

Thermo Scientific Vanquish – Variable Wavelength Detector F

Better separations, more results, easier interaction

Thermo Scientific™ Vanquish™ UHPLC system is designed to offer:

- **Better separations** with the power of the system to unveil more compounds than ever before
- **More results** with throughput, speed and sample capacity to boost workflow productivity
- **Easier interaction** to make the system a joy to work with

The Vanquish UHPLC system is designed as an integrated UHPLC system, where the Vanquish detectors measure the sample with more versatility.

Vanquish Variable
Wavelength Detector



High-Performance UV-Vis Detection

The Vanquish Variable Wavelength Detector is designed to achieve both robust and high-performance UV-Vis absorption detection. The module offers excellent linearity and noise performance to support a wide operating range and trace detection. With up to 250 Hz, the detector keeps pace with any current and future UHPLC detection challenges. Select from a wide flow cell portfolio to match your application related requirements. The elaborated design, automated performance and wellness monitoring, and a wide range of usability features give you full confidence in your analytical results.

- Maximize the data collection rate up to 250 Hz for today's and tomorrow's fastest UHPLC applications
- Choose from a broad range of flow cells, covering virtually any application need, also compatible with LC/MS
- Minimize baseline drift and noise with active temperature control of optics and electronics to detect even the smallest quantities of trace compounds
- Detect trace analytes next to main compounds with the large linearity range of up to 2.5 AU and a wide wavelength range
- Simplify method development with up to four absorption channels and spectral scans

PRODUCT SPECIFICATIONS

Specification	Value
Optical Design	Single beam, forward-optics design with dedicated reference wavelength photodiode and active lamp house temperature control
Maximum Data Collection Rate	250 Hz (single-channel data acquisition) (under Thermo Scientific™ Dionex™ Chromeleon™ Chromatography Data System 7.2 SR3 control or later) Up to 5 Hz (multi-channel data acquisition)
Wavelength Range	190–900 nm with deuterium and tungsten lamp
Noise, One Channel	<±2.5 µAU at 254 nm, time constant 2 s, at 1 mL/min with water
Noise, Multiple Channels	<±10 µAU (typical <±7 µAU) at 254 nm and 280 nm, time constant 2 s, at 1 mL/min with water
Drift	<0.1 mAU/h at 254 nm and dry standard flow cell
Linearity	<5% (typical <3%) at 2.5 AU caffeine, wavelength: 272 nm based on ASTM
Spectral Bandwidth	6 nm at 254 nm
Light Source	Deuterium lamp, tungsten lamp
Number of Signal Channels	Up to four
Flow Cells	6 different, see ordering information for details
Wavelength Accuracy	±1 nm
Wavelength Repeatability	±0.1 nm
GLP	Predictive Performance functions: lamp age and ignitions, lamp intensity degradation, leak detection, service monitoring period. All system parameters logged in the Chromeleon CDS Audit Trail.
PC Connection	USB 2.0; 3-port HUB to connect further Vanquish modules
I/O Interfaces	2 × 6 pin Mini-Din connectors each having functionality: 1 input, 1 relay out, 1 bidirectional input/output
Safety Features	Power-up diagnostics of optics, cooling fans, motors, and electronics Leak detection and safe leak handling
Wetted Parts (Flow Cells)	Standard and semi-micro flow cell: Fused Silica, PEEK, PTFE, Stainless Steel Bio, semi-preparative and UV monitor flow cells: Fused Silica, PEEK
Biocompatible	Standard and semi-micro flow cell: No; pH range 1–12, chloride concentration up to 0.1 mol/L Bio, semi-preparative and UV monitor flow cells: Yes; pH range 2–12, chloride concentration up to 1 mol/L
Power Requirements	100–240 V AC, 50/60 Hz, max. 150 W/255 VA
Environmental Conditions	5–35 °C; 20–80% RH (non-condensing)
Dimensions (h × w × d)	160 mm × 420 mm × 620 mm (6.3 in. × 16.5 in. × 24.4 in.)
Weight	16 kg (35 lb)

ORDERING INFORMATION

Description	Part Number	Description	Part Number
Vanquish Variable Wavelength Detector F	VF-D40-A	Semi-preparative flow cell, 0.7 µL, PEEK	6074.0320
Accessories Standard flow cell, 11 µL, stainless steel	6077.0250	Ultra-low dispersion UV monitor, 45 nL	6074.0285
Standard Bio flow cell, 11 µL, PEEK	6077.0200	Deuterium lamp, high sensitivity	6077.1111
Semi-micro flow cell, 2.5 µL, stainless steel	6077.0360	Deuterium lamp, standard	6077.1110
Semi-micro Bio flow cell, 2.5 µL, PEEK	6077.0300	Tungsten lamp	6074.2000

To order in the U.S., call 1-800-346-6390, or contact the Thermo Fisher Scientific office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the above part numbers.

To find a local representative, visit:

www.thermofisher.com/chromatography

©2016 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

Thermo

S C I E N T I F I C

A Thermo Fisher Scientific Brand