

Seapoint Fluorescein Fluorometer



Features

- w Low power requirements
- w Can be used in pumped or open deployments
- w 6.6" (16.8 cm) L x 2.5" (6.4 cm) D
- w 6000 m depth capability
- w Good ambient light rejection
- w Linear output with fluorescein concentration
- w Range settings of 5, 15, 50 and 150 $\mu\text{g/l}$ selected externally via two control lines
- w Low temperature coefficient
- w Pin compatible with other Seapoint sensors
- w Interfaces easily with data acquisition systems
- w Rugged, corrosion-free materials

Applications

- w Trace Studies
- w Leak Detection

Description

The Seapoint Fluorescein Fluorometer (SFF) is a high-performance, low power instrument for *in situ* measurements of fluorescein dye.

Its small size, very low power consumption, high sensitivity, wide dynamic range, 6000 meter depth capability, and open or pump-through sample volume options provide the power and flexibility to measure fluorescein in a wide variety of conditions.

The SFF uses modulated LED lamps and excitation filter to excite fluorescein present in water. The fluorescent light emitted by the fluorescein passes through an emission filter and is detected by a silicon photodiode. The low level signal is then processed using synchronous demodulation circuitry which generates an output

voltage proportional to fluorescein concentration.

The SFF may be operated with or without a pump. The sensing volume may be left open to the surrounding water, or, with the use of the supplied cap, can have water pumped through it.

Two control lines allow the user to set the sensitivity to one of four options. These lines may be hardwired or microprocessor controlled to provide a suitable range and resolution for a given application.

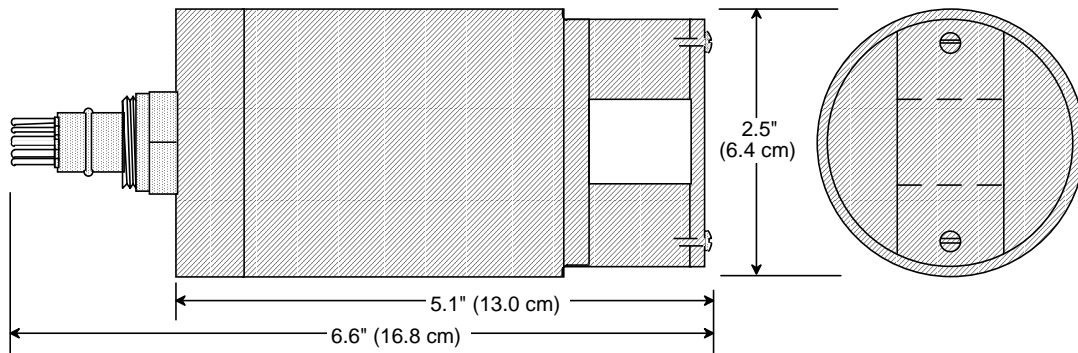
The sensor is easily interfaced with data acquisition packages; a 5 ft. pigtail is supplied. Custom configurations are available.

Specifications

w Power Requirements	8.5-20 VDC, 27 mA avg., 50 mA pk.		
w Output	0-5.0 VDC		
w Output Time Constant	1.0 sec.		
w Excitation Wavelength	475 nm CWL, 30 nm FWHM		
w Emission Wavelength	530 nm CWL, 30 nm FWHM		
w Sensing Volume	340 mm ³		
w Minimum Detectable Level	0.02 µg/l		
w Sensitivity/Range	<u>Gain</u>	<u>Sensitivity, V/(µg/l)</u>	<u>Range, µg/l</u>
	30x	1.0	5
	10x	0.33	15
	3x	0.10	50
	1x	0.033	150
w Depth Capability	6000 m (19,685 ft)		
w Weight (dry)	1000 g (2.2 lbs)		
w Operating Temp.	0°C to 65°C (32°F to 149°F)		
w Material	Rigid cast polyurethane, epoxy		
w Underwater Connector	Impulse AG-306/206 (others available on request)		

Dimensions

Open Configuration (no pump)



Pumped Configuration

