

74 Series

Spectrophotometers

Introducing the 74 Series

The 74 series spectrophotometers provide accurate and reliable results in various applications from teaching, to industrial applications, to routine sample analysis in quality control environments. These spectrophotometers have been designed to be easy to use and have enhanced connectivity for simple and quick data transfer. There are two models in the 74 series range. Model 7410 uses a tungsten halogen lamp for measurements in the visible spectrum from 320 to 1000nm. Model 7415 uses a press to read xenon lamp to extend measurements into the UV spectrum, down to 198nm. Both models have a 5nm spectral bandwidth and are covered by a 3-year warranty.

Measurement Modes

The 74 series spectrophotometers offer measurement modes for simple photometrics; concentration calculated using a single standard or a factor; quantitation with the ability to create a calibration curve using up to 20 standards; full spectrum scanning; multi-wavelength, where up to 4 wavelengths can be measured simultaneously and kinetics, to monitor the change in absorbance over time.

Key Features

- 7" High Definition colour touchscreen display
- Multiple USB ports for data storage & printer connectivity
- Android operating system
- Internal memory for methods and results (Upload to CPLive * 10GB onboard storage)
- Multi-language options; English, French, German, Spanish and Italian
- Extensive range of accessories available
- 3-year warranty (including xenon lamp)

Instrument Design

The clever ergonomic design of the 74 series focuses on ease of accessibility, whilst keeping the overall footprint as small as possible. The power switch and USB ports are located at the front of the instrument for easy access. The large colour touchscreen is situated in front of the large sample chamber to ensure unhindered access to both. Inside the 74 series spectrophotometers are powerful optics coupled with a traditional grating & monochromator design to produce accurate & reliable results.

Interface Design

The 74 series spectrophotometers have a custom designed user interface which is based on an Android platform, making it easy to navigate and control the instrument. The home screen gives quick access to the different measurement modes as well as shortcuts to previously saved methods and results.



Sample Chamber

The large sample chamber accommodates all available accessories, therefore saving valuable laboratory bench space. The large sample chamber lid allows easy access for loading and unloading samples and for changing accessories. The domed lid has been designed to allow tall multi-cell changers or test tubes to be used whilst still keeping a light tight sample chamber.

Display

These spectrophotometers have a large 7" High Definition colour touchscreen display which makes navigation fast and intuitive. The display allows full spectrum scans, quantitation curves and kinetics runs to be viewed effortlessly.

The touchscreen capability enables users to zoom in and out and select points all by simply touching the screen. The touchscreen display is fast and responsive even when wearing gloves.

Internal Memory

These spectrophotometers have a generous 10GB on-board storage (upload to CPLive) which allows methods and results to be stored on the instrument.

Enhanced Connectivity

The 74 series have been designed with excellent connectivity in mind. The easy access USB ports on the front of the instrument can be used for software updates, data storage and printer connectivity. Results & methods can be stored as CSV files for easy transfer to Microsoft Excel®. With the free CPLive connectivity results can be automatically uploaded and stored effortlessly & securely in the cloud.

Technical Specification

Parameter	7410	7415
Wavelength range	320 to 1000nm	198 to 1000nm
Wavelength Accuracy & Reproducibility	$\pm 2.0\text{nm}$ & $\pm 0.5\text{nm}$	
Stray Light	<0.5% at 340nm	<0.5% at 340nm and 220nm
Spectral bandwidth	5.0nm	
Photometric Ranges	-0.3A to 2.5A & 0 to 199.9%T	
Photometric Accuracy	$\pm 0.01\text{A}$ at 1.0A & $\pm 1\%T$	
Concentration & Quantitation	Blank with a single standard or Factor & Blank with up to 20 standards	
Multi-Wavelength	Up to 4 wavelengths * Ratio and Difference Calculations	
Spectrum Range	320 to 1000nm	198 to 1000nm
Internal Memory	3.6GB or Upload to CPLive * 10GB onboard storage	
External Memory	Limited by attached mass storage device	
Optics	Single beam with tungsten lamp	Single beam with Xenon lamp
Stability	<0.002 Abs/hr after 30 minute warm up	<0.001 Abs/hr without warm up
Outputs	USB Type A x 2, USB Type B x 1, Ethernet connection (RJ45)	
Supply Voltage/Frequency	100 - 240VAC at 50 to 60Hz	
Power Supply	24V DC, 2.5A	
Dimensions (w x d x h)	280 x 500 x 156mm	
Weight	9kg	
Warranty	3 years (including xenon lamp)	

Ordering Information

Part Code	Description
741001	7410 visible scanning spectrophotometer, fitted with 10x10mm cuvette holder, and supplied with a universal power supply and an instruction manual
741501	7415 UV/visible scanning spectrophotometer, fitted with 10x10mm cuvette holder, and supplied with a universal power supply and an instruction manual

Accessory Ordering Information

Part Code	Description
SMP50/PRINTER	External Printer fitted with a battery and supplied with UK, EU and US power leads
630204	10 x 10mm single cuvette holder
630005	10 to 100mm adjustable path length cuvette holder
630304	Micro-cuvette holder with reduced aperture
637071	Test tube holder (accepts 10mm square cuvettes, 16 and 24mm diameter test tubes)
740401	Automatic 8-cell changer

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