

Vis and UV-Vis spectroscopy solutions for education

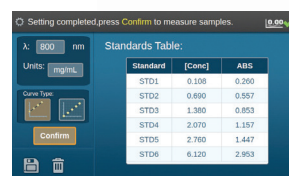
Durable, reliable instruments for teaching bright young minds

With easy-to-learn, high-resolution on-board control, large washable sample compartments, and data export options that meet modern expectations, the Thermo Scientific™ GENESYS™ Visible and UV-Visible spectrophotometers are designed with students and educators in mind. For teaching spectroscopy fundamentals or for advanced experiments, the GENESYS spectrophotometers give you complete confidence in your results with outstanding stability and accuracy.

Thermo Scientific™ GENESYS™ 30 Visible Spectrophotometer

Outstanding durability, traditional simplicity

- Large sample compartment with removable, washable liner for easy clean up
- Supports use of standard cuvettes, test tubes and long pathlength cells
- Ideal for performing OD600 measurements and colorimetric protein assays



Description	Part Number
GENESYS 30 Visible Spectrophotometer	840-277000*

Thermo Scientific™ GENESYS™ 50 UV-Vis Spectrophotometer

Smarter by design with advanced usability and modern functionality

- New 7-inch, high-resolution, touchscreen user interface
- On-board-controlled software with sophisticated methods including kinetics, advanced Quant and Peak Pick
- WiFi-ready – print wirelessly to a shared WiFi printer, store or back-up data and methods to remote locations; USB port

* Also available as a visible-only instrument (Thermo Scientific™ GENESYS™ 40 Visible Spectrophotometer).



Description	Part Number
GENESYS 40 Visible Spectrophotometer	840-297000*
GENESYS 50 UV-Visible Spectrophotometer	840-298000*

Also available from Thermo Fisher Scientific:

Thermo Scientific™ SPECTRONIC™ 200 Visible Spectrophotometer

Quick, convenient measurements in the hands of novice users

SPECTRONIC 20 spectrophotometers have served as core analytical instruments in school, college and university teaching laboratories since 1953. The SPECTRONIC 200 visible spectrophotometer continues this tradition into the 21st century.

- Removable sample compartment for easy clean up
- Supports test tubes and standard square cuvettes
- Spectrum indicator in live display associates wavelength to color
- Includes Quant mode with up to 4 standards



Description	Part Number
SPECTRONIC 200 Visible Spectrophotometer	840-281700

Choose the instrument that's right for your teaching needs:

Feature	SPECTRONIC 200 Vis	GENESYS 30 Vis	GENESYS 50 UV-Vis
Educational Level	High School Chemistry	University Chem/Biochem	University, General Chemistry and Analytical Chemistry
Optical System	Single Beam	Single Beam	Dual Beam
Spectral Bandwidth	≤4.0 nm	5.0 nm	2.0 nm
Light Source	Tungsten-Halogen	Tungsten-Halogen	Xenon Flash Lamp
Detector	2048 element CCD	Silicon Photodiode	Dual Silicon Photodiodes
Wavelength Range	340 – 1000 nm	325 – 1100 nm	190 – 1100 nm
Linear Photometric Range	-0.3A to 1.8A	-3.0A to 3.0A	-2.0A to 3.0A
Color Display Size & Resolution	3.5" • 320x240 px	5" • 800 x 480 px	7" High-Def • 800 x 1280 px
Full Spectrum Scanning	Yes	Yes	Yes
Live Display	Yes	Yes	Yes
Fixed Mode	Yes	Yes	Yes
Quant with Standards (Max)	4	6	15
OD600	Yes	Yes	Yes
Pick Peak	No	No	Yes
Kinetics	No	No	Yes
Snap-on Printer Option	No	Yes	Yes
Export Data Via USB	No	Yes	Yes
WiFi Ready	No	No	Yes

Find out more at thermofisher.com/genesys

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UV-Vis spectroscopy solutions for research labs

Leveraging 60 years of spectroscopy experience, Thermo Scientific™ GENESYS™ UV-Vis spectrophotometers offer superior performance, walk-up convenience and a modern ergonomic design. With a broad range of accessories, the GENESYS UV-Vis spectrophotometers can meet nearly every need of academic research, QA/QC and R&D laboratories.

