Product Specifications

The Thermo Scientific GENESYS 10 series includes affordable, easy-to-use, and reliable UV-Visible and Visible-only spectrophotometers designed to meet the requirements of laboratories performing routine analysis. Combine a wide range of accessories and software with a GENESYS 10 instrument to create a customized solution for your QA/QC or teaching laboratory.

GENESYS 10

Unmatched reliability for traditional analysis

For over 60 years, customers in world-renowned research institutions, industrial laboratories and teaching institutions have relied on Thermo Scientific UV-Visible and Visible spectrophotometers. The GENESYS 10 series has set the standard for ease-of-use and reliability.

Designed for Reliability and Precision

The patented optical design provides a high-performance system in a compact footprint. The GENESYS 10 UV-Vis scanning instrument has very few moving parts and a long lifetime xenon lamp, which covers the full UV-Visible wavelength range. The dual-beam optical system provides enhanced stability by incorporating an internal reference detector. The GENESYS 10 Vis uses a tungsten lamp and single detector to support routine measurements in the visible range.

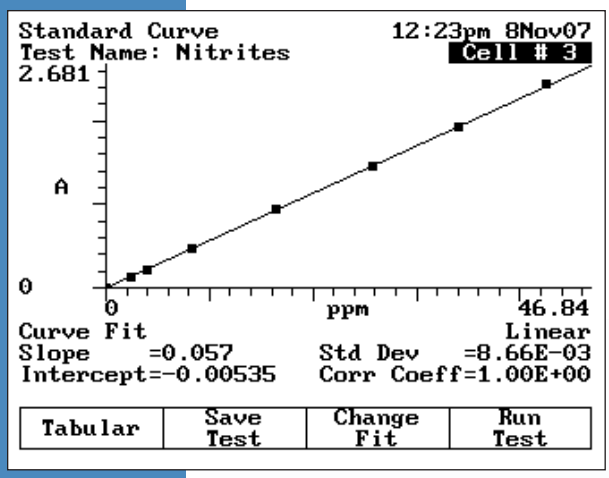
Software Flexibility

The GENESYS 10 series offers the flexibility of a large built-in graphical display and contact-sensitive SoftKeys for maximum ease-of-use. Optional software can also control the instrument for more complex analysis. Whether your methods require quantitative analysis, wavelength scanning, fixed multi-wavelength measurements, kinetics, color, or other more advanced calculations, a GENESYS 10 series instrument is the right choice.

Cost-effective UV-Visible Spectrophotometers for Teaching and Routine Quality Control Laboratories

Intuitive Design Provides Maximum Ease-of-use

The simple, intuitive built-in keyboard and graphically displayed SoftKeys ensure that the most routine measurements require only a few keystrokes. A simple, 3-step process gives you easy access to routine absorbance or transmittance data. Add two extra keystrokes to make a concentration measurement in the units of your choice. The unique SmartStart™ feature allows you to place the most frequently used methods on the first screen each time the instrument is turned on. SmartStart makes training users simple and provides easy access to the laboratory tests you use every day.



The Standard Curve screen provides easy set-up of concentration methods. Select up to 7 curve fit options, up to 15 standards and select up to 10 pre-programmed measurement units, or create your own.

More Bench Space

The compact design saves valuable bench space and leaves more room for additional laboratory equipment. A built-in printer delivers high-quality printouts of data and graphics without increasing the system footprint.

