

PAR Sensor

Photosynthetically Active Radiation Sensor



Applications

- Oceanographic and Freshwater Productivity Studies
- Vertical Profiling
- Laboratory Photosynthetic Physiology Studies
- Agronomic and Terrestrial Productivity Studies
- Meteorological Stations

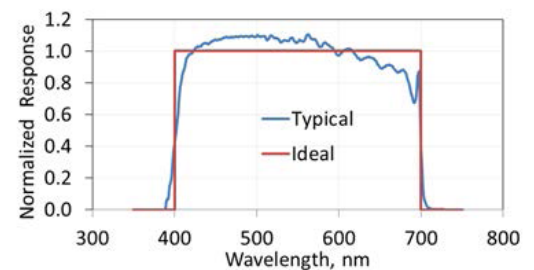
Options

- Integrated temperature and tilt sensors for serial option
- Optics: In Air | In Water
- Housing: 1000m Plastic | 7000m Titanium
- Data output: Serial ASCII | Linear Analog | Logarithmic Analog
- Easy integration with Sea-Bird Electronics CTD platforms

From limnologists and oceanographers to plant and crop physiologists, scientists trust Satlantic PAR sensors to provide superior data quality and rugged construction to withstand harsh field conditions.

Features

The ideal spectral response for a PAR sensor gives equal emphasis to all photons between 400 and 700 nm. Satlantic PAR sensors use a high quality filtered silicon photo diode to provide a near equal spectral response across the entire wavelength range of the measurement.



Tilt

- Tilt sensor reports two axis pitch and roll, to 0.1 degree resolution.
- Accuracy is approximately 1 degree

Optical

Spectrum:	400 – 700 nm
PAR Range:	0 - 5000 $\mu\text{mol photons m}^{-2} \text{ s}^{-1}$
Spatial:	cosine response
Cosine error:	0° – 60° <3% 60° – 85° <10%
Collector area:	86 mm ²
Detector:	17 mm ² silicon photodiode



Electrical

Input Voltage:	6 – 28 VDC
Current Draw:	17 mA @ 12 VDC
Connector:	Subconn MCBH4M or MCBH8M (serial)
Auxiliary Sensors	Integrated temperature and tilt sensors for serial option



Telemetry

Sample Rate:	100 Hz maximum
Digital Output:	RS-232 ASCII, up to 100 Hz
Analog Signal Output:	0.125 - 4.0 V
Analog Signal Scaling:	linear or logarithmic



Physical

Weight (in air):	88g (plastic) or 182g (titanium)
Weight (in water):	39 g (plastic) or 133 g (titanium)
Depth Rating:	1000 m (plastic) or 7000 m (titanium)
Length:	139 mm (with connector) 89 mm (housing)
Diameter:	25 mm

