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PRODUCT SPECIFICATIONS

Thermo Scientific Nicolet Summit FTIR Spectrometer Family

Reach the peak of productivity



Compact, capable, and connected – The Thermo Scientific™ Nicolet™ Summit™ FTIR Spectrometers deliver reliable data by minimizing the steps needed to measure and identify materials – all in a rugged, compact footprint. Interface with the Nicolet Summit using the integrated Windows® computer or USB cable. An optional touchscreen interface helps save space and simplify analysis even further.

- **Fast, trusted results** – the Nicolet Summit FTIR Spectrometers are designed with the Thermo Scientific™ LightDrive™ Optical Engine to improve data reproducibility and results; each instrument is tested and shipped to you with factory-verified specifications, guaranteeing actual, not typical or achievable, performance
- **Streamlined workflows** – the Thermo Scientific™ OMNIC™ Paradigm™ Software Suite provides automated workflows for performance verification and regulatory compliance; workflows can be easily developed in OMNIC Paradigm Software using a new, visual workflow builder
- **Real-time feedback** – a unique LED LightBar indicates how well your sample matches a reference spectrum and provides feedback on instrument status
- **Worry-free ownership** – a multi-year warranty on the laser, source and interferometer backed by Unity™ Lab Services* provides unmatched confidence

The Nicolet Summit Spectrometer comes in three models: LITE, Standard or PRO. The LITE and Standard models are ideal for teaching labs, while the PRO model provides extra capabilities for industrial labs. The Standard and PRO models have enhanced connectivity with Wi-Fi and Ethernet. All models include free access to our Thermo Scientific™ OMNIC™ Anywhere Cloud-based Application, allowing you to share data anytime, anywhere, and on any device.

	Nicolet Summit LITE	Nicolet Summit	Nicolet Summit PRO
LightDrive Optical Engine (laser, source, interferometer)	●	●	●
Warranty on LightDrive laser, source and interferometer	5-year	10-year	10-year
OMNIC Paradigm Software	●	●	●
Pharmacopeia workflows	●	●	●
Detector	$LiTaO_3$	DTGS	TEC-DTGS
Included library/reference spectra	850	5,000	10,000
User Interface	USB	Integrated Windows 10 Computer	Integrated Windows 10 Computer
Wi-Fi enabled		●	●
Touchscreen available		●	●
Internal motorized aperture			●

*Only available in North America and selected European countries. Qualified dealer network support available outside these regions.

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Find out more at **thermofisher.com/summit**

