

## acs – In-situ Spectrophotometer



Based on the highly successful ac-9, the ac-spectra (ac-s) offers almost an order of magnitude increase in spectral resolution of in-situ absorption and beam attenuation coefficients. The ac-s features a proven flow-through system, compact size, and excellent stability. With 80+ wavelength outputs from 400–730 nm, the 4 nm resolution allows for spectral “fingerprinting” and deconvolution analysis. The ac-s employs a 25-cm pathlength for effective measurement of the cleanest natural waters.

### Specifications:

#### Mechanical

<i>Diameter</i>	10.4 cm
<i>Length</i>	79 cm
<i>Weight in air</i>	5.9 kg
<i>Weight in water</i>	0.80 kg
<i>Pressure housing</i>	Acetal copolymer

#### Electrical

<i>Input</i>	10–35 VDC
<i>Current draw</i>	0.83 A @ 12 V nominal
<i>Serial output</i>	RS-232, -422, or -485
<i>Connector</i>	MCBH6M
<i>Sample rate</i>	4 scans/sec., nominal

#### Environmental

<i>Temperature range</i>	0–30 deg C
<i>Depth rating</i>	500 m

#### Optical

<i>Spectral range</i>	400–730 nm
<i>Bandpass</i>	15 nm/channel
<i>Pathlength</i>	10 or 25 cm
<i>Beam cross-section</i>	8 mm dia. (nominal)
<i>Linearity</i>	≥ 99% R <sup>2</sup>
<i>Output wavelengths</i>	80–90
<i>Resolution</i>	4 nm
<i>Precision</i>	
	(450–730 nm)
	+/-0.001 m <sup>-1</sup> typ., 0.003 m <sup>-1</sup> max @ 4 Hz
	+/-0.0005 m <sup>-1</sup> typ., 0.0015 m <sup>-1</sup> max @ 1 Hz
	(400–449 nm)
	+/-0.005 m <sup>-1</sup> typ., 0.012 m <sup>-1</sup> max @ 4 Hz
	+/-0.003 m <sup>-1</sup> typ., 0.006 m <sup>-1</sup> max @ 1 Hz
<i>Accuracy</i>	+/-0.01 m <sup>-1</sup>
<i>Dynamic range</i>	0.001–10 m <sup>-1</sup>

REF – acs iss A APR 2009

Specifications subject to change without notice