Thermo Scientific™ GENESYS™ 150 UV-Vis Spectrophotometer

Research quality measurements with routine simplicity

- Dual (split) beam optics for accuracy
- Xenon flash lamp flashes only during measurements saving power and lamp life
- High resolution, lab-glove-compatible touchscreen interface tilts to avoid glare
- Peltier thermostatted cell holder, sipper, 8-cell changer and fiber-optic dip probe accessories for advanced experimental needs
- Access favorite methods quickly with Smart Start operation
- Export data via USB, Ethernet, or Wi-Fi; print reports from on-board control via Ethernet or Wi-Fi

For life science labs, the Thermo Scientific™ BioMate™ 160 model includes all the features of the GENESYS 150 instrument plus pre-programmed life science methods. The GENESYS 150 is also available as a Visible-range instrument (Thermo Scientific™ GENESYS™ 140 Visible Spectrophotometer).



Thermo Scientific™ GENESYS™ 180 UV-Vis Spectrophotometer

High-throughput ready

Includes all of the features the GENESYS 150 instrument plus double beam optical design to correct for changing absorbance of your sample matrix; 8 cell changer included.



Thermo Scientific™ GENESYS™ 50 UV-Vis Spectrophotometer

Modern functionality for single cell analysis

- Tough fixed-position, high-resolution, lab-glove compatible touchscreen
- Rugged sample compartment; removable, washable liner for easy clean-up
- Support for cuvettes up to 100 mm pathlength and test tubes up to 150 mm tall and 25 mm diameter

Also available as a Visible-range instrument (Thermo Scientific™ GENESYS™ 40 Visible Spectrophotometer).



Description	Part Number
GENESYS 40 Visible Spectrophotometer	840-297000*
GENESYS 50 UV-Visible Spectrophotometer	840-298000*
GENESYS 140 Visible Spectrophotometer	840-308000*
GENESYS 150 UV-Visible Spectrophotometer	840-300000*
GENESYS 180 UV-Visible Spectrophotometer	840-309000*
BioMate 160 UV-Visible Spectrophotometer	840-301000*

*USA country power cable part numbers listed. For other countries, substitute last three numbers from 000 to: 100 = China • 200 = India/RSA • 300 = EU • 400 = UK • 500 = Aus/NZ

Also available for your research needs:

Thermo Scientific™ Evolution 201/220 UV-Vis Spectrophotometer

Flexibility and reliability for method development

- Double beam optical design to correct for changing absorbance of the sample matrix
- Precisely known zero-time data and electronic in/out triggering deliver the highest level of accuracy for rapid-mixing kinetics measurements
- Cell changers and sipper are cable-free, snap-in Thermo Scientific™ Smart Accessories™ with auto-recognition and initialization to speed your analysis
- Selectable bandwidth option and Thermo Scientific™ INSIGHT™ software for 21 CFR Part 11 compliance



Description	Part Number
Evolution 201 UV-Visible Spectrophotometer, PC control	840-210800
Evolution 220 UV-Visible Spectrophotometer, PC control	840-210600

Feature	GENESYS 50 UV-Vis**	GENESYS 150 UV-Vis**	GENESYS 180 UV-Vis	Evolution 201/220 UV-Vis
Applications	For routine single-cell analysis	For labs with large numbers of samples or specialized accessory needs	For labs with large numbers of samples, specialized accessory needs or assays that require a reference cell	For labs that require sophisticated accessories or 21 CFR Part 11 compliance
Beam Geometry	◀ Dual Beam (internal reference correction) ▶		Double Beam (both sample and reference cuvettes)	
Optical System	◀ Xenon Flash Lamp, Czerny-Turner Monochromator ▶			
Spectral Bandwidth	2.0 nm	2.0 nm	2.0 nm	1 nm (Evo 201); user-selectable (Evo220)
Detector	◀ Dual Silicon Photodiodes ▶			
Wavelength Range	190 – 1100 nm			
High-definition Color Display	Yes	Yes	Yes	Computer or tablet control
Room-light Resistance	No	Yes	Yes	Yes
Full Spectrum Scanning, Live Display, Fixed mode, Quant, Peak Pick, Kinetics	Yes	Yes	Yes	Yes
21 CFR Part 11 Compliance	No	No	No	Yes
Printer Options	◀ Snap-on printer and laser printer ▶			Print from INSIGHT PC software (optional)
8-cell Changer	No	Optional	Standard	Optional
Supports Peltier, Fiber Probe	No	Yes	Yes	Yes
Connectivity	USB, Ethernet, Wi-Fi (optional)			PC control
Performance Verification	Yes	Yes	Yes	Yes, Pharma capable
Warranty	◀ 2-year warranty, 3rd year available when registered ▶			1 year

**GENESYS 40 and 140 Visible spectrophotometers includes Tungsten-Halogen lamp, 4.0 nm spectral bandwidth and a wavelength range of 325 - 1100 nm

Find out more at thermofisher.com/genesys

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Thermo Scientific GENESYS Vis and UV-Vis Spectrophotometers

Legendary reliability. Unrivalled usability.

