NEXOS™ LINK

TECHNICAL DATA

SPECIFICATIONS

	NEXOS™ 2K	NEXOS™ 4K
Optical Bench	Symmetrical Czerny-Turner design, 75 mm focal length; NEXOS™ spectrometer bench	
Wavelength range	190 - 1100 nm	
Stray light	0.1 - 1% (typical value 300l/mm, blaze 300 nm < 0.3%)	
Detector	HAM S11639, CMOS linear array, 2048 pixels (14x200 µm)	HAM S13496, CMOS linear array, 4096 pixels (7x200µm)
Signal/Noise	375:1	365:1
Dynamic Range	4500	
Dark noise	15 cnts	
AD converter	16-bit, 6 MHz	
Integration time	9 µs – 30 s	
Interface	RS232 or SPI pigtailed with separate power connection	
Data transfer speed	TBD ms /scan	TBD ms /scan
Digital I/O	5 bidirectional programmable I/O; 1 Analog out, 1 Analog in, 1x5V	
Dimensions, weight	105 x 80 x 20 mm, 277,5 grams	
Power supply	Separate	
Temperature range	5-55 °C	

GRATINGS

Use	Useable range (nm)	Spectral range (nm)	Lines/mm	Blaze (nm)	Order code
UV/VIS/NIR	190-1160**	910**	300	300	MN0300-0.30
UV/VIS	190-850	544-540*	600	300	MN0600-0.30
UV	190-750	261-256*	1200	250	MN1200-0.25
UV	190-650	168-152*	1800	UV	MN1800-0.25
UV	190-580	121-103*	2400	UV	MN2400-0.25
UV	190-400	72-57*	3600	UV	MN3600-0.25
UV/VIS	250-850	536-532*	600	400	MN0600-0.40
VIS/NIR	300-1160**	800**	300	500	MN0300-0.50
VIS	360-1000	529-519*	600	500	MN0600-0.50
VIS	300-800	247-216*	1200	500	MN1200-0.50
VIS	350-750	147-121*	1800	500	MN1800-0.50
VIS	350-640	96-89*	2400	VIS	MN2400-0.50
NIR	500-1050	515-506*	600	750	MN0600-0.75
NIR	500-1050	210-204*	1200	750	MN1200-0.75
NIR	600-1160	339-300*	830	800	MN0830-0.80
NIR	600-1160**	500**	300	1000	MN0300-1.00
NIR	600-1160	500	600	1000	MN0600-1.00

Note: a selection of starting wavelength is possible, contact us for available configurations.
* Depends on the starting wavelength of the grating; the higher the wavelength, the bigger the dispersion and smaller the range to select
** Please note that not all pixels will be used for the useable range

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RESOLUTION NEXOS™ 2K

Slit size (µm)	10	25	50	100	200	500
300 lines/mm grating	1.0	1.4	2.25	4.8	9.2	21.3
600 lines/mm grating	0.40-0.53*	0.7	1.2	2.4	4.6	10.8
830 lines/mm grating	0.32	0.48	0.93	1.7	3.4	8.5
1200 lines/mm grating	0.20-0.28*	0.27-0.38*	0.52-0.66*	1.1	2.3	5.4
1800 lines/mm grating	0.10-0.18*	0.20-0.29*	0.34-0.42*	0.8	1.6	3.6
2400 lines/mm grating	0.09-0.13*	0.13-0.17*	0.26-0.34*	0.44-0.64*	1.1	2.7
3600 lines/mm grating	0.06-0.08*	0.10	0.19	0.4	0.8	1.8

*Depends on the starting wavelength of the grating; the higher the wavelength, the bigger the dispersion and the higher the resolution.

RESOLUTION NEXOS™ 4K

Slit size (µm)	10	25	50	100	200	500
300 lines/mm grating	0.50-0.70	1.4	2.25	4.8	9.2	21.3
600 lines/mm grating	0.30-0.36*	0.7	1.2	2.4	4.6	10.8
830 lines/mm grating	0.25	0.48	0.93	1.7	3.4	8.5
1200 lines/mm grating	0.14-0.18*	0.27-0.38*	0.52-0.66*	1.1	2.3	5.4
1800 lines/mm grating	0.09-0.11*	0.20-0.29*	0.34-0.42*	0.8	1.6	3.6
2400 lines/mm grating	0.07-0.09*	0.13-0.17*	0.26-0.34*	0.44-0.64*	1.1	2.7
3600 lines/mm grating	0.05-0.06*	0.10	0.19	0.4	0.8	1.8

*Depends on the starting wavelength of the grating; the higher the wavelength, the bigger the dispersion and the higher the resolution.

ORDERING INFORMATION

Order code	Ordering information
AvaSpec-NXS2048CL-RS232	OEM NEXOS™ fiber-optic spectrometer, 75 mm focal length, 2048 pixel CMOS detector, RS232 communication, power connection, needs DCL, second order suppressing, fixed slit
AvaSpec-NXS4096CL-RS232	OEM NEXOS™ fiber-optic spectrometer, 75 mm focal length, 4096 pixel CMOS detector, RS232 communication, power connection, needs DCL, second order suppressing, fixed slit
AvaSpec-NXS2048CL-SPI	OEM NEXOS™ fiber-optic spectrometer, 75 mm focal length, 2048 pixel CMOS detector, SPI communication, power connection, needs DCL, second order suppressing, fixed slit
AvaSpec-NXS4096CL-SPI	OEM NEXOS™ fiber-optic spectrometer, 75 mm focal length, 4096 pixel CMOS detector, SPI communication, power connection, needs DCL, second order suppressing, fixed slit

CONFIGURATION DEPENDANT PARAMETERS

Order code	Options information
SLIT-XX-P	Fixed Slit for NEXOS™ Spectrometer. Slit size, please specify XX = 10, 25, 50, 100, 200, 500 µm
OSC	Order sorting coating for grating MN 0600-0.50
OSC-UA	Order sorting coating for grating MN 0300-0.30 / MN 0300-0.50
OSC-UB	Order sorting coating for grating MN 0600-0.50
OSF-YYY-3	Order sorting filter for reduction of second-order effects, possible: YYY = 305, 395, 457, 515, 550, or 600 nm, depending on range
DCL	Detector Collection Lens. To be included

Avantes will select needed second order suppression based on desired configuration.

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