OWLS Product List

Effective from January 2, 2012

Model	Description	Features
OWLS 210	Optical Waveguide Lightmode Spectroscopy System (Standard)	
	The OWLS measuring unit is a high sensitivity (~1ng/cm^2) , label free biosensor system. Chemical and bio-chemical interactions can be followed and quantified in real time, thus revealing the specificity, the dynamics and the strength of the reaction and/or the binding. More details in the OWLS 210 brochure.	
	INCLUDING	
	OWLS 210 Main unit	It includes the optical-mechanical basic unit with electronic control: He-Ne laser illumination optics; high resolution stepping motor controlled goniometer, photodetector with autorange photoccurrent measuring electronics; multiplexed 16 bit A/D converters, data acquisition, USB communication with the standalone computer and temperature controlled sample holder. Temperature controller with temperature range from 20^{o}C to 80^{o}C with +/-0,1 ^{o}C accuracy. The potentiostat is also built in for EC measurement optionally.
	PC computer /Apple iMAC	PC is communicating with the OWLS 210 unit via USB port. MS Windows™ 7 operation system is installed on the PC.
	BioSense software, one user license	BioSense is an MS Windows compatible application software that provides flexible control of measurement on OWLS 210 instrument, data acquisition, analysis and storage. It is designed for easy parameter set-up and data display. *More details in OWLS 210 brochure.*

SH-0812 Integrated sensor holder	The glass sensor chip (size 8mm x 12 mm) is placed on the sensor holder and tightened to its sealing O ring. The sensor holder forms a flow cell above the glass sensor. The sensor holder is made from biocompatible PEEK material, the O ring is made from Kalrez and the tubings are made from Teflon. The glass sensor chip and the sensor holder form an integrated unit that is placed into the OWLS instrument during measurement. Integrated sensor holder with different flow cell heights and volumes are available. More details see SH-0812 brochure.
SIS-06 Sample Injection System	SIS-06 Sample Injection System provides bubble-free, controlled flow rate fluid supply through the flow cell of the sensor holder with flow rate setting in the range of 0.01µl/min - 35ml/min. Selectable 20µl - 200 µl sample loop is offered for controlled-volume sample injection with Rheodyne Model 9725 injector valve. The standard sample loop size is 200µl. The syringe pump is a standalone unit controlled by manual or PC commands.
Gas tight syringe with 3 pcs replacement needles	This syringe is used to fill the sample loop in the injection valve. It has a special leak tight syringe with blunt tip needles. Type: Hamilton 1725 RNR
OW 2400 Sensor chips, 5 pcs	More details in OW2400 sensor brochure

On-site installation and customer training

Operation Manual in English

Customer support by phone or e-mail, remote technical support via Internet by TeamViewer software

One year warranty at the manufacturer's site.

Free BioSense software upgrade for one year.

Note:

Sensor chip size:12 mm x 8 mm x 0.5 mm

OWLS instrument, its accessories and the sensor chips are sold for scientific and research purposes.

Sales Terms and Conditions apply: see our web site

Specifications and prices are subject to change without notice

ACCESSORIES FOR OWLS 210

Model	Description	Features
SH-0812	Integrated sensor holder with flow cell	The glass sensor chip (size 8mm x 12 mm) is placed on the sensor holder and tightened to its sealing O ring. The sensor holder forms a flow cell above the glass sensor. The sensor holder is made from biocompatible PEEK material, the O ring is made from Kalrez and the tubings are made from Teflon. The glass sensor chip and the sensor holder form an integrated unit that is placed into the OWLS instrument during measurement. Integrated sensor holder with different flow cell heights and volumes are available. More details see SH-0812 brochure.
SHEC-0812	Integrated sensor holder for Electrochemical OWLS measurements	Same as SH-0812 but has a round metal electrode inside the flow cell, ~1mm above the sensing area of the sensor chip. The metal electrode can be made from Ag or Pt, depending on the customer need. More detail see SHEC-0812 brochure.
SHECFL-0812	Integrated sensor holder with flow cell with metal electrodes and with fiber optic probe	Same as SHEC-0812 sensor holder, but the metal electrode above the sensing area is made from a metal tube, Inside this tube a polymer or quartz fiber optic cable is inserted. This sensor holder is used to run parallel OWLS, electrochemical, and fluorescence measurement. More detail see leaflet.
CUG-0812	Integrated sensor holder with flow cell with glass inspection window	Same as SH-0812 but has a round glass window inside the flow cell, ~1mm above the sensing area of the sensor chip. The glass window is used to allow light illumination during the microscopic observation in an inverted microscope. Inverted microscopy inspection is useful in applications when the microscope picture is correlated with the OWLS measurements, like experiments using live cells.
CUC-0812	Integrated sensor holder with flow cell with tubing in the center	Same as SH-0812 but has an open ended tubing (diameter 21mm) in the middle of the flow cell. Recommended for cell measurement.
O-ring	Spare Kalrez O-ring	for SH-0812 and other integrated sensor holders

PSC-10	Plasma surface cleaner	This equipment is designed for cleaning the surface of the sensor chips. It is recommended to clean the surface of the sensor chip before functionalizations of the sensors or before starting the OWLS measurement to clean the sensor surface from hydrocarbon contamination. The plasma cleaner contains a reaction chamber made from glass tube equipped with vacuum sealing. A plasma generator with control electronics is included in the table top system. Vacuum pumps, gas valves etc. are options. More details on request.
N2	Blow off N2 gun with membrane filter	It is a hand-held, finger triggered "gun" shape device, used to blow off particles, dust from the surface of the sensor chip. It is connected to a low pressure (max 1 bar) high purity nitrogen, air or argon line (not included) and it is using a filter housing which accommodates changeable membrane filters (1 μm pore size)

OPTIONS FOR OWLS 210

Model	Description	Features
BioSense	BioSense software, second user license	BioSense second user license is installed on separate PC. Measured data can be imported from OWLS data base to the second user Biosense Software and all the calculations, data evaluation functions are available. The Biosense with second user license is not suitable for controlling the OWLS instrument.

PO-CV	BioSense controlled potenciostat for the EC-OWLS measurement	The PO-CV potentiostat/galvanostat is an electrochemical analyzer that provides a user-configurable instrument for electrochemical application. It is built into the OWLS main unit and its three measuring wires are connected to the SHEC-0812 type sensor holder. The BioSense software allows running parallel OWLS and electrochemical measurements. It is also possible to run standard EC techniques such as cyclic voltammetry, chronoamperometry, square wave, and differential pulse voltammetry. The EC-OWLS measurement needs OW2400c ITO coated sensor chips. More details on request.
RI-40	BioSense controlled in-line refractometer (temperature control up to 40 ^{O}C)	This is an in-line, temperature controlled refractometer, which measures continuously the refractive index of liquid flowing through its special flow-type flow cell. The measured refractive index is continuously forwarded to the Biosense software and used in the OWLS calculations. The measuring wavelength of the refractometer is 633 nm, the same as used in the OWLS. It also can be used as a standalone refractometer. More details on request.
	Autosampler	The robotic autosampler is designed to maximize the performance and throughput of the OWLS 210 instruments. The Autosampler has biocompatible PEEKT fluidics, minimal sample carryover and excellent repeatability. It ensures high quality, reproducible kinetic data. It has variable sample loop and syringe sizes for micro to macro injections and is compatible with 1.5 ml sample vials, 96 and 384 well plates.