Bluetooth™

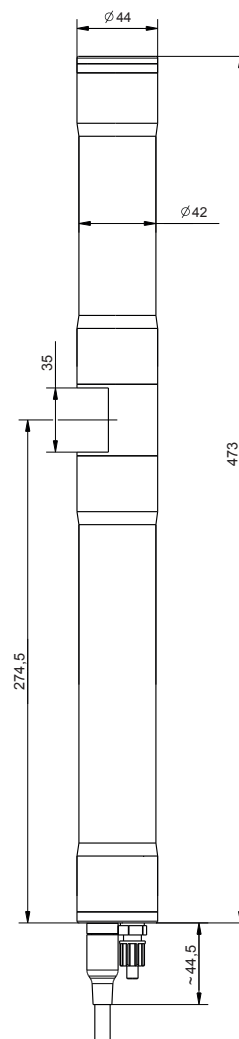# spectro::lyser® V3

spectro::lyser™ UV-Vis monitors depending on the application an individual selection of: TSS, turbidity, color, TOC, DOC, BOD, COD, NO_3-N, NO_3^-, chloramine, HS^-, O_3, CLD, Chl-a, BTX, UV254, fingerprints, spectral alarms and temperature

· measuring principle: UV-Vis spectrometry over the total range (190-750 nm)
· web server on board - IoT enabled, no user software is needed to configure the probe
· communicates directly with your mobile device via Bluetooth or WLAN
· choose exactly the parameters you want to measure – unlimited number of parameters possible
· 8 GB onboard memory - capacity for logging data for many years
· improved optical performance - revolutionary precision
· fast measurement interval - every 10 seconds possible
· extremely power efficient - sleep mode for low energy consumption
· multiparameter probe with 1 mm, 5 mm or 35 mm optical path length, ideal for waste water, surface water and drinking water
· long term stable and maintenance free in operation
· factory precalibrated, local multi-point calibration possible
· automatic cleaning with compressed air or brush/ruck::sack

recommended accessories	
part number	article name
B-32-xxx	s::can compressor
B-33-012	con::nect V3
B-44 B-44-2	cleaning valve
D-330-xxx	con::cube V3
F-110-V3	carrier s::can spectrometer V3 & V2 probe, 45 degree
F-120-V3	carrier s::can spectrometer V3 & V2 probe, vertical
F-446-V3	flow cell (by-pass fitting), AutoBrush, POM-C (for spectro::lyser V3 & V2 pathlength 35 mm)
S-11-xx-moni	moni::tool Software

technical specification

measuring principle	UV-Vis spectrometry 190 - 750 nm		status information	RGB LED ring
measuring principle detail	xenon flash lamp, pixel array detector		internal sensors	supply voltage sensor, tilt sensor, rotation sensor
automatic compensation instrument	real dual beam measurement for compensation and detailed diagnostics		cable length	1 m fixed cable (-010) or 7.5 m fixed cable (-075) or 15 m fixed cable (-150) or 30 m fixed cable (-300)
automatic compensation of cross sensitivities	turbidity / solids / organic substances		cable type	PU jacket
precalibrated ex-works	all parameters		housing material	stainless steel 1.4404
accuracy standard solution (>1 mg/l)	NO_3-N: +/- 2% +1/OPL[mg/l]* COD-KHP: +/-2% +10/OPL[mg/l]* (* OPL … optical pathlength in mm)		window material	optical path length 5 and 1 mm: sapphire optical path length 35 mm: fused silica (UV-grade)
access to raw signals	access to spectral information		weight (min.)	3.4 kg (incl. cable)
reference standard	distilled water		dimensions (Ø x l)	optical path length 35 mm: 44 x 473 mm / 517.5 mm optical path length 5 mm: 44 x 457 mm / 501.5 mm optical path length 1 mm: 44 x 453 mm / 497.5 mm
onboard memory	8 GB			
integrated temperature sensor	0 … 45 °C			
resolution temperature sensor	0.1 °C			
integration via	con::cube V3 (D-330-xxx) con::nect V3 (B-33-012) con::lyte V5 (D-320-pro2) and adapter cable (C-32-V3)		operating temperature	0 … 45 °C
			storage temperature	-10 … 65 °C
power supply	10 … 18 VDC		operating pressure	0 … 3 bar
power consumption (typical)	3 W		high pressure specification (optional)	10 bar
power consumption (sleep mode)	60 mW		installation / mounting	submersed or in a flow cell
power consumption (max.)	20 W		flow velocity	3 m/s (max.)
interface to s::can terminals	M12 RSTS 8Y (IP67), RS485, Ethernet		mechanical stability	30 Nm
			ingress protection class	IP68
interface to third party terminals	con::nect V3 incl. Modbus RTU, REST API		automatic cleaning	media: compressed air or autobrush permissible pressure: 3 ... 6 bar
digital interface (for cleaning devices)	1 digital in/out 1 digital out		conformity environmental testing	EN 60721-3
			conformity - EMC	EN 61326-1
network connection	100Base-T Ethernet, Bluetooth, WLAN		conformity - RoHS2	EN 50581
			standard warranty	2 years
measurement interval	10 sec (configurable, depending on application)		extended warranty (optional)	3 years

