

## ACQUITY® Refractive Index Detector

For isocratic UPLC® or APC™ analysis of samples without a UV chromophore, the ACQUITY® Refractive Index (RI) detector offers unparalleled performance. Its low-dispersion fluidics were designed to match the performance needed for narrow, low-volume peaks while still delivering stable baseline performance, low noise, and a wide, linear dynamic range.



### OPERATING SPECIFICATIONS

Refractive index range	1.00 to 1.75
Measurement range	$7.0 \times 10^{-9}$ RIU to $5.0 \times 10^{-4}$ RIU
Linear dynamic range	$\leq 5.0\%$ over $\pm 5.0 \times 10^{-4}$ RIU
Noise <sup>1</sup>	$\leq \pm 1.5 \times 10^{-9}$ RIU (2 points/s, 1-s filter time constant 0.5 mL/min, 100% H <sub>2</sub> O)
Drift <sup>1</sup>	$\leq 2.0 \times 10^{-7}$ RIU/h (2 points/s, 1-s filter time constant, 0.5 mL/min, 100% H <sub>2</sub> O)
Sampling rates	1 to 80 points/s
Filter time constant	0.0 to 5.0 s (Independently optimized)
Compatible flow rate range	0.05 to 2.00 mL/min
RIU Full Scale settings	1 to $500 \times 10^{-6}$ RIU
Temperature control	Internal oven: 30 to 55 °C (86 to 131 °F), $\pm 0.5$ °C, settable 0.1 °C increments Temperature and accuracy are measured at sensor
Integrated valves	Purge, recycle, and pressure relief
Unattended operation	Leak sensors, full diagnostic data captured through console software

**OPTICAL COMPONENT SPECIFICATIONS**

Flow cell	Fused quartz
Flow cell volume	1.3 µL
Flow cell pressure limit	≤145 psi
Light source	LED 870 nm
Wetted materials	316 stainless steel, fluoroelastomer, fluoropolymer, Natural PPS, fused silica, and PEEK (for non-APC systems)
Internal fluidic volume	<15 µL

**ELECTRICAL SPECIFICATIONS**

Power requirements	100 to 240 VAC
Line frequency	50 to 60 Hz
Power consumption	145 VA (nominal)
Inputs	One event input for inject start
Outputs	Two outputs (1 analog and 1 event)

**PHYSICAL/ENVIRONMENTAL SPECIFICATIONS**

Dimensions	Width: 34.3 cm (13.5 inches)
	Height: 20.8 cm (8.2 inches)
	Depth: 61.0 cm (24.0 inches)
Weight	15.4 kg (34.0 pounds)
Operating temperature range	15 to 40 °C (59 to 104 °F)
Operating humidity range	20% to 80%, non-condensing
Audible noise	<50 dBA above a reference sound pressure of 20 µPa at front of unit in operator position.

**ORDERING INFORMATION****PART NUMBER**

ACQUITY Refractive Index Detector

176015095

1. After a two-hour minimum warmup period. Oven set 5 °C above ambient, ambient T +/- 1 °C/h

# Waters

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