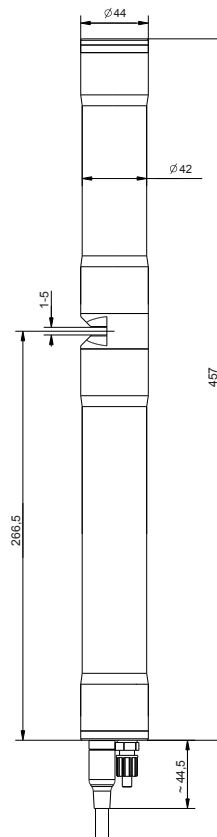




# spectro::lyser<sup>®</sup> V3

spectro::lyser™ UV-Vis monitors depending on the application an individual selection of: TSS, TS, turbidity, color, TOC, DOC, BOD, COD, NO<sub>3</sub>-N, NO<sub>3</sub>, HS-, O<sub>3</sub>, CLD, 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	cleaning valve
B-44-2	
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-48-V3	spectrometer V3 & V2 flow-cell (by-pass setup), PVC
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 <sub>3</sub> -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	operating temperature	0 ... 45 °C
integrated temperature sensor	0 ... 45 °C	storage temperature	-10 ... 65 °C
resolution temperature sensor	0.1 °C	operating pressure	0 ... 3 bar
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)	high pressure specification (optional)	10 bar
power supply	10 ... 18 VDC	installation / mounting	submersed or in a flow cell
power consumption (typical)	3 W	flow velocity	3 m/s (max.)
power consumption (sleep mode)	60 mW	mechanical stability	30 Nm
power consumption (max.)	20 W	ingress protection class	IP68
interface to s::can terminals	M12 RSTS 8Y (IP67), RS485, Ethernet	automatic cleaning	media: compressed air or autobrush permissible pressure: 3 ... 6 bar
interface to third party terminals	con::nect V3 incl. Modbus RTU, REST API	conformity environmental testing	EN 60721-3
digital interface (for cleaning devices)	1 digital in/out 1 digital out	conformity - EMC	EN 61326-1
network connection	100Base-T Ethernet, Bluetooth, WLAN	conformity - RoHS2	EN 50581
measurement interval	10 sec (configurable, depending on application)	standard warranty	2 years
		extended warranty (optional)	3 years

**municipal WWTP influent & sewer**

		parameter													part number		
		TSS [mg/l]	color (app) [Hazen]	color (true) [Hazen]	TOC [mg/l]	DOC [mg/l]	BOD [mg/l]	COD [mg/l]	COD f [mg/l]	BOD [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>2</sub> -N [mg/l]	HS [mg/l]	UV254 t [Abs/m]		UV254 f [Abs/m]	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	1200	3500	2100	500	400	800	1500	800	800	16	70	12	500	420		
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	8000	23000	14000	3300	2600	5300	10000	5300	5300	100	460	80	3300	2800		
parameter part no.		GC-I-TSS	GC-I-COL	GC-I-TOC	GC-I-BOD	GC-I-COD	GC-I-BOD	GC-I-NO3-N	GC-I-HS	GC-I-UV254							

**municipal WWTP aeration**

		parameter						part number
		TS [g/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>2</sub> -N [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	20	530	26	110	3300	2800	
parameter part no.		GC-A-TS	GC-A-COD	GC-A-NO3-N	GC-A-UV254			

**municipal WWTP effluent**

		parameter*													part number		
		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 <sub>3</sub> -N [mg/l]	NO <sub>2</sub> -N [mg/l]	O <sub>3</sub> [mg/l]	UV254 t [Abs/m]		UV254 f [Abs/m]	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	600	1200	3500	2100	400	300	300	500	300	45	190	180	500	420		
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	4000	8000	23000	14000	2600	2000	2000	3300	2000	300	1300	1200	3300	2800		
parameter part no.		GC-E-TSS	GC-E-TURB	GC-E-COL	GC-E-OC	GC-E-BOD	GC-E-COD	GC-E-NO3-N	GC-E-O3	GC-E-UV254							

\*measurable concentration ranges may vary due to water matrix

**brewery WWTP influent**

		parameter*							
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>3</sub> <sup>-</sup> [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	2000	18000	18000	16	70	500	420	
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	13000	60000	53000	100	470	3300	2800	
parameter part no.		GC-B-TSS	GC-B-COD		GC-B-NO3-N		GC-B-UV254		

**paper mill WWTP influent**

		parameter*							
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>3</sub> <sup>-</sup> [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	1200	2000	1700	16	70	500	420	
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	8000	13000	11000	100	470	3300	2800	
parameter part no.		GC-P-TSS	GC-P-COD		GC-P-NO3-N		GC-P-UV254		

**paper mill WWTP effluent**

		parameter*							
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>3</sub> <sup>-</sup> [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	600	140	140	16	70	500	420	
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	4000	5300	5300	100	470	3300	2800	
parameter part no.		GC-Q-TSS	GC-Q-COD		GC-Q-NO3-N		GC-Q-UV254		

**dairy WWTP influent**

		parameter*							
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	NO <sub>3</sub> <sup>-</sup> [mg/l]	UV254 t [Abs/m]	UV254 f [Abs/m]	part number
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	0	SP3-1-01-NO-xxx
	max.	8000	33000	16000	210	940	3300	2800	
parameter part no.		GC-M-TSS	GC-M-COD		GC-M-NO3-N		GC-M-UV254		

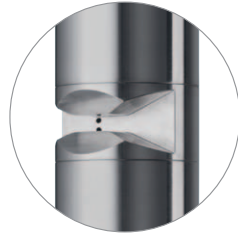
\*measurable concentration ranges may vary due to water matrix

## The perfect accuracy for every application

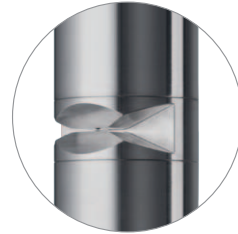
The spectro::lyser V3 is available with three different optical path lengths.



drinking water:  
35 mm



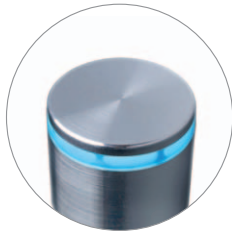
surface water:  
5 mm



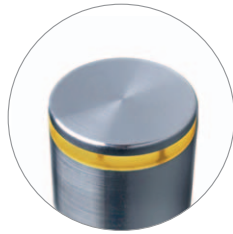
waste water:  
1 mm

## Optical information ring

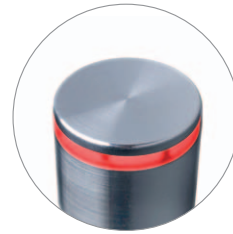
The color of the optical information ring signals the state of the sensor.



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.

