AvaSpec-Fast StarLine Ultra-fast Spectrometer for High-speed Applications

AvaSpec-Fast

For ultra-fast spectral acquisition the AvaSpec-Fast offers the best solution. Up to 5637 spectra can be stored at 0.20 ms per scan using Avantes unique store-to-RAM functionality. Depending on the configuration chosen, between 1254 and 5637, spectra can be stored during one burst.

The AvaSpec-FAST series is available in five different configurations; the difference being the number of active pixels. More pixels provide higher resolution or more bandwidth, but slower minimum integration time. For all models, start/stop pixels can be set in our software to increase the number of scans stored on board over a shorter wavelength range.

The AvaSpec-FAST can be configured in CR or SS mode. CR, or continuous run mode, means a single external trigger (through the DB26-connector) results in a customer-set number of scans automatically to be measured. SS-mode, for single scan, means a single spectrum is acquired at every external trigger. CR or SS mode must be specified at the time of order.

Possible configurations are single or dual channel, desktop or Rack-mounted. The instrument is available with all the options and gratings of the AvaSpec-ULS2048. The AvaSpec Fast serie is based on the AvaSpec-ULS2048. Optional it can also be based upon the AvaSpec-ULS2048L.

Technical Data

FAST Series Model	Min Integration Time	Pixels	Max. Frequency (Hz) in CR-Store to RAM	Max amount of spectra Store to RAM
AvaSpec-ULS350F-USB2	0.20 ms	350	5000	5637
AvaSpec-ULS750F-USB2	0.40 ms	750	2500	2716
AvaSpec-ULS950F-USB2	0.50 ms	950	2000	2157
AvaSpec-ULS1350F-USB2	0.70 ms	1350	1400	1528
AvaSpec-ULS1650F-USB2	0.85 ms	1650	1100	1254

Grating selection table for AvaSpec-FAST

Grating	Lines/ mm	Spectral range AvaSpec-ULS350F (nm)	Spectral range AvaSpec-ULS750F (nm)	Spectral range AvaSpec-ULS950F (nm)	Spectral range AvaSpec-ULS1350F (nm)	Spectral range AvaSpec-ULS1650F (nm)
Z	150	400	850	900	n.a.	n.a.
A	300	190	400	520	750	900
B	600	90	200	250	360	450
C	1200	45	100	120	180	210
D	1800	30	60	80	110	140
E	2400	20	45	50	80	100
F	3600	10	27	30	50	60

Ordering Information

AvaSpec-ULS350F-USB2	• Ultra-fast Fiber-optic Spectrometer, 75 mm low stray-light AvaBench, 350 pixel CCD detector, USB/RS-232 interface, incl. AvaSoft-Basic, USB2 cable. Specify grating, wavelength range and options
AvaSpec-ULS750F-USB2	• As AvaSpec-ULS350F-USB2, but 750 pixel CCD detector
AvaSpec-ULS950F-USB2	• As AvaSpec-ULS350F-USB2, but 950 pixel CCD detector
AvaSpec-ULS1350F-USB2	• As AvaSpec-ULS350F-USB2, but 1350 pixel CCD detector
AvaSpec-ULS1650F-USB2	• As AvaSpec-ULS350F-USB2, but 1650 pixel CCD detector

Options

• See AvaSpec-ULS2048-USB2

AVANTES enlightening spectroscopy
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