

## Classic Fluorometer Series



Aquation's **Classic Fluorometers** measure variable chlorophyll fluorescence including  $F_0$ ,  $F_0'$ ,  $F_m$ ,  $F_m'$ ,  $F_v/F_m$  and  $\phi_{II}$ . They can be used on the bench and in the field. The water-resistant sensor enables convenient measurement of wet material including aquatic plants and coral. USB and wireless options are available.

### Description

Aquation's **Classic Fluorometers** use the PAM measuring technique to measure the variable fluorescence of photosystem II, returning values of  $F$ ,  $F_0$ ,  $F_m'$ ,  $F_m$ ,  $F_v/F_m$ ,  $\phi_{PSII}$ , and other calculated values (e.g.  $\phi_{NO}$ ,  $\phi_{NPQ}$ ). These easy-to-use PAM fluorometers are used in physiological studies of terrestrial plants, seagrasses, coral, macroalgae and microalgae. Chlorophyll concentration is estimated with a relative chlorophyll index derived from  $F_0$ . The wireless option allows the computer to be located away from water yet within wireless range; the fully waterproof fluorescence sensor can be used in aquaria studies and is available with a flat base for benchtop work or with the cable entering from the base. All commands are provided via a PC.

### Features

- Measures variable fluorescence of chlorophyll
- Uses PAM method
- Far red light for PSII deactivation
- Automatic ranging and autozero functions
- Fully waterproof for field and wet-lab applications
- Wireless or USB link to PC
- Sensor with flat base or cable extending from base
- Repeated measurements are possible when attached to PC or datalogger
- Easy-to-use software with an uncluttered interface
- Pre-programmed light curves are available

### Benefits

- Widely used measuring technique directly comparable with other published work
- Wireless link protects your computer
- Specific physiological questions can be addressed at different times of day
- Far red light enables true measurement of  $F_0'$ , used in quenching analysis



<https://aquation.com.au/products/classic-fluorometer/>



## Specifications

Measured parameters	F, Fo, Fo', Fm, Fm'
Calculated parameters	$\phi_{II}$ , Fv/Fm, $\phi_{NO}$ , $\phi_{NPQ}$ , qP, qN
Actinic Light (white LED)	4500 $\mu\text{mol quanta m}^{-2} \text{s}^{-1}$
Saturating Light (white LED)	10500 $\mu\text{mol quanta m}^{-2} \text{s}^{-1}$
Measuring light (470 nm LED)	0.1W
Far red light (735 nm LED)	
Voltage	40 $\mu\text{mol quanta m}^{-2} \text{s}^{-1}$
Communication	110 to 240 VAC, or 12 V DC
Control	USB or 2.4 GHz
Temperature range	Windows PC (or Windows emulator) 0 to 45°C (operating) -5 to 60°C (storage)
Dimensions (sensor)	45mm (2.4") dia. x 55mm (2.4") long
Dimensions (interface box)	127 x 63 x 30 mm (5" x 2.5" x 1.2")
Weight	Sensor and cable 250g/8.8oz
Housing material	Acetal and 316 Stainless Steel

## Options

**Wireless:** Radio link connects Interface box and sensor to PC, range to 500 m.

**USB:** direct link connecting interface box and sensor.

**Benchtop:** sensor with flat base for benchtop work.

**Base-entry:** cable enters base of sensor for process applications.

**Deepwater:** specialised connector enables operation to 5 bar.

	PC to sensor communication	
	Wireless	USB
Benchtop	yes	yes
Base-entry	yes	yes
Deep-water	yes	yes

## Applications

- Plant physiology
- Stress monitoring
- Chlorophyll concentration
- Research
- Undergraduate teaching



Wireless Interface Box



Benchtop sensor with USB Interface Box, cables and powerpack



### Classic Fluorometer Sensors:

- Benchtop (above)
- Deep-water (lower left)
- Base-entry (lower right)

