



LISA color

5XSXXXXX0



Color measurement

In drinking water treatment, “color” is an important indicator of risks from unwanted disinfection by-products, including trihalomethanes and haloacetic acids. TriOS offers LISA color with innovative LED technology for this purpose.

This immersion sensor uses two different LEDs for long-term stable measurement of the SAC or color at different wavelengths. The second channel is used for turbidity/ background correction.

Thanks to the modern device platform, which is also used in all other TriOS photometers, optical paths of 50, 100, 150 and 250 mm are available, making it easy to implement almost any application. Thanks to the optional titanium housing, LISA color is also available for applications in aggressive media (e.g. high chloride concentrations).

In addition, LISA color is equipped with the innovative G2 interface with web browser configuration, internal data logger, flexible protocols and data outputs. The uniform device platform of all TriOS photometers stands for a standardized replacement and consumables system, which enables the use of the wide range of accessories for our devices. The modern G2 interface also offers fast integration into third-party systems.

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

Advantages

- Without sampling and sample preparation
- Delay-free
- Without reagents
- Robust housing
- Reliable and cost-effective

Applications

- Environmental monitoring
- Color measurement
- Drinking water treatment
- Filter Monitoring / Reverse Osmosis
- Industrial applications
- Waste water treatment

Technical specifications

Measurement technology	Light source	2 LEDs	
	Detector	photodiode	
Measuring principle		Attenuation, Transmission	
Optical path		1 mm, 2 mm, 5 mm, 10 mm, 50 mm, 100 mm, 150 mm, 250 mm	
Parameters		SAC ₄₃₆ , SAC ₅₂₅ , SAC ₆₂₀	
		Color (based on DIN EN ISO 7887) (410 nm, 436 nm, 525 nm, 620 nm)	
		Pt-Co color number (APHA/Hazen) (390 nm or 455 nm)	
		Cr-Co color number (380 nm or 413 nm)	
Measuring range		See parameter list for measuring ranges below	
Measuring accuracy		0,5 %	
Turbidity compensation		Yes, 740 nm	
Data logger		~ 2 MB	
Response time T100		4 s	
Measuring interval		≥ 2 s	
Housing material		Stainless steel (1.4571/1.4404) or titanium (3.7035)	
Dimensions (L x Ø)		340 mm x 48 mm*	~ 13.4" x 1.9" *
Weight	VA	~ 2.4 kg*	~ 5.3 lbs*
	Ti	~ 1.3 kg*	~ 2.9 lbs*

*for 50-mm path

Interface	digital	Ethernet (TCP/IP)
		RS-232 or RS-485 (Modbus RTU)
	analog	Ethernet (TCP/IP)
		4 .. 20 mA, max. load: 500 Ohm
Power consumption		≤ 1 W

Power supply	12 - 24 VDC ($\pm 10\%$)
Maintenance effort	≤ 0.5 h/month typical
Calibration/ maintenance interval	24 months
System compatibility	Modbus RTU
	Analog Out (4 .. 20 mA)
Warranty	1 year (EU & USA: 2 years)

Max. pressure	with Sub-Conn	30 bar	~ 435 psi
	with fixed cable	3 bar	~ 43.5 psi
	in flow unit	1 bar, 2...4 L/min	~ 14.5 psi, 0.5 to 1 gpm
Degree of protection		IP68	

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 fps to 33 fps

* No ice crystals in the sample water

Measurement ranges



150 mm



50 mm

NOTICE

The transmission at 740 nm must not fall below 33 %, otherwise the turbidity content in the medium is too high and the path must be shortened.

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Parameters	Unit	Measurement range							
		1 mm*	2 mm*	5 mm*	10 mm	50 mm	100 mm	150 mm	250 mm
SAC 436 nm	1/m	5...1500	2,5...750	1...300	0,5...150	0,1...30	0,05...15	0,03...10	0,02...6
SAC 525 nm	1/m	5...1500	2,5...750	1...300	0,5...150	0,1...30	0,05...15	0,03...10	0,02...6
SAC 620 nm	1/m	5...1500	2,5...750	1...300	0,5...150	0,1...30	0,05...15	0,03...10	0,02...6
True color 410 nm	mg/L Pt	100...28000	50...14000	20...5600	10...2800	2...560	1...280	0,6...185	0,4...110
Pt-Co 390 nm**	mg/L Pt	40...11000	20...5500	8...2200	4...1100	0,8...220	0,4...110	0,3...75	0,2...45
Pt-Co 455 nm**	mg/L Pt	200...55000	100...22500	40...11000	20...5500	4...1100	2...550	1,5...360	0,8...220
Cr-Co 380 nm	° (color degree)	50...15000	25...7500	10...3000	5...1500	1...300	0,5...150	0,3...100	0,2...60
Cr-Co 413 nm	° (color degree)	200...55000	100...22500	40...11000	20...5500	4...1100	2...550	1,5...360	0,8...220

* Theoretical measurement ranges ** The Pt-Co scale (Hazen) ends at 500 mg/L Pt