

tecSpec NIR
Standalone NIR Spectrometer Module
with USB Interface

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Introduction

tecSpec NIR is a ready-to-use NIR spectrometer module with SMA fiber input connector and a USB PC interface. Taking advantage of high-performance spectrometer and electronic components, it allows to acquire accurate spectral data while offering a compact format and maintenance-free operation.

The module is available in two wavelength ranges and allows high-speed analysis of near-infrared radiation with high dynamic range and a very good cost-performance ratio. Its mechanical design and universal functionality makes it an ideal choice for many applications in NIR spectroscopy.

Application Areas

- Laboratory
- Process Control
- Field Applications

Features

- Two wavelength ranges: NIR and extended NIR
- Based on diode array spectral sensors: compact, maintenance-free and long-term stable design for fast spectral data acquisition
- TE-cooled detector operation with high-dynamics readout
- High-speed USB interface with drivers for Windows 2000 and XP
- Power Supply: 12V DC or 100 .. 240 V AC using external power supply
- Digital I/O Interface for external Trigger, flash control and general purpose TTL I/O

Product Versions

- *tecSpec NIR 1.7*: 960 – 1690 nm, 512 Pixels, 5 nm Resolution (FWHM)
- *tecSpec NIR 2.2*: 1000 – 2170 nm, 256 Pixels, 16 nm Resolution (FWHM)

Software

- Windows 2000 / XP driver included
- tec5 AdminTool included (configuration, testing, raw data acquisition)
- MultiSpecLite application program included
- Various Programmer Interfaces available

Accessories (optional)

- Fiber-optic cables and probes

Key Specifications

Wavelength accuracy:	± 0.6 nm
Wavelength thermal drift:	≤ 0.012 nm/K
Measurement rate:	> 100 per second achievable
A/D converter resolution:	15 / 16 bits
Dynamic range:	up to 10,000
Dimensions (approx. mm):	235 x 175 x 115
Weight (Spectrometer unit):	2.5 kg approx.
Optical Input (FSMA):	Φ 0.6 mm, NA = 0.22

PC Requirements

- Windows 2000 or Windows XP operating system, Windows CE on request
- USB 2.0 or 1.1 port with host functionality (USB 2.0 recommended)