing of the wavelength, autozeroing the output, and spectra collection. The autozero function is an especially useful tool as it can be used to reset the baseline to zero after a wavelength change or at a time specified by the operator. After the wavelength change, the baseline can also be set to the last level bevor the operation. So more less no baseline shift will be observe, which would desturb the picture of the chromatogram. This capability provides the **SpectraFlow 501** with a unique feature not found in many other detectors on the market.

The ability to monitor the light intensity through the cell and the reference channel provides the user with the possibility of diagnosing problems in the system. As an example, if the system is noisy, the operator can quickly determine if the lamp intensity has fallen more than 50 %, or if the cell window is dirty. If the cell window is dirty, blowing some air over it can frequently solve the problem.

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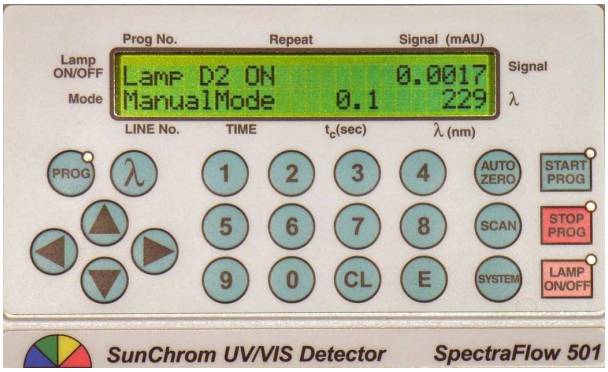

The keypad includes a number of colored LED's that provides the user with information about the status of the system such as the mode of operation as soon as it is powered up. It also provides a broad range of useful functions; for example, the Deuterium lamp can be turned off if it will not be used for a long period of time and then turned on as required. The clear and well defined keyboard, which contains two lines of information makes the operation of the system simple for the beginner and leads the user through the setup of the system completely error free. Each of the keys on the keyboard has a single purpose and is not redefined as the operator accesses various parts of the interaction program.

Many parameters that are not commonly changed are located in the System (parameter) menu. This menu includes items such as GLP parameters as well as information about the optics, mechanical components and lamp condition so that the operator can concentrate on the critical information without having to wade through parameters which are not of immediate importance while setting operational parameters.

Technical Data

Analytical Specifications	
Spectral Range	190 to 740 nm
Spectral Bandwidth	8 nm
Source	Deuterium; optional Tungsten Lamp
Measuring Range	0.0005 to 2.0 AU
Analog Output	2 x 0 - 2 V; Absorption; Spectra
Amplification	0.1 - 10 V (corresponding to 0.1 - 10 AU)
External Inputs	Program-Start; Autozero
External Outputs	Error
RS232	Input/Output via “Daisy Chain“
Noise	1.0 x 10^{-5} AU at 240 nm after warmup and a time constant of 1 sec
Drift	1.0 x 10^{-4} AU/Hour at 240 nm after warmup and a time constant of 1 sec
Time Constant	0.1 to 10 sec
Cell Thickness	10 mm (Standard cell - Stainless Steel)
Cell Volume	10 µL (Standard cell - Stainless Steel)

General

Display	2 x 20 Character, Background Illuminated LCD
Dimensions	35.5 cm x 22.5 cm x 16 cm (L xW x H)
Weight	6.8 kg
Power Requirements	110 - 240 VAC ± 10%; 50/60 Hz
Compliance Information	in conformity with IEC 1010, **CE, ISO 9001** certified production

We reserve the right to change specifications, design or price without advance notice.

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Ordering Information

Part Number	Short Description
458-200.201	UV/Vis-Detector SpectraFlow 501
458-200.522	Tungsten Lamp
969-200.513	Deuterium Lamp
458-200.601	Analytical Cell, 10 mm, 10 µL, SS
458-200.602	Analytical Cell, 3 mm, 2 µL, SS
458-200.609	Preparative Cell, 1/8", 0.5/1.25/2 mm, SS
458-200.624	Nano Flow Cell, 10 mm, 5 nL
458-200.625	Capillary Flow Cell, 10 mm, 42 nL
458-200.626	Micro Flow Cell,10 mm, 0.254 µL

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