

DATASHEET

ARCOptix FT-NIR *Rocket* 0.9-2.6 μ m

Fibered near-infrared Fourier-transform spectrometer



If you are looking for high performance, compact and affordable NIR spectrometer, the ARCOptix FT-NIR Rocket is the instrument that you need. Thanks to its permanently aligned interferometer and solid-state reference laser, the FT-NIR Rocket offers excellent stability in both intensity and wavelength scales. The FT-NIR Rocket fibered spectrometer is compatible with light sources and sampling accessories typically used with array-detector based NIR spectrometers. Experience the high-quality spectra of our FT-NIR!

■ Benefits

- Broad wavelength range 0.9-2.6 μ m
- High resolution of 8 cm^{-1} (<1nm@1 μ m to <5nm@2.5 μ m)
- Excellent stability in intensity and wavelength
- Very good sensitivity (very well adapted for diffuse reflectance)
- Very compact and rugged, easy to use

■ Applications

- Transmission, diffuse reflectance
- Light source measurement (NIR Lasers, LED, Solar,...)
- Material identification and quantification in various fields such as geology, food and beverage industry, medical diagnostics

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Specifications

Interferometer type	Permanently aligned with dual retro-reflector
Detector	Extended type InGaAs photodiode (Optionally 1- or 2-stage TE-cooled)
Reference laser	Solid-state, 680nm (optionally TE temperature stabilized)
Spectral range	0.9–2.6 μm (11000–3850 cm^{-1}) ⁱ
Resolution	8 cm^{-1} (optionally 4 cm^{-1})
Minimum measurement cycle time	1 sec
Signal-to-noise ratio (SNR)	>10'000:1 ⁱⁱ
Wave number repeatability	<10 PPM with optional temperature stabilized control laser ⁱⁱⁱ
Optical fiber input	SMA 905 connector, up to 1mm fiber core diameter, NA=0.25
Communication interface	USB 2.0
Power requirements	7.5-12V (1-6W depending on versions)
Software interface	Windows XP/Vista/7/8 software
Operating temperature / humidity	5 to 35C / non condensing
Storage temperature	-10 to 60C
Dimensions	180mm x 126mm x 78mm
Weight	1.7 KG

ⁱ The cut-off wavelength is 2.5 μm with TE-cooled detectors

ⁱⁱ Measured with a HL2000-HP-FHSA halogen lamp in transmission mode, 5s measurement, around peak sensitivity wavelength, Norton-Beer weak apodization, linearly corrected baseline, resolution setting 8 cm^{-1}

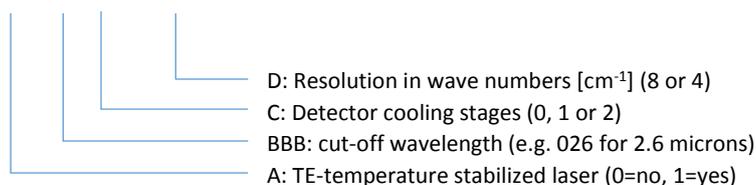
ⁱⁱⁱ Temperature-induced drift is ~ 70 [ppm/ $^{\circ}\text{C}$] without laser temperature stabilization

SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT NOTICE.

Ordering Information

The FT-NIR Rocket is available in different versions:

FTNIR-LA-BBB-CTE-RD



Example:

FTNIR-L1-025-2TE-R8: with temperature-stabilized laser, cut-off 2.5 μm , 2-stage cooled detector, 8 cm^{-1} resolution.

Please contact info@arcoptix.com for more information.