Beam Transmissometer

WET Labs

c-Rover

The CRV5 transmissometer specifically designed for profiling floats where buoyancy is a primary consideration. It features low power consumption and weighs just 0.57 kg in water. For comparison, the deep C-Star transmissometer weighs 2.7 kg in water. The weight saving design makes the CRV5 a relatively delicate instrument. It is not rugged enough for normal ship-based operations.

The CRV5 is available in two wavelengths:

- Red (650 nm): Best for particle dynamics, e.g. mass concentration estimates.
- Green (530 nm): Best for estimates of in-situ visibility.

Specifications

Mechanical

Height	58.4 cm
Diameter	6.91 cm
Weight in air	1.9 kg
Weight in water	0.57 kg
Internal air volume	636 cc

Electrical

Output resolution	14 bit
RS-232 output	19200 baud
Connector (PEEK)	MCBH-6-MP
Power input	7.5–15 VDC
Operating current, typ., 532 and 650 nm	35 mA
Operating current, max., 532 and 650 nm	50 mA
Sample rate	to 8 Hz

Optical

Wavelengths	532, or 650 nm
Optical pathlength	25 cm
Acceptance angle	~ 1.4 deg
Precision, 532 and 650 nm	0.002 m^{-1} @1 Hz
Linearity	>99% R^2

Environmental

Rated depth	2000 m
Temperature range	-2 – 40 deg C
Temperature stability cycled over 38–3–20 ° C	0.02% FS/deg C
Long term stability (6 hrs)	0.02% FS/Hr

Specifications are subject to change without notice.