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2489 UV/Visible Detector

Whether you are doing routine UV-based applications or pushing the limits of detection with low-level impurity analyses, Waters® 2489 UV/Visible (UV/Vis) Detector is the best detection choice for performance, reliability, and usability.

The 2489 UV/Vis Detector is the most sensitive and versatile dual-wavelength absorbance detector available for HPLC. The design combines a high energy Deuterium source, a precise optical design, and low noise, high speed electronics. These advanced capabilities take UV/Vis detection performance to a new level.

OPERATING SPECIFICATIONS[1]

Wavelength range	190 to 700 nm
Bandwidth	≤5 nm
Wavelength accuracy	±1 nm (via patented[2] Erbium filter)
Wavelength repeatability	±0.1 nm
Linearity[3]	≤5% at 2.5 AU, propylparaben, 257 nm
Baseline noise,[3] single wavelength	≤5 x 10^{-6} AU, 230 nm, 10 points/s, 1.0 s, 30-s segments, dry analytical flow cell
Baseline noise,[3] dual wavelength	≤35 x 10^{-6} AU, 230 nm, 280 nm, 1 point/s, 2.0 s, 30-s segments, dry analytical flow cell
Drift	≤1 x 10^{-4} AU/h
Measurement range	0.0001 to 4.0000 AU
Sampling rate	Up to 80 points/s

OPTICAL COMPONENT SPECIFICATIONS

Light source	Deuterium arc lamp, warranty: 2000 hours or 1 year warranty (whichever comes first)
Flow cell design	Patented TaperSlit™[4]
Path length	10 mm (analytical cell)
Cell volume	16.3 µL (analytical cell)
Pressure limit	1000 psi (analytical cell)
Wetted materials	316 stainless steel, fused silica, Tefzel, PEEK

ELECTRICAL SPECIFICATIONS

Power requirements	100 to 240 VAC
Line frequency	50 to 60 Hz
Power consumption	185 VA (nominal)
Inputs	Four event inputs
Outputs	Four outputs (2 analog and 2 event)

PHYSICAL/ENVIRONMENTAL SPECIFICATIONS

Dimensions	Width: 28.4 cm (11.2 inches) Height: 20.8 cm (8.2 inches) Depth: 50.3 cm (19.8 inches)
Weight	9.3 kg (20.5 pounds)
Operating temperature range	4 to 40 °C (39 to 104 °F)
Operating humidity range	20% to 80%, non-condensing
Audible noise	<58 dBA

ORDERING INFORMATION		PART NUMBER
2489 UV/Visible Detector		176002489
Optional flow cells:		
Semi-preparative	4.4 µL volume, 3 mm pathlength	WAT081158
Inert (Titanium)	16.3 µL volume, 10 mm pathlength	WAT081157
High-pressure	16.3 µL volume, 10 mm pathlength	WAT081321
Microbore	4.4 µL volume, 3 mm pathlength	WAT081159
Autopurification	6.0 µL volume, 1 mm pathlength	289000614
Variable path length	0.06 to 1.20 µL volume, 0.15 to 3.00 mm pathlength	700000923

1. All performance specifications are measured following a warm-up period of one hour. Ambient $\Delta T \leq \pm 2.0$ °C
2. U.S. Patent Numbers: 6,423,249 and 6,783,705
3. ASTM E1657-98
4. U.S. Patent Number: US 5,883,721

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