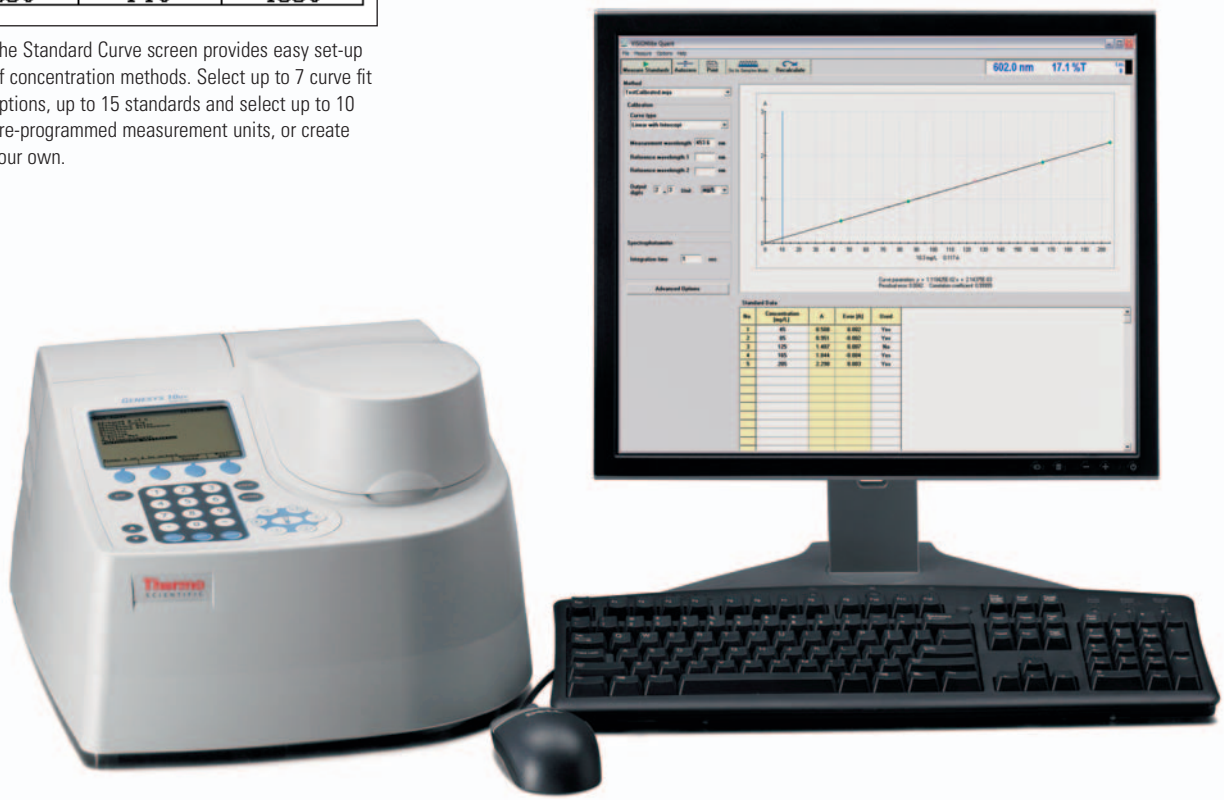
Low Cost of Ownership

The GENESYS 10 series is designed for routine use and maximum reliability. The xenon lamp provides excellent performance over the full wavelength range of 190-1100 nm. Guaranteed for 3 years of continuous use, the xenon light source will provide many years of maintenance-free performance. The lamp may not need replacing over the entire lifetime of the instrument, as it is only on when taking a measurement.

Automatic Cell Changer Accessory Saves Time

The 6-cell changer on the GENESYS 10 series provides built-in sample automation. One position is designated for the blank, leaving space for the automatic analysis of up to 5 samples. The cell changer automatically interacts with all built-in Local Control and PC software applications. It can easily be removed and replaced with other optional accessories such as long pathlength cell holders, test tube holders, a Peltier single cell holder, a solid sample holder, sipper systems, and fiber optic accessories. The nanoCell accessory provides the flexibility of small volume liquid measurement with 1 µL of solution and allows highly concentrated liquids to be measured.

Enhance your sensitivity and productivity with the automatic measurement of up to 3 long pathlength cell holders



Comprehensive Local Control Software

The GENESYS 10 series systems offer a comprehensive suite of built-in applications for routine analysis and teaching. Built-in software applications include a continuous live display of:

- Absorbance, Transmittance, or Concentration
- Absorbance ratio/absorbance difference
- Quantitative analysis with up to 15 standards
- Fixed multi-wavelength analysis for up to 31 wavelengths
- Kinetics
- Wavelength scanning
- Performance verification

The wavelength scanning application provides the flexibility to scan at various scan speeds, label peaks/valleys, and report specific wavelengths for routine QC applications. Easy graph data scaling and a built-in 3-point net calculation for sloping baseline corrections is provided in the standard software.

Performance Validation

Built-in performance verification provides an easy and automated tool for checking your instrument performance. In accordance with Good Laboratory Practice (GLP), each verification report gives the time, date, and instrument serial number. The built-in wavelength accuracy test is compatible with either the internal lamp or external calibrated standards. The xenon lamp provides a cost-effective primary standard for wavelength accuracy and repeatability tests. Additional built-in tests allow you to monitor other instrument performance specifications including photometric accuracy, noise, and stray light.

