

AvaSpec-Mini: Small and powerful OEM spectrometer

Looking for a very small spectrometer with a resolution as good as 0.2 nm? Then the AvaSpec-Mini is an ideal choice. It's only the size of a deck of cards, yet delivers stray-light levels lower than 0.2% and weighs only 174 grams. Easy to take anywhere you like.

The devices offer the quality and reliability that you are used to in our larger spectrometers. Yet they are fitted in a diminutive footprint making them ideal for OEM applications.

The AvaSpec-Mini finds its way into many areas of research, such as light analysis, chemical research and Raman spectroscopy.

Of course, the AvaSpec-Mini works seamlessly with Avantes spectroscopy software and the Windows and Linux libraries.



Technical data

	AvaSpec-Mini 2048(L)	AvaSpec-Mini 3648
Optical Bench	Symmetrical Czerny-Turner, 75 mm focal length	
Wavelength range	220-1100 nm	
Resolution	0.10 nm - 10.80 nm	
Stray-light	<0.2%	
Sensitivity	Similar to ULS2048(L) (no DCL)	Similar to ULS3648 (no DCL)
Detector	Sony CCD linear array, 2048 (Large) pixels	Toshiba CCD linear array, 3648 pixels
Signal/Noise	200:1 (2048);300:1 (2048L)	350:1
AD converter	16-bit, 2 MHz	16-bit, 1 MHz
Integration time	1.05ms - 10 minutes	10µs - 10 minutes
Interface	USB 2.0 (480 Mbps) / RS-232(115200 bps)	
Sample speed with on-board averaging	3.0 ms/scan	7.4 ms/scan
Data transfer speed	4.6 ms/scan	7.4 ms/scan
I/O	6 bidirectional programmable I/O; 2 analog out; 2 analog in	
Dimensions, weight	95 x 68 x 20 mm, 174 grams	
Power supply	Default USB power, 250 mA; external 5-15Vdc (RS232)	
Temperature range	0-55°C	

Grating selection table for AvaSpec-Mini

Use	Useable range (nm)	Spectral range (nm)	Lines/mm	Blaze (nm)	Order code
2048(L)					
UV	200-400	167	1800	250	MN 1800-0.25
VIS	330-900	530	600	500	MN 600-0.50
NIR	550-1100	520	600	1000	MN 600-1.00
3648					
UV	200-400	170	1800	250	MN 1800-0.25
VIS	330-900	535	600	500	MN 600-0.50
NIR	550-1100	525	600	1000	MN 600-1.00

Resolution table (FWHM in nm) for AvaSpec-Mini*

Grating (lines/mm)	Slit size (μm)					
	10	25	50	100	200	500
2048 (L)						
600	0.40-0.53	0.70	1.20	2.40	4.60	10.80
1800	0.10-0.18	0.20-0.29	0.34-0.42	0.80	1.60	3.60
3648						
600	0.30-0.36	0.58-0.60	1.17	2.20	4.50	10.00
1800	0.09-0.11	0.18	0.36-0.40	0.78	1.50	3.70

* Typical values. Small deviations are possible.

Ordering Information

- AvaSpec-Mini2048** • Mini Fiber-optic Spectrometer, 75 mm focal length, 2048 pixel CCD detector, USB2 powered interface
- AvaSpec-Mini2048L** • Mini Fiber-optic Spectrometer, 75 mm focal length, 2048L pixel CCD detector, USB2 powered interface
- AvaSpec-Mini3648** • Mini Fiber-optic Spectrometer, 75 mm focal length, 3648 pixel CCD detector, USB2 powered interface

Specify grating, wavelength range and options.

Options

- DUV** • Deep UV detector coating (start wavelength <350nm)
- SLIT-XX** • Slit size, please specify XX = 10,25, 50, 100, 200 or 500 μm
- FCPC** • FC/PC fiber-optic entrance
- OSC** • Order sorting coating for grating MN 600-0.50, recommended with OSF-305
- OSF-YYY** • Order-sorting filter for reduction of 2nd order effects, please specify YYY= 550 or 600 nm, depends on range

For non-OEM users a set of preconfigured models are available

AvaSpec-Mini:
perfect solutions for
your OEM application!