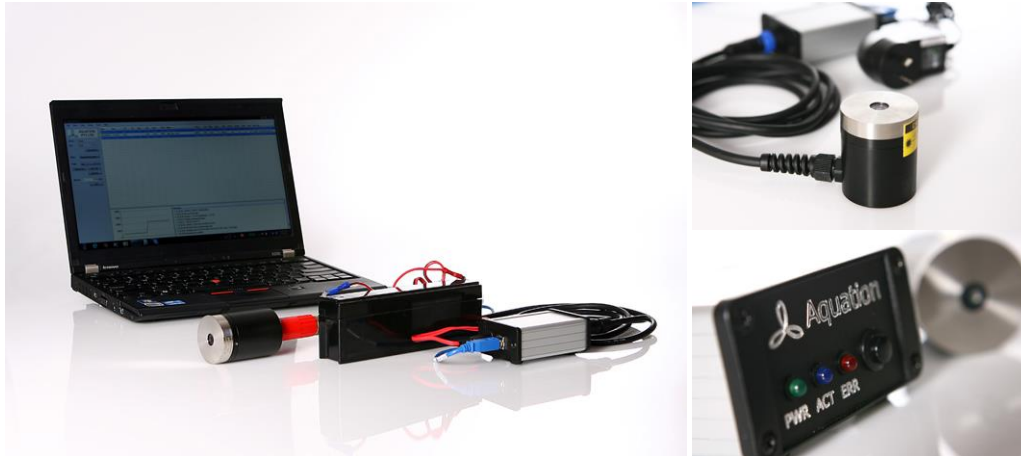# Classic Fluorometer USB Standard 50m

Aquation's **Classic Fluorometer USB Standard 50m** is designed for long-term submersion to 50m/164ft depth (sensor only). In combination with the optional light pipe assembly and the Submersible Datalogger, this sensor can be used in underwater applications where a robust and waterproof design is required. The sensor enables convenient measurement of wet material including aquatic plants, algae and wet leaves.

Benefits

- Fully waterproof sensor for field applications

- Powered from battery or mains, Repeated measurements are possible when attached to PC or datalogger

- Easy-to-use software with an uncluttered interface

- Extensive programmable capacity in software for advanced users

- Can be used in the field (Pelican or similar waterproof case for netbook and interface box recommended!)

The small size of the fluorometer (1.8"diameter, 2.7" long), and its 12-24V capability makes it easy to use in the field. On commencing measurements, one establishes a suitable gain setting with a sample leaf and a zero offset value in air or water. Chlorophyll-containing samples are then simply placed over the sampling window for single or repeated measurements. An optional clear light pipe extension enables measurement of samples 0.5m from the sensor; this is particularly useful for long term measurements where shading of the sample must be avoided.

The Classic Fluorometer USB Standard 50m is designed for underwater operation for extended periods (the sensor is waterproof to 50 m). While the sensor can be operated via computer with cable lengths up to 20 m, we recommend use of an Aquation Submersible Datalogger if depths exceed 20 m. The light pipe extension and sample holder enable continuous monitoring of a leaf, coral or alga for extended intervals where the shutter is not required.

See over for further detail.

Field Studies ☑

Pollution Studies ☑

Plant Stress Analysis ☑

Environmental Analysis ☑

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Classic Fluorometer USB Standard 50m

Features and Specifications:

- Chlorophyll fluorometer for plant physiology and chlorophyll content studies
- Fluorescence sensor with cable located at base of unit
- Sensor is waterproof to 50m/164ft
- Measures variable fluorescence of photosystem II
- Returns Fo, Fm and Fv/Fm values
- Calculates relative chlorophyll index that correlates with chlorophyll concentration
- Measures temperature in sensor
- Flexible and uncluttered software is easy to use
- User manual and software supplied
- USB connection to PC
- Unit of measure: relative fluorescence units
- Range: 0-4000
- Automatic ranging and autozero functions
- Relative chlorophyll index (function of gain and Fo)
- Temperature in ºC
- Light sources: 470nm LED (excitation), white (saturation and actinic), 735 nm (far red)
- Sensor housing: acetal, stainless steel 316
- Interface enclosure: strengthened aluminium
- Weight: Sensor and cable ~300g/10.5oz
- Dimensions: Interface 5″x2.5″x1.2″; Sensor 1.8″diameter, 2.7″ long
- Voltage: 110-240V 50-60Hz, 12-24VDC

The Classic Fluorometer USB Standard 50m can also be operated from a PC (Windows XP and later) via a standard USB cable. Both the power supply and computer are connected to the interface enclosure. A water resistant cable runs from this enclosure to the fluorescence sensor. All items are contained in a lightweight carry case that is small enough to fit in a shoulder bag.

AquationDirect is the proprietary software used to communicate with the fluorometer. The simple uncluttered approach hides features when they are not required, providing a more enjoyable user experience.

There are three levels of control:

"Profile" defines settings for each measurement (measuring light intensity, saturating pulse intensity etc.).

"Program" defines a sequence of yield measurements, actinic treatments and far-red light treatments. The intensity and duration of each light can be defined. A Light Curve and Recovery Curve generator provides flexible generation of curves with user defined actinic intensities and durations. Even reverse light curves can be defined if required.

"Schedule" simply schedules a series of Programs, where one may wish to run different programs during the early morning program, midday, afternoon and night time.

Above: Classic Fluorometer Standard 50m Fluorescence Sensor with light pipe extension, sample holder and Submersible Datalogger.

Above: Classic Fluorometer Standard 50m Fluorescence Sensor