Unique certified and traceable standards are available for verifying the photometric accuracy, linearity, and wavelength accuracy of your GENESYS 10 system.

Fiber optic probes increase sample throughput and allow the measurement of small volume, highly concentrated, or other difficult samples

Additional Flexibility with Application Software

A range of software programs are available for the GENESYS 10 series instruments.

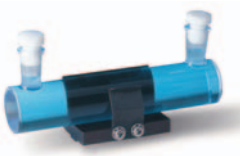
- The standard instrument control software, VISION*lite*™, consists of applications for wavelength scanning, fixed multi-wavelength analysis, quantitative analysis and kinetics.
- For food and beverage customers, EnzLab, an analyzer software application for enzymatic food analysis is available.
- Industrial liquid color and transmission color measurements can be performed using the VISION*lite* ColorCalc software.
- Luminous transmittance of sunglasses and other optical materials is available with the VISION*lite* MaterialsCalc software.

Each of these application software packages completely controls the GENESYS 10 series spectrophotometer and appropriate accessories.

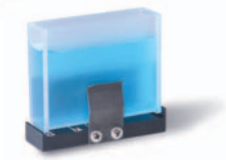
Accessories for your Sample

Single-Cell Peltier

Liquid Thermostatted Single Cell Holder



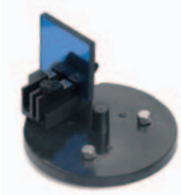
Long Pathlength Cylindrical Cell Holder



Long Pathlength 100 mm Rectangular Cell Holder

VERSA Fiber Optic Probe

nanoCell



Solid Sample Holder

Long Pathlength 50 mm Rectangular Cell Holder

Sipper Accessory

Product Specifications

	GENESYS 10 Vis Part Number 335900 Series	GENESYS 10 UV-Vis *Scanning* Part Number 335906 Series
Optical Design	Single Beam	Dual Beam
Spectral Bandwidth	5 nm	
Light Source (typical service life)	Tungsten-Halogen (1000 hrs.)	Xenon (5 years)
Detector	Silicon Photodiode	Dual Silicon Photodiodes
Wavelength:		
Range	325 – 1100 nm	190 – 1100 nm
Accuracy	± 1.0 nm	± 1.0 nm
Repeatability	± 0.5 nm	± 0.5 nm
Slew Speed	11,000 nm/min	
Scanning Speed	200 – 2200 nm/min	
Data Interval	1.0, 2.0, 3.0, 5.0 nm	
Photometric:		
Range	-0.1 – 3.0 A; 0.3 – 125%T; ± 9999 C	
Readout	Absorbance, % Transmittance, Concentration	
Accuracy	0.5% or 0.005A, whichever is greater, up to 2A	
Noise	< 0.001A at 0A; < 0.002A at 2A, peak-to-peak at 340 nm	
Drift	0.002A/hour (after warmup)	0.001A/hour
Stray Light	< 0.1%T at 340 and 400 nm	< 0.1%T at 220, 340, and 400 nm
Display	Graphical, 320 x 240 pixel backlit LCD, 3.8" x 2.8"	
Keypad	Sealed Membrane Keypad	
Local Control Software	Absorbance/Transmittance/Concentration	Absorbance/Transmittance/Concentration
	Standard Curve	Standard Curve
	Absorbance Ratio	Absorbance Ratio
	Absorbance Difference	Absorbance Difference
	Kinetics	Kinetics
	Survey Scan (100 nm range)	Full Range Scanning (190 - 1100 nm)
	3-Point Net	3-point Net
	Multiwavelength	Multiwavelength
	Performance Verification Tests	Performance Verification Tests
		Cell Correction
		SmartStart program
Data Storage	Up to 120 methods	
Printer (optional)	40 column internal graphics; parallel port output in HP PCL format (text and graphics)	
Communications	Bi-directional RS232C	
Languages	Software, output and operator's manual: English, French, German, Spanish, Italian (user selectable)	
Power Requirements	Selected automatically; 100 – 240 Volts	
Dimensions	30 W x 40 D x 25 H cm (11.8" x 15.7" x 9.8")	
Weight	8.6 kg (19 lb.)	
Warranty	1 year	

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Thermo Electron Scientific Instruments LLC, Madison, WI USA is ISO Certified.

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