

SH-UVFS200 UV full spectrum absorption probe

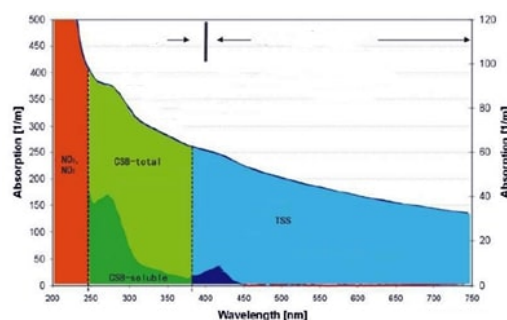
● Overview

The Full Spectrum UV absorption probe uses UV-Vis absorption technology to obtain the corresponding pollutant levels in water samples through dual-beam compensation combined with chemometric algorithmic analysis. The complete measurement system is composed by the measurement probe, the controller, the connecting cable (standard 10 meters), the mechanical brush and PC SW license.



● Measurement technique

Different pollutants in the water body have certain characteristics of light absorption at different wavelengths (water absorption spectral fingerprint), as shown in the following figure. Full-spectrum water quality probe detects the pollutants in the water body using 190nm ~ 750nm band absorption spectrum and chemometric mapping relationship, so as to obtain the analysis of water samples COD, TOC, BOD5, turbidity, color, TSS, nitrate, pollutant content.



● Product features

- Full-spectrum detection technology, no reagents, no secondary pollution
- Modular design of cleaning brushes, easy to replace, low maintenance costs
- Dual beam detection, automatic compensation for light source attenuation
- High measurement accuracy
- 4 kinds of variable optical range block, fast response time, 10 seconds fast response.

● Probe technical specifications

Measured wavelength	190~750 nm
Path length	35 / 15 / 5 mm, to be selected
Detection indicators	COD, TOC, BOD, Nitrate, Turbidity, TSS, Color, SAC254
Response time	≤10 seconds
Measurement range (35 mm path length)	COD: (0~70) mg/L; TOC: (0~30) mg/L; Nitrate: (0~5) mg/L Turbidity: (0~200) NTU; TSS: (0~100) mg/L; Color: (0~300) Hazen; SAC254: (0 to 70) Abs/m.
Measurement range (15mm path length)	COD: (0 to 165) mg/L TOC: (0 to 70) mg/L; Nitrate: (0~15) mg/L; Turbidity: (0~465) NTU; TSS: (0~230) mg/L; Color: (0~700) Hazen; SAC254: (0 to 165) Abs/m.
Measurement range (5mm path length)	COD: (0-500) mg/L; TOC: (0-210) mg/L; Nitrate: (0~50) mg/L; Turbidity: (0~1400) NTU; TSS: (0~700) mg/L; Color: (0~2100) Hazen; SAC254: (0 to 500) Abs/m.
Performance indicators	Accuracy: not more than ±5.0% F.S.; Repeatability: ≤2.0%; Zero drift: not more than ±2% F.S.;
Automatic cleaning	Mechanical brush can be set to clean the optical window at regular intervals
Serial connection	RS485
Power supply	24 Vdc / 10 W
Operating temperature	0~50 °C
Body material	AISI 316 stainless steel
Protection class	IP68
Dimensions	44 (Φ) * 533 (L) mm
Weight	about 2.5 Kg.

● Controller technical specifications

User interface	7-inch color touch screen
Power supply	220VAC or 24VDC
Communication method	4G, HJ-212 compliant
Protection class	IP65
Operating temperature	-20~60°C
Dimensions	223 (L) * 199 (W) * 116 (H) mm

- **External mechanical brush technical specifications (not applicable for 1 mm pathlength model)**

Cleaning method	Automatic cleaning/manual cleaning
Control method	Switching signals
Operating temperature	(0~50) °C
Power supply	12VDC/1W
Protection class	IP68
Dimensions	184 (L) x 85 (W) x 63 (H) mm

- **Flow-cell technical specifications**

Internal volume	Around 100 mL
Inlet/Outlet Pipe diameter	Outer diameter 8 mm, inner diameter 5mm
Materials	Main body: polyurethane; viewing window: plexiglass
Dimensions	184 (L) x 85 (W) x 63 (H) mm

- **Product applications**

- Surface water, sewage plant process sections, storm sewerage network, river outfalls