VIPER

17SXXXXX0

VIPER measures the spectrally resolved light attenuation in the wavelength range from 360 to 720 nm and thus enables the simultaneous, precise determination of several parameters. Five selected, energy-saving LEDs serve as the light source and ensure stable measurement results and a long service life.

The sensor is available in various path lengths as well as in stainless steel and titanium versions, allowing it to be used flexibly in a wide variety of media - for example for water monitoring, color measurement of aqueous solutions or for quality control of drinking water.

Like all TriOS sensors, VIPER is equipped with nano-coated optical windows that effectively prevent fouling. Additional parameters can be installed subsequently via software if required.

Thanks to the integrated TriOS G2 interface, sensor configuration is particularly easy: it is carried out directly via a web browser. This makes integration into existing process control systems and external data loggers easier than ever before.

The TriOS compressed air flushing is also available for the 100 mm, 150 mm and 250 mm paths!

Advantages

- Without sampling and sample preparation
- Delay-free
- Without reagents
- Optical windows with nano coating
- LED technology

Applications

- Environmental monitoring
- Color measurement
- Seawater, brackish water
- Drinking water monitoring
- Filter Monitoring / Reverse Osmosis
- Waste water treatment
- Trace substance elimination
- Industrial applications

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Technical specifications

Measurement technology	**Light source**	5 LED
	Detector	High-end miniature spectrometer
		256 channels
		360 to 720 nm, 2.2 nm/pixel
Measurement principle		Attenuation
Optical path		10 mm, 50 mm, 100 mm, 150 mm, 250 mm

Parameters	SAK_{436}
	Pt-Co color number (APHA/Hazen) (390 nm, 455 nm)
	Coloring based on DIN EN ISO 7887-C (410 nm, 436 nm, 525 nm, 620 nm)
	Cr-Co color number (380 nm, 413 nm)
Measurement range	0.01...2.5 AU (absorption units)
Measurement accuracy	< 0.2 %
Turbidity compensation	Yes
Data logger	~ 2 GB
Response time T100	2 min
Measurement interval	≥ 1 min

Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)	
Dimensions (L x Ø)		495 mm x 48 mm*	~ 19.5″ x 1.9″*
Weight	**VA**	~ 2.4 kg*	~ 5.3 lbs*
	Ti	~ 1.3 kg*	~ 2.9 lbs*

* With 50 mm path

Interface	**digital**	Ethernet (TCP/IP)
		RS-232 or RS-485 (Modbus RTU)
Power consumption		≤ 3 W

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Power supply		12 - 24 VDC (± 10 %)	
Maintenance effort		≤ 0.5 h/month typical	
Calibration/ maintenance interval		24 months	
System compatibility		Modbus RTU	
Warranty		1 year (EU: 2 years)	
Max. pressure	**with SubConn**	30 bar	~ 435 psi
	with fixed cable	3 bar	~ 43.5 psi
	in FlowCell	1 bar, 2...4 L/min	~ 14.5 psi, 0.5 to 1.0 gpm
Degree of protection		IP 68	
Sample temperature		0...+55 °C* +2...+40 °C for specified measurement accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
Ambient temperature		0...+55 °C* +2...+40 °C for specified measurement accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
Storage temperature		-20...+80 °C	~ -4 to +176 ˚F
Inflow velocity		0.1...10 m/s	~ 0.33 to 33 fps

* No ice crystals in the sample water

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