

Data Sheet

VIAVI MicroNIR 1700 EC

An ultra-compact, near infrared spectrometer

The MicroNIR® 1700 EC is a lightweight and cost effective near infrared (NIR) spectrometer that combines VIAVI high-precision optical coating technology with innovation in optical system design and miniaturization.

Integrating VIAVI linear variable filter (LVF) technology as the dispersive element, the MicroNIR spectrometer contains the light source, collection optics, electronics and detector in a package less than 2" in diameter (<47 mm) that weighs 4 ounces (116 g). The spectrometer is USB-C powered and can be used in diffuse reflection, transmission, or transfection modes.

The MicroNIR 1700 EC uses the same optical engine as the MicroNIR OnSite-W and PAT family and is designed for exploratory data analysis and model development. An OEM version is available.



MicroNIR 1700 EC

Benefits

- NIR wavelength range covers all important spectral bands with excellent penetration depth
- Compact and robust with no moving parts and no maintenance or calibration required
- Real-time prediction and method management
- Powerful tool for developing calibration models

Applications

- Pharmaceutical
- Food, feed, and agriculture
- Industrial processing

Standard Accessories

The MicroNIR 1700 EC includes the following standard accessories:

- Measurement collar with sapphire window
- Spectralon reference target
- Power and data USB-C cable
- Flash drive with software, manuals and support documentation



MicroNIR 1700 EC

Software

The MicroNIR 1700 EC includes the VIAVI MicroNIR Pro software suite with features for data acquisition, calibration and method development, user management, and real-time prediction. Using MicroNIR Pro software, a developer can process data and build complete chemometric models using regression and classification algorithms including PCA, PLS, Spectral Match Value and Moving Block analyses. Batch mode predictions on stored data are also supported.



MicroNIR Pro Software

Specifications

Parameter	Specification
Illumination source	Two integrated vacuum tungsten lamps rated for >40,000 hr lifetime @ < 1 W
Working distance	Range 0-15 mm; optimal results when samples are in contact with measurement collar window
Dispersing element	VIAVI linear variable filter (LVF)
Detector	128 pixel InGaAs photodiode array
Wavelength range	908-1676 nm (11,012-5966 cm ⁻¹)
Pixel-to-pixel interval	6.2 nm
Spectral resolution (FWHM)	<1.25% of center wavelength (e.g., resolution <12.5 nm @ 1000 nm)
Analog-to-digital converter	16 bit
Integration time	10 ms typical
Computer Interface	USB-C
Weight	116 g (4 oz)
Size	47 mm diameter x 60 mm height
Power	USB-C powered (<500 mA @5 V)
Operating system	Microsoft Windows 7 and above
Software included	MicroNIR Pro
Operating temperature	-20° to +40°C (noncondensing)
Storage temperature	-40° to +70°C (noncondensing)
Package drop test	ISTA 2A

For more information, please contact your local VIAVI account manager or VIAVI directly at 1-800-254-3684 worldwide or via e-mail at micronir@viavisolutions.com.