ground water

spectro::lyser™ V3 (35 mm OPL, UV-Vis)	parameter*											
	turbidity [NTU/FTU]	color (app) [Hazen]	color (true) [Hazen]	TOC [mg/l]	DOC [mg/l]	NO$_3$-N [mg/l]	NO$_3^-$ [mg/l]	HS$^-$ [mg/l]	BTX [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
min.	0	0	0	0	0	0	0	0	0	0	0	SP3-1-35-NO-xxx
max.	170	500	300	71	60	20	88	5	51	71	60	
parameter part no.	GC-G-TURB	GC-G-COL		GC-G-TOC		GC-G-NO3-N		GC-G-HS	GC-G-BTX	GC-G-UV254		

surface water

	parameter*																
spectro::lyser™ V3	TSS [mg/l]	turbidity [NTU/FTU]	color (app) [Hazen]	color (true) [Hazen]	TOC [mg/l]	DOC [mg/l]	BOD [mg/l]	COD [mg/l]	COD f [mg/l]	NO$_3$-N [mg/l]	NO$_3^-$ [mg/l]	Chl-a [µg/l]	HS$^-$ [mg/l]	BTX [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
(35 mm OPL, UV-Vis) min.	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	SP3-1-35-NO-xxx
max.	170	200	500	300	30	25	42	71	42	15	66	100	5	51	71	60	
(5 mm OPL, UV-Vis) min.	0	0	0	0	0	0	0	0			0		0	0	0	0	SP3-1-05-NO-xxx
max.	1200	1400	3500	2100	210	180	300	500	300	100	460	700	35	360	500	420	
parameter part no.	GC-R-TSS	GC-R-TURB	GC-R-COL		GC-R-TOC	GC-R-BOD		GC-R-COD		GC-R-NO3-N		GC-R-CHL-A	GC-R-HS	GC-R-BTX	GC-R-UV254		

drinking water

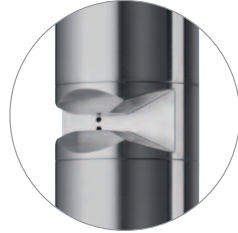| spectro::lyser™ V3 (35 mm OPL, UV-Vis)	parameter*											
	turbidity [NTU/FTU]	color (app) [Hazen]	color (true) [Hazen]	TOC [mg/l]	DOC [mg/l]	NO$_3$-N [mg/l]	NO$_3^-$ [mg/l]	Chloramine [mg/l]	O$_3$ [mg/l]	CLD [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
min.	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-35-NO-xxx
max.	170	500	300	22	17	20	88	42	25	22	71	60	
parameter part no.	GC-D-TURB	GC-D-COL		GC-D-TOC		GC-D-NO3-N		GC-D-CHLORAMINE	GC-D-O3	GC-D-CLD	GC-D-UV254		

*measurable concentration ranges may vary due to water matrix
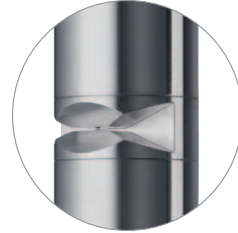
The perfect accuracy for every application

The spectro::lyser V3 is available with three different optical path lengths.
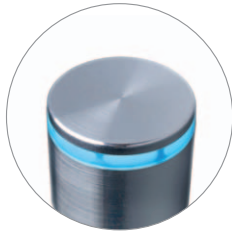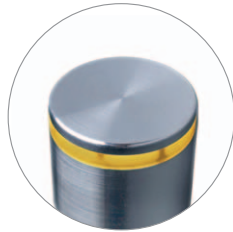
drinking water:

35 mm

surface water:

5 mm

waste water:

1 mm

Optical information ring

The color of the optical information ring signals the state of the sensor.

everything
okay

sensor in
service mode

parameter or device
error

Wireless communication - Io::Tool

Intuitive web interface for data visualization and configuration of the spectro::lyser V3.