

## Waters® 2996 Photodiode Array Detector

*Waters 2996 PDA Detector offers no-compromise chromatographic and spectral sensitivity, reliability and ease of use for analytical and preparative separations. Advanced spectral analysis enhances component recognition and homogeneity assessment.*

### Operating Specifications

Wavelength Range	190-800 nm
Light Source	Prealigned, Deuterium lamp
Spectral Resolution/Optical Bandpass	1.2 nm per photodiode with a total of 512 photodiodes, digital and optical (3D mode)
Digital Resolution	1.2 nm - 600 nm (2D mode)
Wavelength Accuracy	± 1 nm
Linearity Range	≤ 5% at 2 AU Propyl paraben, 257 nm
Baseline Noise	3.0 X 10 <sup>-5</sup> AU, at 254 nm (10 mm cell)
Drift	≤ 1.0 X 10 <sup>-3</sup> AU/hour/°C, dry cell at 254 nm
Sensitivity Setting Range	0.0001-2.0000 AUFS (under software control)
Filter Setting Range	0, 0.1, 0.2, 0.5, 1, 2, 3
Flowcell Design	Reversed TaperBeam™ Patented Refractive Index Corrected
Path Length	10 mm (standard analytical cell)
Cell Volume	8 µL (standard analytical cell)
Pressure Limit	1000 psi (standard analytical cell)
Wetted Materials	316 stainless steel, fused silica, Tefzel®
Outputs	Two analog integrator outputs Two programmable event outputs
Inputs	Two inject start inputs
Diagnostics	Self test or start-up
Deuterium Lamp	Warranty: 2000 hours or 1 year, whichever comes first

### Physical/Environmental Specifications

Dimensions	Width: 11.5 inches (29 cm) Height: 8.1 inches (22 cm) Depth: 24 inches (61 cm)
Weight	31 pounds (14.3 kg)
Operating Temperature	+4 to 40° C (39° to 104° F) operation
Operating Humidity	20 to 80%, non-condensing

**Electrical Specifications**

Power Requirements	100 - 230 VAC 230 VAC (190-264 V), 50/60 Hz
Line Frequency	50 - 60 Hz
Power Consumption	100 VA (nominal)

**Ordering Information**

**Part Number**

2996 Photodiode Array Detector	186000869
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(Requires Waters Millennium<sup>®32</sup> or MassLynx<sup>™</sup> Software)

Millennium<sup>32</sup> Software:

Millennium <sup>32</sup> Single System NT	WAT047507
Millennium <sup>32</sup> Multi System NT	WAT047509
Millennium <sup>32</sup> Workstation Add-On Single System	WAT042990
Millennium <sup>32</sup> Workstation Add-On Multi System	WAT042991

*Millennium<sup>32</sup> Client/Server – contact your local Waters Representative*

**Optional Flowcells**

Semi-preparative 3 mm path length, 2.5 µL volume	289000578
Inert (titanium) 10 mm path length, 8 µL volume	289000576
Microbore (and Integrity <sup>®</sup> MS) 3 mm path length, 2.5 µL volume	289000577
High Pressure Analytical (4000 psi) 10 mm path length, 8 µL volume	289000579
Variable Path Length Prep 0.15–3 mm path length, variable volume	WAT057664
Autopurification 1 mm path length, dual flow path, 1.3 µL volume	289000612

All performance specifications are for the 2996 detector following a warm-up period of one hour.

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