

Sea Tech Light Back-Scattering Sensor

Description

The Light Back-Scattering Sensor, (LBSS) projects light into the sample volume using two modulated 880 nm Light Emitting Diodes. Light back-scattered from the suspended particles in the sample volume is measured with a solar-blind silicon detector. A light stop between the light source and light detector prevents the measurement of direct transmitted light so that only back-scattered light from suspended particles in water are measured.

The sensor has two ranges permitting the user to measure nearly all suspended particle concentrations found in open ocean or coastal waters. Range for the measurement of suspended particle concentration in water will be approximately 10 mg/l if High-Gain is selected. If Low-Gain is selected full scale will be a factor of 3.3 higher or approximately 33 mg/l.

SPECIFICATIONS

Range: \approx 10 mg/l on High-Gain, \approx 33 mg/l on Low-Gain

Resolution: 0.01% of full scale, \approx 1 μ g/l

Sensor Output: 0 to 5 VDC

Time Constant: \leq 0.1 Second

Power: 9 to 28 VDC @ \approx 22 ma

Sensor Turn on Time: \approx 1 second

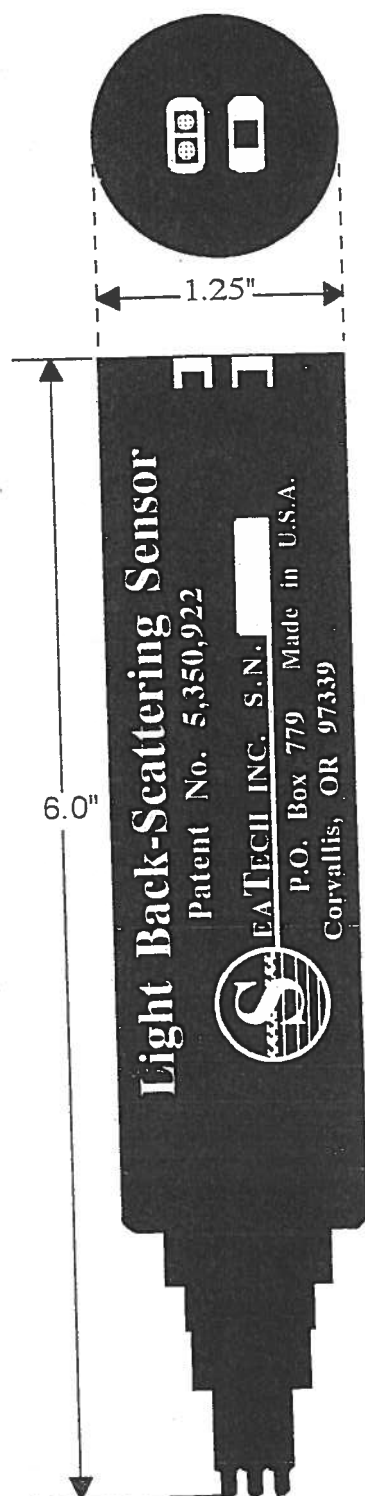
Temperature Stability: \approx 0.5%, 0-50°C

Depth: 6000 meters

Size: 3.2 cm, (1.25") Diameter, 14 cm, (5") Length

Weight: 0.26 kg in air, 0.13 kg in water

Material: ABS Plastic housing filled with epoxy,
clear epoxy optical windows



(Actual Size)