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GENESYS—developed for users, designed for results

Built on the foundation of 60 years of spectroscopy experience, the next generation Thermo Scientific™ GENESYS™ family of Vis/UV-Vis spectrophotometers provides exceptional performance with a contemporary design.

- Start taking measurements immediately with the simple-to-use, high-resolution, color-display start menu
- Exchange samples with ease with large, accessible sample compartment
- Save your data fast any way you want it with multiple data-export options

There is a GENESYS spectrophotometer you can count on to provide accurate, reproducible results for your application requirements.



Outstanding features to help you meet your teaching, quality

For teaching labs, research labs and industrial QC requiring robust construction, ease-of-use and software capability.



GENESYS 30 Visible Spectrophotometer

Modern power meets traditional simplicity

- The gold standard in basic spectrophotometers
- Large sample compartment supports the use of cuvettes and test tubes
- Removable, washable compartment liner for easy clean-up
- Ideal solution when OD600 is your primary need



GENESYS 40 Vis/50 UV-Vis Spectrophotometers

Advanced usability, modern functionality

- 7-inch, high-resolution touchscreen interface
- Local control increases speed and reliability for routine analysis
- Large sample compartment with front access simplifies sample handling
- Wi-Fi ready—save data and methods, print results from on-board control

Choose the instrument that's right for you

Instrument	Spectral region	Optics	Display
GENESYS 30	Vis	Single Beam	5-inch color screen
GENESYS 40	Vis	Dual Beam	7-inch touchscreen
GENESYS 50	UV-Vis	Dual Beam	7-inch touchscreen, tiltable
GENESYS 140	Vis	Dual Beam	7-inch touchscreen, tiltable
GENESYS 150	UV-Vis	Dual Beam	7-inch touchscreen, tiltable
BioMate 160	UV-Vis	Dual Beam	7-inch touchscreen, tiltable
GENESYS 180	UV-Vis	Double Beam	7-inch touchscreen, tiltable

*8-cell changer comes standard with the GENESYS 180

**Three-year warranty available upon instrument registration

control and research UV-Vis needs

For advanced teaching labs, R&D, research and life science applications requiring higher throughput or temperature control.



GENESYS 140 Vis/150 UV-Vis
Spectrophotometers

Elite performance, enhanced capabilities

- Tilttable 7-inch, high-resolution touchscreen tablet to avoid glare
- Compatible with automated cell changers, Peltier, sipper and fiber optic probe accessory options
- Wi-Fi ready—save data and methods, print results from local control



Thermo Scientific™ BioMate™ 160
UV-Vis Spectrophotometer

Life science enabled

- Includes Life Science Application Software package
- Software includes pre-programmed life science methods such as Nucleic Acid A260; Protein A280 and A205; Protein Colorimetric assays and OD600
- Extend your capabilities with a microcell holder or Peltier thermostatted cell holder or cell changer option



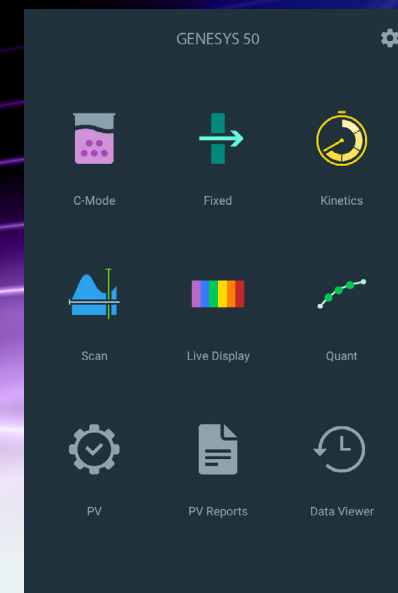
GENESYS 180 UV-Vis Spectrophotometer

High-throughput ready

- Double-beam optics
- Ideal solution when a reference beam is required, such as for kinetics
- 8-cell changer standard
- Make measurements outside the sample compartment without cuvettes using fiber optic coupler and probe

Walk-up convenience

Simple-to-use, touchscreen user interface features the methods and applications most important to you.



