

# Labdisc BioChem Data Logger Specifications



Parameter	Labdisc BioChem
<b>Supported Platforms</b>	Standalone, PC, Mac, iPad, Linux, Android, Chromebook
<b>Built-in Accessible Sensors</b>	15 sensors: Air Pressure, Ambient Temperature, Barometric Pressure, Colorimeter, Conductivity, Dissolved Oxygen (electrode sold separately), External Temperature, GPS, Heart Rate, Light, pH, Relative Humidity, Thermocouple, Turbidity, Universal Input
<b>Max. Sampling Speed</b>	1000/s
<b>Sampling Resolution</b>	12-bit
<b>Internal Data Storage</b>	128,000 samples
<b>Internal Rechargeable Battery</b>	LiPO 3.6V
<b>Battery Life</b>	> 150 Hours
<b>Display</b>	Graphical LCD 64 x 128 pixels
<b>Keypad</b>	Yes
<b>Communication</b>	USB 2.0
<b>Wireless Communication</b>	Bluetooth V2.0 on all sensors
<b>Remote Data Collection</b>	Yes
<b>Automatic Sensor Testing &amp; Calibration</b>	Yes
<b>Size</b>	$\phi=132$ , H=45 mm
<b>Weight</b>	300 gr.
<b>Temperature Range</b>	-10 to 50 °C
<b>Standard Compliance</b>	CE, FCC



## Labdisc BioChem Built-in Sensor Specifications

Sensor Type	Max. Range	Accuracy
Air Pressure	10 to 300 kPa	±2.5 kPa
Ambient Temperature	-10 to 50 °C	±1 °C
Barometer	500 to 1100 mB	±2.5 mB
Colorimeter	10 to 90% transmittance (3 colors)  $\lambda$ R=620 nm $\lambda$ G=550 nm $\lambda$ B=470 nm	±5 %
Conductivity	0 to 20 ms	±2 %
Dissolved Oxygen	0 to 14mg/l	±8 %
External Temperature	-25 to 125 °C	±2 °C
GPS	N/A	±3m
Heart Rate	0 to 240 bpm	±1 digit
Light	0 to 55,000 lx	±15 %
pH	0 to 14 pH	±2 %
Relative Humidity	0 to 100 %RH	±3.5% (20% to 80%) RH
Thermocouple	-200 to 1200 °C	±2 %
Turbidity	0 to 1000 NTU	±10 %
Universal Input	0 to 5 V	±2 %



## Analysis Software Specifications

Parameter	Description
Data Retrieval	Online up to 100 samples per second, or download Labdisc stored data
Data Display	Line graphs, bar graphs, tables, meters, Google Maps
Communication	USB 2.0, Bluetooth 2.0
Data Logging Configuration	Sensor selection, sampling rate, sampling points
Graph Manipulation	Placing and moving up to 2 markers on the graphs, zoom in/out, graph cropping, graph color change, sensor legend (allowing graph show/hide and the selection of lines/icons for the graph samples)
Graph Annotation	Text and image annotations on the graph
Mathematical Functions	Derivative, linear regression, quadratic regression, FFT
Statistics	Minimum, maximum, average, standard deviation for a selected graph
Data Manipulation	Save/open experiment data, direct export to EXCEL, display hardcopy printout
Workbook	Full suite of built-in curriculum activities
Stored Experiments	Full suite of stored experiment data
Configuration	Sensor calibration, change of sensor units
Firmware Update	Ability to update the Labdisc firmware through a USB connection
OS	PC, Mac, Linux, iPad, Android, Chromebook