NICOLET TECHNOLOGIES

FT-IR

Nicolet Technologies (later Thermo Nicolet and Thermo Scientific) is a historic pioneer in Fourier Transform Infrared (FT-IR) spectroscopy. Because 'FT-IR' represents a broad class of instruments spanning several generations of spectrometers (including the Nicolet Avatar, Nexus, Magna, iS, and Summit series) rather than a single specific model, numerical parameters such as size, weight, spectral resolution, and signal-to-noise ratio vary by specific instrument configuration. However, core architectural features like the Michelson interferometer design, HeNe reference laser calibration, OMNIC software control, and versatile sampling compatibility are shared across the Nicolet family.

SPECIFICATIONS

Optical Performance and Specifications

Interferometer Design	Michelson interferometer (with auto-alignment or dynamic alignment options depending on model)
Beamsplitter Material Options	KBr, XT-KBr, CaF2, Quartz, or Mylar (model and spectral range dependent)
Light Source Standard	Ever-Glo mid-IR source, halogen, or ceramic (model dependent)
Detector Options Standard	DTGS (Deuterated Triglycine Sulfate), MCT (Mercury Cadmium Telluride), or InGaAs (model dependent)

Software and Data Handling

Operating Software Compatibility	OMNIC Software Suite

Sampling and Optical Pathway

Automated Accessory Recognition	Supported (Smart Accessories with automatic parameter configuration on compatible models)
Compatible Sampling Modalities Transmission	Supported
Compatible Sampling Modalities Attenuated Total Reflection ATR	Supported (via dedicated Smart ATR or generic accessories)
Compatible Sampling Modalities Diffuse Reflectance DRIFTS	Supported
Compatible Sampling Modalities Specular Reflectance	Supported

TECHNOLOGY

Fourier Transform Infrared Spectroscopy (FT-IR)

APPLICATIONS

Chemical analysis, compound identification, materials characterization, and quality control