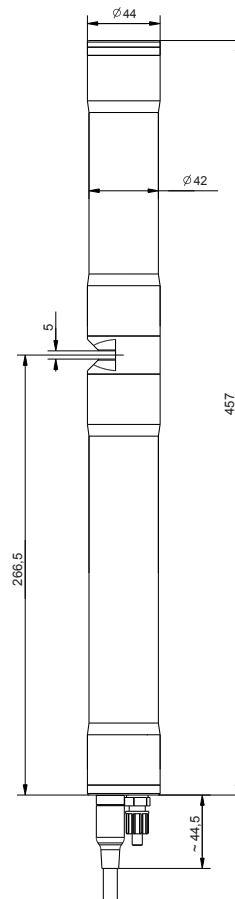


# spectro::lyser V3

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 (200-750 nm)
- web server on board
- communicates directly with your mobile device via 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 5 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
- non aging optics, long term stable and maintenance free in operation
- factory precalibrated, local multi-point calibration possible
- automatic cleaning with compressed air or brush/ruck::sack
- no consumables
- automatic compensation against multiple cross-sensitivities by unique chemometrics (e.g. turbidity)
- simple web interface for visualization & operation



**recommended accessories**

part number	article name
D-330-xxx	con::cube V3
B-33-012	con::nect V3
B-32-xxx	s::can compressor
B-44	cleaning valve
B-44-2	
C-32-V3	Adapter cable to connect a V3 spectrometer (M12) to V2 Terminal (MIL Plug)
F-110-V3	carrier s::can spectrometer V3 & V2 probe, 45°
F-48-V3	spectrometer V3 & V2 flow-cell (bypass setup), PVC
S-11-xx-moni	moni::tool Software
F-146-rs-35, F-146-rs-15, F-146-rs-05, F-146-rs-iscan-35, F-146-rs-iscan-05	ruck::sack

**technical specification**

measuring principle	UV-Vis spectrometry 200 - 750 nm
measuring principle detail	xenon flash lamp, pixel array detector
measurement interval	15 sec (configurable, depending on application)
automatic compensation instrument	real dual beam measurement for compensation and detailed diagnostics
automatic compensation cross sensitivities	turbidity / solids / organic substances
precalibrated ex-works	all parameters
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)
access to raw signals	access to spectral information
reference standard	distilled water
onboard memory	8 GB
integrated temperature sensor	0 ... 45 °C
resolution temperature sensor	0.1 °C
integration via	con::cube V3 con::nect V3 con::lyte V5 (D-320-pro2) and adapter cable (C-32-V3)
power supply	10 ... 18 VDC
power consumption (typical)	3 W
power consumption (sleep model)	60 mW
power consumption (max.)	20 W
interface to s::can terminals	M12 RSTS 8Y (IP67), RS485, Ethernet
interface to third party terminals	con::nect V3 incl. Modbus RTU, REST API, Modbus TCP/IP
digital interface (for cleaning devices)	1 digital in/out 1 digital out
network connection	100Base-T Ethernet, WLAN
status information	RGB LED ring
internal sensors	supply voltage sensor, tilt sensor, rotation sensor

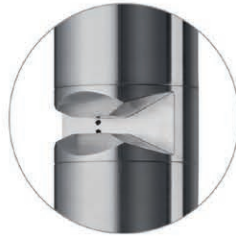
cable length	1 m fixed cable (-010) or 7.5 m fixed cable (-075) or 15 m fixed cable (-150)
cable type	PU jacket
housing material	stainless steel 1.4404 (optional titanium)
window material	optical path length 15 ... 0.5 mm: sapphire optional: optical path length 100 ... 5 mm: fused silica (UV-grade)
weight (min.)	3.4 kg (incl. cable)
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
operating temperature	0 ... 50 °C
operating pressure	0 ... 5 bar
high pressure specification (optional)	10 bar
installation / mounting	submersed or in a flow cell
flow velocity	3 m/s (max.)
mechanical stability	30 Nm
ingress protection class	IP68
automatic cleaning	media: compressed air or autobrush permissible pressure: 3 ... 6 bar
storage temperature	-10 ... 65 °C
conformity - environmental testing	EN 60721-3
conformity - EMC	EN 61326-1
conformity - RoHS 2	EN 50581
standard warranty	2 years
extended warranty (optional)	3 years

## 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.



**municipal WWTP influent & sewer**

		parameter												part number
		TSS [mg/l]	color (app) [Hazen]	color (tru) [Hazen]	TOC [mg/l]	DOC [mg/l]	BOD [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	HS- [mg/l]	UV254 [Abs/m]	UV254 f [Abs/m]	
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	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	100	80	3300	2800	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	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	16	12	500	420	

**municipal WWTP aeration**

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

**municipal WWTP effluent**

		parameter												part number	
		TSS [mg/l]	turbidity [NTU/FTU]	color (app) [Hazen]	color (tru) [Hazen]	TOC [mg/l]	DOC [mg/l]	BOD [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	O <sub>3</sub> [mg/l]	UV254 [Abs/m]		UV254 f [Abs/m]
spectro::lyser™ V3 (1 mm OPL, UV-Vis)	min.	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	1200	3300	2800	
spectro::lyser™ V3 (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.	600	1200	3500	2100	400	300	300	500	300	45	180	500	420	

**paper mill WWTP influent**

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

**paper mill WWTP effluent**

		parameter					part number	
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	UV254 [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.	4000	5300	3300	100	3300	2800	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	600	790	490	16	500	420	

**brewery WWTP influent**

		parameter						part number
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	UV254 [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.	13000	60000	53000	100	3300	2800	
spectro::lyser™ V3 (5 mm OPL, UV-Vis)	min.	0	0	0	0	0	0	SP3-1-05-NO-xxx
	max.	2000	9000	7900	16	500	420	

**dairy WWTP influent**

		parameter						part number
		TSS [mg/l]	COD [mg/l]	COD f [mg/l]	NO <sub>3</sub> -N [mg/l]	UV254 [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.	8000	33000	16000	210	3300	2800	