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Specifications

Spectral Range:	8,000–350 cm^{-1} optimized, mid-infrared KBr beamsplitter
Spectral Resolution:	Summit LITE Spectrometer – better than 0.6 cm^{-1} Summit Spectrometer – better than 0.6 cm^{-1} Summit PRO Spectrometer – better than 0.45 cm^{-1} (superior line shapes)
Signal-to-noise:	Summit LITE Spectrometer - 14,000:1 (peak-to-peak, one minute) Summit Spectrometer – 35,000:1 (peak-to-peak, one minute) Summit PRO Spectrometer – 40,000:1 (peak-to-peak, one minute)
Wavenumber Precision:	0.001 cm^{-1} at 2,000 cm^{-1}
Wavenumber Accuracy:	0.05 cm^{-1} at 2,000 cm^{-1}
Ordinate Linearity (ASTM E1421):	<0.15 %T deviation from 0.0%T
Infrared Source (LightDrive):	Non-migrating hotspot, single-point source for unmatched data reproducibility
Laser (LightDrive):	Solid-state, temperature controlled diode laser with long lifetime
Interferometer (LightDrive):	Dynamically aligned interferometer with KBr/Ge mid-infrared beamsplitter optimized for highest spectral throughput
Detector:	Summit LITE Spectrometer - lithium tantalate ($LiTaO_3$) Summit Spectrometer – fast-recovery deuterated triglycine sulfate (DTGS) Summit PRO Spectrometer – thermoelectrically cooled (TEC) DTGS for maximum detector response linearity
Size (W x H x D):	Standard configuration: 34 cm x 24 cm x 32 cm; (13.3 in. x 9.6 in. x 12.7 in.) With touchscreen: 53 cm x 43 cm x 32 cm; (20.8 in. x 17.0 in. x 12.7 in.)
Weight:	Summit LITE Spectrometer – 9.6 Kg (21 lbs) Standard configuration – 10.9 Kg (24 lbs) With touchscreen – 12.6 Kg (27.8 lbs)
Power Consumption:	100-240 VAC, 47-63 Hz, 110 W
User Interface/Connection:	Summit LITE Spectrometer – • USB connection to laptop computer Summit & Summit PRO Spectrometers – • Integrated touchscreen for local control on the instrument (optional) • Mini-display port connection to monitor • Ethernet connection to laptop computer • Wireless/Remote control via WLAN (optional)
LightBar:	Multi-colored LED bar displays system status and spectral library match value/QCheck result
Background collection:	• Standard background collection (i.e., user initiated) • Smart Background collection (background collected while instrument is idle)
Desktop Software:	The Nicolet Summit FTIR Spectrometers are is powered by OMNIC Paradigm Software. Desktop software features include: • Dashboard/Home screen for quick access of recent work • Visual, drag and drop workflow creator with example templates • Live displays of data collection and spectral data preview • Connectivity to OMNIC Anywhere Cloud-based Application • Smart Background feature cuts measurement time by 50% • Advanced instrument health information tracking (optional) • Flexible, one-click library creation • Pre-defined reporting templates exportable to Microsoft Office Suite • Multi-component search functionality • Full spectral processing and analysis tools (baseline correction, spectral math, peak area, peak height, etc…) • Quantification prediction for Beer's Law, PLS, CLS, etc… • Automated workflow creator based on spectral processing history

Touchscreen Software:	Touchscreen software features include: • Multi-point, ultra-responsive touchscreen display • Simplified visual layout for streamlined applications • Screen tap simplicity to run dedicated workflows and analyses • Spectral viewer with basic processing tools (i.e., peak area)
OMNIC Security Suite Software:	• Full Security Administration software with permission and access rights validation • Digital signature and electronic data security compliant • Database infrastructure for advanced tracking and complete audit trail • Audit Manager software with spectral process and system audit trail viewer
Performance Verification and Regulatory Compliance:	• Automated performance verification tests (ASTM E1421) to meet customer GLP requirements • System suitability tests for complete, customizable system performance assurance • Internal NIST-traceable 1.5 mil polystyrene film (serialized) • Compliant with latest pharmacopeia methods (Ph. Eur, USP, JP, and CP) • 21 CFR Part 11 compliance available, including installation and operation qualification (IQ/OQ)
Sampling Accessories:	Open sample compartment provides compatibility with Nicolet iS5 iD Accessories and hundreds of other third-party accessories
Optical Housing:	All optics are sealed in a metal alloy chassis for enhanced durability, robustness, and moisture control
Serviceability:	• User-replaceable components (without opening cover): Desiccant, power supply, sample compartment windows, infrared source • No manual alignment required • Service contracts available from Unity™ Lab Services or qualified dealer network
Warranty:	1 year on complete system, 5 years on Thermo Scientific™ Everest™ Diamond ATR Summit LITE – 5 years on interferometer, laser and source Summit & Summit PRO – 10 years on interferometer, laser and source
Humidity and Vapor Protection:	• Tightly sealed and desiccated optical compartment with protective KBr windows • Optional ZnSe windows available for environments with excessive humidity • Rechargeable desiccant cartridges with humidity indicator
Diagnostics:	• Continuous electronic monitoring of multiple spectrometer components with temperature and humidity sensors • Diagnostic status displayed on LightBar
Training and Help:	Free online training videos and help articles, including unpacking, getting started, and advanced applications
Operating Systems:	Microsoft® Windows® 10 (64-bit)

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