Flexible computer control

Optional VISIONlite software offers complete control from a Microsoft® Windows® computer providing applications for:

- Scanning
- Quantitative analysis
- Kinetics
- Fixed wavelength measurements

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GENESYS instrument specifications

Description		GENESYS 30	GENESYS 40	GENESYS 140	GENESYS 50	GENESYS 150	BioMate 160	GENESYS 180
Optical Design		Single Beam			Dual Beam			Double Beam
Spectral Bandwidth		5 nm			2 nm			
Light source (Typical Lifetime)		Tungsten-Halogen (>1000 hours)			Xenon Flash Lamp (>5 years typical, 3 years guaranteed)			
Detector		Silicon Photodiode	Dual Silicon Photodiodes					
Wavelength	Range	325–1100 nm			190–1100 nm			
	Accuracy	±2 nm	±0.5 nm					
	Repeatability	<±1 nm	<±0.2 nm					
	Scan Speed	Automatic—up to 1200 nm/min	Automatic—up to 1800 nm/min			Slow, medium and fast (up to 1600 nm/min)		
	Data Resolution	1 nm				0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm		0.1 nm, 0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm
Photometric	Range	–3A to +3A	–3A to +3.5A		–2A to +3.5A			
	Display	–3A to +3A, 0 to 200 000 %T, 0 to 9 999 999 C	–3A to +5A					
	Accuracy	±0.002A (0–0.3A) 0.5% of ABS reading (0.301A – 2.5A)	±0.002A at 0.5A ±0.004A at 1.0A ±0.008A at 2.0A					
	Repeatability ¹	±0.002 A	±0.001A at 1A					
	Noise ²	≤0.001A at 0A ≤0.001A at 1A ≤0.002A at 2A	≤0.00020A at 0A at 260 and 500 nm ≤0.00030A at 1A at 260 and 500 nm ≤0.00040A at 2A at 260 and 500 nm					
	Drift ³	<0.002A/Hr	<0.0010A/Hr		<0.0005A/Hr			
Stray Light		<0.1%T at 340 nm and 400 nm	<0.05%T at 340 nm and 400 nm		< 1.0%T 198 nm (KCl) , <0.05%T at 220 nm (NaI), <0.03%T at 340 nm (NaNO ₂)			
Baseline Flatness		<0.003A	±0.005A		±0.002A			
Display		5-inch diagonal, 32-bit color display, 800 × 480 pixels	7-inch color touchscreen, fixed, high definition, 800 × 1280 pixels	7-inch color touchscreen, tiltable, high definition, 800 × 1280 pixels	7-inch color touchscreen, fixed, high definition, 800 × 1280 pixels	7-inch color touchscreen, tiltable, high definition, 800 × 1280 pixels		
Keypad		Tactile rubber 23 keys with numeric keypad	Touchscreen					
Sample Compartment		<ul style="list-style-type: none">• Accessible from top, front or side• All platforms can accommodate 100 mm cells• Available accessory for test-tubes up to 25 mm diameter and 150 mm height• Removable, washable sample compartment liner with magnetic placement and hold-down		<p>Accommodates (optional):</p> <ul style="list-style-type: none">• 8-position cell changer• 4-position cell changer (long path cells)• Peltier thermostatted cell holder (20–60 °C)• Sipper accessory	<ul style="list-style-type: none">• Accessible from top, front or side• Able to accommodate cells up to 100 mm pathlength• Available accessory for test-tubes up to 25 mm diameter and 150 mm height• Removable, washable sample compartment liner with magnetic placement and hold-down	<p>Accommodates (optional):</p> <ul style="list-style-type: none">• 8-position cell changer• 4-position cell changer (long path cells)• Peltier thermostatted cell holder (20–60 °C)• Sipper accessory• Fiber optic probe coupler		<ul style="list-style-type: none">• 8-position cell changer (standard) <p>Also accommodates (optional):</p> <ul style="list-style-type: none">• 4-position cell changer (long path cells)• Peltier thermostatted cell holder (20–60 °C)• Sipper accessory• Fiber optic probe coupler
Printer		Snap-on printer available						
Connectivity		<ul style="list-style-type: none">• USB-A on front face supports flash memory devices for method and data storage• USB-B on side supports connection to a Windows computer running optional remote control software; export data to PC via USB	<ul style="list-style-type: none">• Single USB-A supports flash memory devices for method and data storage• Duplex USB-A supports connection to a Windows computer running optional remote control software, keyboard, mouse• Export data to network or PC via Ethernet or Wi-Fi• Print via USB, Ethernet or Wi-Fi					
Languages		English (Available soon: Spanish, German, French, Italian, Portuguese, Russian, Chinese, Japanese, Korean, Thai)						
Dimensions		35.5 × 38.5 × 19.5 cm (L × W × H)						
Weight		7.5 kg						
Power Requirements		External AC to DC converter. Voltage and Frequency (Hz) selected automatically, 100–240 volts, 50–60 Hz.						
Warranty		2 years standard with 1 year extension upon registration of the instrument with Thermo Fisher Scientific within 6 months of purchase						

1. Measured at 1.0A at 546 nm 2. RMS at 500 nm. 60 consecutive measurements. 3. At 500 nm after warmup. 2hrs GENESYS 30, 1hr all others. *** Visit www.thermofisher.com/connect for details

Find out more at thermofisher.com/genesys

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