

# ECO V2 | Gliders, AUVs, & Integrators

DYNAMIC RANGE OPTICAL SENSORS

## Overview

Dive into the next generation of optical monitoring with Sea-Bird Scientific's cutting-edge ECO V2 Series. The ECO V2 series offers an impressive dynamic range, seamlessly transitioning from the deep blue ocean to coastal waters, all while delivering 16-bit resolution and enhanced signal-to-noise ratios across up to four channels.

The ECO V2 Series is a game-changer for biological monitoring and dye trace studies. Its robust potted optics block ensures long-term sensor stability, and with the optional anti-biofouling technology, you can achieve truly extended field measurements without compromising accuracy.

The ECO V2 Series offers a multitude of variations and configurations of components to maximize the quality and outcomes of your research. A flexible yet precise sensor package can cover the full range of natural waters, allowing for easier and more reliable research, decision making, and predictions.

The ECO V2 can be deployed independently or can be integrated within other platforms, including glider systems to garner a host of measurement parameters.



## Features

- **High Dynamic Range** – One range that covers all natural waters requiring fewer sensors to provide more data.
- **User-Friendly Software** – ECO V2 uses UCI and is compatible for Windows and Mac.
- **System in a Sensor** – The 4-measurement sensor option delivers even more versatility and cost savings. It eliminates cables, reduces weight, and provides better, integrated data.
- **Better Data Logging** – With a wider dynamic range, increased resolution and data-handling speeds.
- **Extended Deployments** – Through optional integrated battery packs and active and passive anti-fouling technologies up to 6000 meters.
- **FDOM Sensitivity** – 5x more sensitive FDOM measurement.
- **Consistently Accurate Data** – Through onboard quality assessment and quality control (QA/QC).
- **Extended Battery Life** – Increased battery life and new battery pack option that is interchangeable with the SBE 37 and much easier to replace than the ECO Classic batteries.

## Instrument Integrations

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### Field Specifications

The specifications below represent the expected performance of the instrument when deployed in the field. Under controlled circumstances in a lab, we would expect the instrument to outperform these specifications.

We have chosen to display field specifications to give our users a true measure of how Sea-Bird Scientific instruments perform in harsh environments and applications. It is critical to keep this in mind when comparing specifications with instruments from other manufacturers.

Optical		Electrical	
Scattering (700)	412 to 880 nm	Digital output resolution	16 bit
Resolution (max)	3.60E-06 m-1 sr-1	Input	7-20 VDC
Range	0.95 m-1 sr-1	Analog output signal	0-5V
Turbidity	700 nm	Linearity	999% R <sup>2</sup>
Resolution (max)	1.32E-03 NTU/count	Data storage	
Range	0-1000 NTU	RS232 Output	19200 baud
Chlorophyll(EX/EM)	470/695 nm	Sample rate	User-selectable from 0.5 - 8 Hz
Resolution (max)	0.016 µg/L/count	Current, typical	60 mA
Range	0-400 µg/L	Current, sleep	150 uA
fDOM EX/EM	370/460 nm	Data validation	Data validation flags provided
Resolution (max)	0.016 ppb/count	RMS noise	2 counts
Range	0-900 ppb	Instantaneous noise	± 5 counts
Mechanical		Environmental	
Diameter	6.99cm	Temperature Range	0 – 50 °C
Connector	Hirose DF11-6DS	Storage Temperature Range	-20 – 50 °C
Length	5.82cm	Depth Rating	1000 m
Weight in air, water	0.35 kg		
Materials	Aluminum, copper		