Spectrophotometer SpectroDirect

For water and waste water testing 330 - 900 nm



Highlights

- Excellent price / performance relationship
- Use of round and Rectangular cuvettes different Sizes without adapter
- 35 user-specific methods
- Fast, easy lamp replacement
- Possibility for data transmission and update to / via PC

Applications

- Waste Water
- Drinking Water
- Industrial Process Water
- Science & Research
- Governmental and Private Laboratories

The SpectroDirect is a modern single-beam spectrophotometer with an excellent price/performance ratio that is specifically designed for water testing.

Optics

The SpectroDirect is a single-beam spectral photometer (see illustration).

The light source is a tungsten halogen lamp with flash function. The lamp is switched on only momentarily during the measurement process[1)], so there is no need for a warm-up period. The SpectroDirect is ready to perform a self-test as soon as it is switched on.

The light passes through an entry slot to the monochromator, where it is split into spectral ranges. The monochromator is a holographically produced, transparent grating. The movable mirror ensures that light of the desired wavelength is focused automatically so that it passes through the exit slot, into the sample chamber and therefore through the water sample. The light that is not absorbed by the sample travels to the silicon photodiode detector. This signal is then evaluatedby a microprocessor and shown as a result in the display.

Methoden, Messbereiche, Reagenzien siehe ab Seite 88

Multifunctional sample chamber

Round vials measuring 16 mm and 24 mm in diameter and rectangular cells with pathlengths from 10 to 50 mm may be used without an adapter. Only the 10 mm cell will be fixed by a little holder that must inserted into the sample chamber.

Operator guidance and functions

The choice of language is prompt in the display and can be switched to German, English, French, Italian, Spanish or Portugese. When further languages become available, they will be updated via internet.

In addition to the pre-programmed Lovibond® methods, the user can also program 35 own methods (10 user concentration methods and 25 user polynomials). Other functions include the automatic count-down function in various methods, differentiated determination for some methods, absorption / transmission, spectral uptake, kinetics and up to 7 concentrations (linear).

Data transfer

The RS232 interface on the back allows direct connection and data transfer to a PC or printer with serial interface. Up to 1000 records can be saved with date, time, running test and code number as well as the measuring range and the method number.

Updates for new methods and additional languages can be found on our website: www.lovibond.com.

Power supply

The required input voltage is 12 V.
The SpectroDirect is connected to an external power pack as standard. Battery operation is also possible by using an external energy station (see accessories).

N.I.S.T. Traceability

The device can be calibrated by the user with a secondary standard filter set (order no .: 711160) which can be traced back to N.I.S.T. are. The user can set the device in "user adjustment mode" for each method with standards traceable to N.I.S.T. adjust.

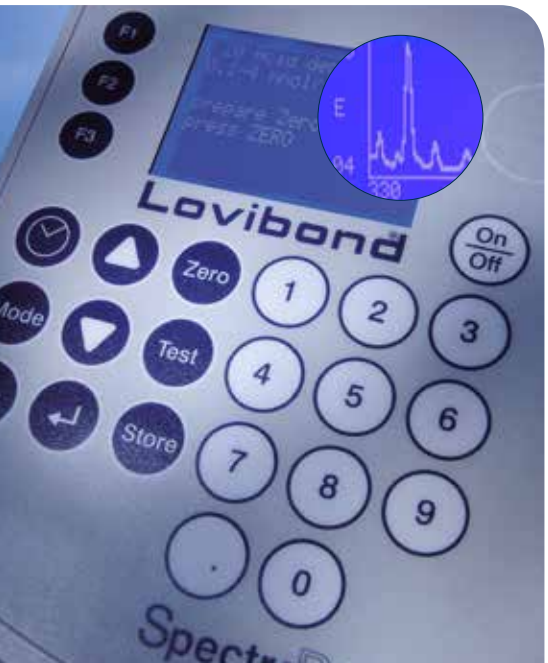
(N.I.S.T. = National Institute of Standards and Technology)

