

# Reach the peak of productivity

with the Thermo Scientific<sup>™</sup> Nicolet<sup>™</sup> Summit<sup>™</sup> family of FTIR Spectrometers



Models available:

**Summit LITE** 

Summit X

**Summit OA** 

thermo scientific

### Over 50 years of innovation, and still going strong

The world of cutting-edge FTIR spectroscopy continues to reach new heights with Thermo Scientific™ Nicolet™ Summit™ family of FTIR Spectrometers. Engineered with a high-performance optical engine and paired with the revolutionary Thermo Scientific™ OMNIC™ Paradigm Software, Nicolet Summit FTIR Spectrometers help you identify, verify, and quantify materials faster than before.

Innovations both recent and well-established have brought many advantages to today's Nicolet Summit spectrometers:

- Reduced workflow set-up time. An intuitive, visual workflow creator with a dragand-drop functionality guides you through the workflow creation.
- Audit-ready cGxP compliance. You can confidently maintain a high level of data
  integrity with our database infrastructure, data security software, and audit manager
  applications that keep you compliant with Pharmacopeia (Ph. Eur., USP, JP, and CP)
  instrument qualification. 21 CFR Part 11 compliance and data security packages are
  available.
- Data analysis anytime, anywhere. With the option of full Wi-Fi connectivity on your PC, you can send data to your Thermo Fisher Connect account in the Cloud and analyze data away from the lab. This allows you to share data and collaborate with colleagues anywhere in the world to accelerate your research, or keep students engaged with data they can access in your teaching lab or from the comforts of their dorm room.
- OMNIC Paradigm Desktop Software. The intuitive Dashboard screen featured in OMNIC Paradigm software allows you to find what you need quickly, perform multicomponent searching, or create spectral libraries.

What started as one instrument at the Nicolet Instrument Corporation in 1971 in Madison, WI, USA—a small but forward-looking company named in honor of the area's intrepid adventurer of yore—has grown into a wide array of vibrational spectroscopy instruments under the Thermo Scientific brand. In 1977 the company introduced its very first Fourier transform infrared (FTIR) spectrometer, the Nicolet 7199. Today, we offer a portfolio of powerful and versatile FTIR spectrometers that are still proudly manufactured in Madison, WI, USA.

Now, with the Nicolet Summit FTIR family of spectrometers, we help your analysis reach even higher levels.

Our partnership with you is built on trust, quality, and expertise, and our team of expert service engineers, application scientists, and sales professionals are here to support you from day one, ensuring that your Nicolet FTIR instrument is operating at its highest performance level.

History and partnership Performance and productivity Applications and markets Intuitive software

### Compact, flexible performance







#### Fit-for-purpose systems

The small footprint and rugged design of these spectrometers fit neatly into any laboratory, making them ideal for multi-user QA/QC or teaching labs.

Powered by the Thermo Scientific™ LightDrive™ Optical Engine, the Nicolet Summit Spectrometer sets the benchmark in FTIR performance and includes a 10-year warranty for X and OA models, and a 5-year warranty for the LITE model, on the interferometer, laser, and source.

#### Productivity

Features like intuitive OMNIC Paradigm Software, an integrated LightBar, and an optional on-board touchscreen streamline your analysis.

Adaptable to any workflow, Nicolet Summit FTIR spectrometers deliver efficient, effective solutions to the needs of routine laboratory analyses or high-resolution research applications, all with speed and simplicity of operation.

#### Connectivity

The Nicolet Summit FTIR family of spectrometers includes the possibilities of connecting to an external PC via USB, or choosing an integrated Windows® computer driven with OMNIC Paradigm Software to provide a built-in data processing system with full Wi-Fi capability.

Keep your lab connected and your data moving as fast as you do.



### Features for innovative spectroscopic analysis

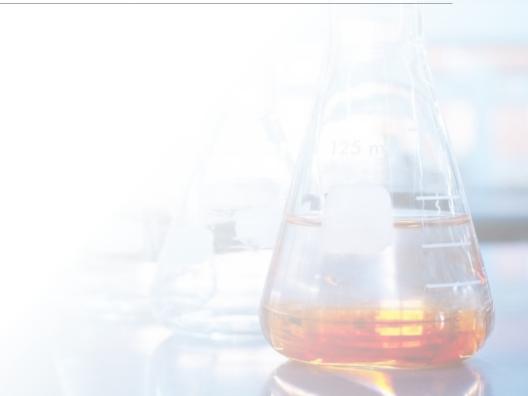
The Thermo Scientific Nicolet family of spectrometers offers unrivaled flexibility, performance, and reliability for quality control, analytical services, or high-powered research. These features help deliver best-in-class performance so you can identify your unknowns, discover new structures, or gain both qualitative and quantitative insights.

- Compact design—Small footprints and rugged designs fit neatly into any laboratory, making them ideal for multi-user QA/QC or teaching labs.
- LightBar—Multi-colored LED LightBar gives you a quick visual pass/fail indication of product quality as well as instrument status at a glance.
- LightDrive Optical Engine—Powerful electronics ensure years of high-performing, reliable data acquisition.
- Everest ATR (optional)—Thermo Scientific™ Everest™
   ATR Accessory with a dependable monolithic diamond crystal eliminates the need for sample preparation.
- Touchscreen monitor (optional)—Ergonomically positioned screen provides a simplified, fast QA/QC workflow interface.

#### Nicolet Summit FTIR Spectrometer comparison guide

Find the best Nicolet Summit FTIR Spectrometer to fit your needs.

