*OEM Spectrometer - AvaBench
Optical Benches for UV/VIS/NIR

AvaSpec optical benches are available with or without one of our electronic boards for integration into your systems.

We developed five types of UV/VIS optical benches for OEM customers.
- AvaBench-75-VRS/NXS used in Compactline and Starline
- AvaBench-75-ULS: used in both StarLine and SensLine
- AvaBench-75-ULSTEC: used in the SensLine
- AvaBench-37.5-HS & AvaBench-100-HSC: used in SensLine



The benches are Czerny-Turner designs with fiber-optic entrance connectors (standard SMA, others possible), collimating and focusing mirrors, and a diffraction grating. A choice of different gratings with different dispersions and blaze angles enables applications in the 200-1100 nm range.

The high numerical aperture AvaBench-37.5-HS has full mechanical compatibility for mounting holes with the AvaBench-75-ULS, making it easy to upgrade to a higher-throughput optical bench.

All AvaBench optical benches are fully compatible with our electronics board or may be interfaced with customer-specific electronics. Video output is handled through a separate mini-coax cable.

**This product is only available for original equipment manufacturers as it needs to be integrated into another product or system to work accordingly. Contact Avantes for more information about this product.*

Technical Data

	AvaBench-75-VRS/NXS	AvaBench-75-ULS	AvaBench-37.5-HS	AvaBench-100-HSC
Implemented in	AvaSpec-NXS2048CL/4096CL and AvaSpec-VAR2048CL/4096CL-EVO	AvaSpec-ULS2048CL/4096CL 2048XL or 2048x64(TEC)	AvaSpec-HS2048XL	AvaSpec-HERO
Focal length	75 mm	75 mm	37.5 mm asym.	100 mm
Numerical aperture	0.07	0.07	0.22	0.13
Wavelength range	200-1160 nm	200-1160 nm	200-1160 nm	200-1160 nm
Resolution (FWHM)	0.05-20 nm	0.05-20 nm	1.2-20 nm	0.18-5.50 nm
Stray light	0.1-1%	0.02-0.1%	<1%	<1%
Gratings	Different	Different	Different	Different
Slits	10, 25, 50, 100, 250, 500 µm	10, 25, 50, 100, 250, 500 µm	25, 50, 100, 200, 500 µm	25, 50, 100, 250, 500 µm
Detector	HAM 2048CL/4096CL	HAM 2048CL/4096CL 2048XL/2048x64	HAM 2048XL	HAM 1024x58
Detector lens	UV/VIS	UV/VIS	n.a.	n.a.
Order-sorting filter	See options	See options	See options	See options
Dimensions, weight	105 x 80x 20 mm, 277,5 gr	120 x 91 x 21 mm, 350 gr	95 x 152 x 42 mm, 722 gr	120 x 125 x 109 mm, 1500 gr

FULL PRODUCT SPECIFICATIONS

Want to know the full product specifications, gratings selection, resolution table, accessories options and ordering information?
Click **here** or scan the QR code on the right

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*OEM spectrometer - AvaBench NIR
Optical Bench for NIR

For OEM applications in the NIR range, we offer our line of AvaBench NIR optical benches. The AvaBench-50 optical bench is available for uncooled detectors in the 1000-1750 nm range. The AvaBench-100TEC is developed for the NIR range from 1000-2500 nm with thermoelectric cooling. The AvaBench-100TEC supports two different TE-cooled detectors with 256 pixels and two TE-cooled detectors with 512 pixels. The 100 nm focal length optical bench provides the optimal balance between optical throughput and resolution. This bench features a unique folding mirror to keep the size as compact as possible. New in the NIR line of optical benches is the AvaBench-75-MN, offering an outstanding small form factor in the NIR range.



All NIR optical benches have symmetrical Czerny-Turner designs with a fiber-optic entrance connector (standard SMA, other options available), collimating, and a specially designed focusing mirror and diffraction grating. Different NIR gratings can be selected for all models.

The NIR AvaBenches are fully compatible with Avantes electronic boards or may be interfaced with customer-specific electronics. The NIR optical benches have a separate video output through a mini-coax cable. The TEC NIR benches have a heatsink and additional electrical connections for the temperature sensor and power for the 2-stage Peltier cooling.

**This product is only available for original equipment manufacturers as it needs to be integrated into another product or system to work accordingly. Contact Avantes for more information about this product.*

Technical Data

	AvaBench-50	AvaBench-100TEC
Implemented in	AvaSpec-NIR256-1.7	AvaSpec-NIR256-1.7TEC AvaSpec-NIR512-1.7TEC AvaSpec-NIR256-2.5-HSC-EVO AvaSpec-NIR512-2.5-HSC-EVO
Focal length	50 mm	100 mm
Numerical aperture	0.22	0.13
Wavelength range	1000-1750 nm	1000-2500 nm
Resolution (FWHM)	2-50 nm	1.5-90 nm
Stray light	< 1%	< 0.5%
Gratings	different	different
Slits	50, 100, 200, 500 µm	25, 50, 100, 250, 500 µm
Detector	HAM-NIR256-1.7	SU-NIR256/512-1.7 HAM-NIR256-2.5 HAM-NIR512-2.5
TE Cooling	No	Yes
Order-sorting filter	OSF-850-3/OSF-1000-3	OSF-1000/1400 and OSC-NIR
Dimensions, weight	100 x 130 x 40 mm, 875 gr.	185 x 145 x 185 mm, 3.5 kg.

FULL PRODUCT SPECIFICATIONS

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