Technical data

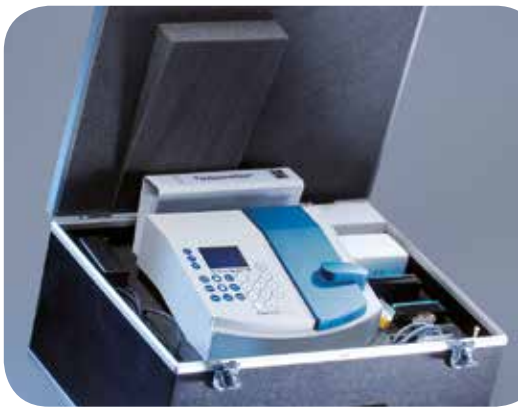
Wavelength range:	330 to 900 nm
Photometric range:	-0.3 to 2.5 Abs
Spectral bandwidth:	10 nm
Wavelength accuracy:	± 2 nm
Wavelength reproducibility:	± 1 nm
Light source:	Pre-adjusted tungsten halogen lamp
Monochromator:	Holographic grating
Detector:	Silicon photodiode
Multifunctional sample chamber for:	Round vials 24 and 16 mm Ø, Rectangular cells 10 - 50 mm
Display:	Backlit LCD graphic display
Language options:	German, English, French, Italian, Spanish, Portuguese
Storage capacity:	1000 test data sets
Serial interface:	RS232
Dimensions: (L x W x H)	270 x 275 x 150 mm
Weight:	approx. 3.2 kg
Power supply unit:	Input: 100 - 240 V ~ 1.0 A 50 - 60 Hz Output: 12 V .... 30 W
CE-Conformity	

Accessories

Item	Code
Replacement halogen lamp	71 10 00
Magnetic pin (for updates)	19 80 16 87-2
Connection cable to a PC	19 81 97
Connection to a 12 V plug	71 10 40
Case for transport	71 20 50
Universal adapter for sockets	19 20 65
Secondary standard set	71 11 60
Plastic funnel with handle	47 10 07
Cleaning cloth for vials	19 76 35
Power supply unit 100-240 V / 50-60 Hz	71 10 90
Power station, 230 V / 50 Hz with cable for connection	71 10 50
12 round vials with lid Height 48 mm, 24 mm Ø	19 76 20
5 round vials with lid Height 48 mm, 24 mm Ø	19 76 29
10 round vials with lid Height 90 mm, 16 mm Ø	19 76 65
Vial stand for 6 round vials Ø 24 mm, acrylic glass	41 89 51
Vial stand for 10 vials (Ø 16 mm or □ 13,5 mm), acrylic glass	41 89 57
W 100, rectangular cell optical glass OG, 10 mm path length	60 10 40
W 100, rectangular cell optical glass OG, 50 mm path length	60 10 70
W 110, rectangular cell Quartz-UV-glass, 10 mm path length	66 11 30
Plain paper printer Incl. mains adapter and RS 232 cable	198077







Delivery Content

SpectroDirect (standard equipment)

- SpectroDirect (basic unit)
- Power supply unit 100 - 240 V
- Serial cable for connection to a PC
- Magnetic pin
- 2 batteries (AA)
- Manufacturers test certificate M
- Warranty information
- Instruction manual

Order code: 71 20 00

SpectroDirect (advanced features)

- SpectroDirect in aluminium case
- Power supply unit 100 - 240 V
- Serial cable for connection to a PC
- Magnetic pin
- 2 batteries (AA)
- Energy station
- Replacement lamp
- 12 round vials with lids, 24 mm Ø
- 10 round vials with lids, 16 mm Ø
- 2 rectangular cells, 10 mm path length
- 2 rectangular cells, 50 mm path length
- Plastic stirring rod, 13 cm
- Manufacturers test certificate M
- Warranty information
- Instruction manual

Order code: 71 20 05

We would be pleased to quote a ready to use spectrophotometer unit for the parameters and required accessories.

Please see pages 88 onwards for reagents (order codes)