

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}

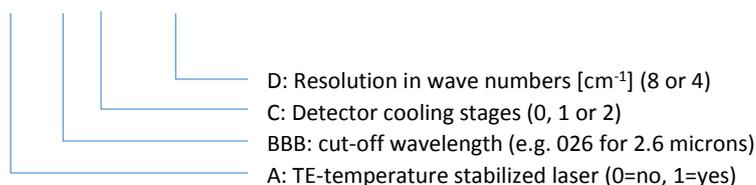
ⁱⁱⁱ Temperature-induced drift is ~ 70 [ppm/ $^{\circ}\text{C}$] without laser temperature stabilization

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.