	Summit LITE	Summit X	Summit OA
LightDrive optical engine	✓	✓	✓
Warranty of LightDrive	5 years	10 years	10 years
OMNIC Paradigm software	✓	✓	✓
Pharmacopeia workflows	✓	✓	✓
Detector	LiTaO3	DTGS	DTGS
Included library spectra	850	5,000	5,000
User interface	USB cable	USB cable	Integrated computer



## Tackle any application with the Nicolet Summit family and accessories

The potential uses of the Nicolet Summit FTIR Spectrometers span varied fields from academia to automobiles. For finding fast, reliable answers about QA testing or material identification, FTIR spectrometry is an invaluable technique.

#### **Pharmaceuticals**

Verify raw materials and specifications of solid dosage drugs and identify contaminants to help protect your company's reputation. The Nicolet Summit FTIR Spectrometer is portable, so you can bring it to the production line for at-line process analysis or station an instrument at your incoming raw materials location.

#### **Polymers**

Understand what chemical properties you need to control when designing new materials with advanced features. Catch changes in additive formulations, degradation of multi-layer polymer composites, weakened packaging materials, and the effects of process curing times on polymer specifications.



#### Education

Keep students engaged with this intuitive spectrometer and lesson plans that help you demonstrate different functional groups of the IR spectra. Have students quickly measure samples in a crowded teaching lab and then analyze data later, on or off campus, using OMNIC Anywhere software.

#### Gemology

Confidently identify different grades of jade or uncover the composition of a mineral sample using a Nicolet FTIR Summit spectrometer. The Gemological Institute of America (GIA) uses FTIR spectroscopy to identify treated versus untreated gemstones.

#### **Batteries**

After optimizing your lithium battery alternatives (e.g., Li–S, Li–O2, Na-ion) and electrolyte formulations, you'll need to inspect product quality and collect chemical information that assures specifications have been met. The non-destructive nature of FTIR spectroscopy makes this an ideal technique for quickly catching changes that can affect battery life and safety.

#### Automotive materials

From leather interiors to dashboard components to fuel additives, use a Nicolet Summit FTIR spectrometer to help you improve profitability, performance, and appeal of your automotive design. Reveal the chemistry and composition of materials used to manufacture today's fuel-efficient cars and trucks for a cleaner, safer world.

#### Lubricants

Take your analysis of automotive oils and machine lubricants a step further by combining an FTIR spectrometer with the proper sampling accessory and graphical workflow software. The Thermo Scientific™ Affirma™ In-service Lubricant Analysis System follows this blueprint. Whether you formulate lubricants or manage fleet vehicles with a lubricant condition monitoring program, a Nicolet Summit FTIR spectrometer can be part of this helpful system for minimizing machinery downtime and extending drain intervals by analyzing the lubricants used to run the machinery.

## OMNIC Paradigm software for the Summit family of FTIR spectrometers

Nicolet Summit FTIR spectrometers are powered by our revolutionary OMNIC Paradigm software, designed with lab managers and science educators in mind, to help you keep pace with all the daily demands on your lab and drive your projects to completion. The software comes with three modes for customized operation: Touchscreen, Operator, and Desktop.

The user-friendly dashboard in OMNIC Paradigm Software helps you view instrument status, see recent work, process your spectra, conduct multi-component searching, and create new libraries. Whether you require fully customized methods or you only want to perform an established routine, OMNIC Paradigm software can provide what you need. It also includes distinctive software features to help the non-spectroscopist:

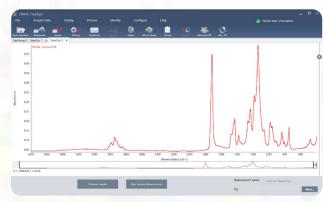
- Smart Background Smart Background measures the background automatically, so that you always have a current measurement without having to manually measure the background.
- One click, three search options Options of multi-component search, correlation search, or spectral search can be selected with just a click, helping you streamline the process of identifying unknown samples and contaminants.
- Easy workflow creator There are several ways to create workflows to suit your needs, and the software can even create a workflow automatically based on the history of an acquired spectrum.
- Al-based spectral interpretation with OMNIC Anywhere Users can perform various analytical tasks, including spectral searching, baseline correction, and peak picking, using the OMNIC Anywhere interface.







Operator mode



Desktop mode



## Nicolet Summit FTIR spectrometers and OMNIC Paradigm software—your compliance solution

The combination of Nicolet Summit FTIR spectrometers and OMNIC Paradigm software can help you reach the peak of data integrity and surpass auditors' expectations. Our database infrastructure, streamlined data security software, and Audit Manager applications will keep your data well-protected and compliant with 21 CFR Part 11 regulations. You can manage multiple user permissions, digitally sign important files, and track detailed user activity using the OMNIC Paradigm Security Suite Software.

These features can also keep you at audit-ready cGxP compliance levels, and fully compliant with Pharmacopeia (Ph. Eur., USP, JP, and CP) instrument qualification. Separate 21 CFR Part 11 compliance and data security packages are available.

Thermo Fisher Scientific provides the instrumentation, the software, and the training you need to keep fully compliant with applicable data security regulations, and keep your operations running smoothly:

- System qualification
- 21 CFR Part 11 tools
- Operator Training
- Validation

Summit X FTIR Qualification	System Suitability tests	Quality Control Check sample	Data Integrity and Compliance
DQ, IQ, OQ and PQ	System suitability tests carried out according to EP, USP, JP and	Customer can use their own control sample to test the method and instrument.	Security Administration allows user management, user access,
Traceable NIST certified internal	Chinese Pharmacopeia		electronic signatures
Polystyrene standard		Alternatively external standard like	
	Additional ATSM tests	Polystyrene film could be used	Audit Manager allows to track
Certified engineers to carry out			all the events and stores the data in
onsite system qualification	Nicolet Factory qualification		database architecture
	and Performance verification tests		



