

Technical Note No. 001

Comparison of Specifications for Ozone Monitors

Ozone Monitor	Eco Sensors Model UV-100	2B Tech Model 106	2B Tech Model 202	2B Tech Model 205	API Model 400 E
Optical Bench	Single Beam	Single Beam	Single Beam	Dual Beam	Single Beam
Range(s)	0-1 ppm, 0-10 ppm 0-900+ ppm	0-1ppm, 0-10 ppm, 0-100 ppm, 0-200+ ppm	0-1ppm, 0-10 ppm, 0-100 ppm, 0-200+ ppm	0-1ppm, 0-10 ppm, 0-100 ppm, 0-200+ ppm	0-100 ppb 0-10 ppm
Resolution	0.01 ppm (10 ppb)	0.1 ppb	0.1 ppb	0.1 ppb	0.1 ppb
Pneumatics	Internal diaphragm pump, ~800 cc/min	Internal diaphragm pump, ~800 cc/min	Internal diaphragm pump, ~800 cc/min	Internal diaphragm pump, ~1600 cc/min	Internal diaphragm pump, ~800 cc/min
Filter	Optional external particulate filter	Optional external PTFE particulate filter	Optional external PTFE particulate filter	Optional external PTFE particulate filter	Internal particulate filter
Dimensions	3.7 x 7.5 x 8.5 in 9 x 19 x 22 cm	3.7 x 7.5 x 8.5 in 9 x 19 x 22 cm	3.5 x 8.5 x 11 in 9 x 22 x 28 cm	3.5 x 8.5 x 11 in 9 x 22 x 28 cm	7 x 17 x 23.5 in 18 x 43 x 60 cm
Volume	236 cubic inches	236 cubic inches	327 cubic inches	327 cubic inches	2,797 cubic inches
Weight	4.0 lb, 1.8 kg	4.2 lb, 1.9 kg	4.6 lb, 2.1 kg	5.1 lb, 2.3 kg	28 lb, 13 kg
Power	4.8 Watt 100-240 Volt ac 50/60 Hz or 12 V dc	4.8 Watt 100-240 Volt ac 50/60 Hz or 12 V dc	5 Watt 100-240 Volt ac 50/60 Hz or 12 V dc	5 Watt 100-240 Volt ac 50/60 Hz or 12 V dc	250 Watt 100-240 Volt ac 50/60 Hz
Reporting Units	ppm	ppb	ppb, pphm, ppm mg/m ³	ppb, pphm, ppm mg/m ³	ppm, ppb, mg/m ³ µg/m ³
Humidity Control	Nafion tube	Nafion tube	Nafion tube	Nafion tube	None
Zero Noise	≤ 0.01 ppm (rms)	≤ 2 ppb (rms)	≤ 1.5 ppb (rms)	≤ 1.0 ppb (rms)	≤ 0.3 ppb (rms)
Lower Detectable Limit (LDL)	≤ 0.02 ppm for 10-s average	≤ 4 ppb for 10-s average ≤ 0.9 ppb for 1 min average	≤ 3 ppb for 10-s average ≤ 1.3 ppb for 1-min average	≤ 2 ppb for 10-s average ≤ 0.9 ppb for 1-min average	≤ 0.6 ppb
Precision	Greater of 0.01 ppm or 2% of reading	Greater of 2.0 ppb or 2% of reading	Greater of 1.5 ppb or 2% of reading	Greater of 1.0 ppb or 2% of reading	Greater of 0.3 ppb or 2% of reading
Zero Drift	≤ 0.01 ppm per hour ≤ 0.02 ppm per 7 days	≤ 1 ppb per hour ≤ 2 ppb per 7 days	≤ 1 ppb per hour ≤ 2 ppb per 7 days	≤ 1 ppb per hour ≤ 1 ppb per 7 days	≤ 1 ppb per hour ≤ 1 ppb per 7 days
Span Drift	≤ 1% per 7 days	≤ 1% per 7 days	≤ 1% per 7 days	≤ 1% per 7 days	≤ 1% per 7 days
Lag Time	10 s	10 s	10 s	2 s	10 s
Rise and Fall Time	20 s	20 s	20 s	4 s	20 s to 95%
Linearity	1% of full scale	1% of full scale	1% of full scale	1% of full scale	1% of full scale
Temperature Operating Range	0-60 °C	0-60 °C	0-60 °C	0-60 °C	5-40 °C
Outputs	0-2.5 V for 3 concentration ranges, 4-20 mA, RS232 Serial, USB	0-2.5 V for 4 concentration ranges, RS232 serial	0-2.5 V for 4 concentration ranges, RS232 serial	0-2.5 V for 4 concentration ranges, RS232 serial	4 Analog voltage ranges, RS232 serial
Data Logger	No	No	14,336 lines (10 s avg. = 1.4 days; 5 min avg = 1.4 mo.)	14,336 lines (10 s avg. = 1.4 days; 5 min avg = 1.4 mo.)	No
Options	Particle Filter	Battery	Battery, Flash Memory, GPS, Particle Filter, Spare Parts	Battery, Flash Memory, GPS, Particle Filter, Spare Parts	Various communication, calibration and chassis mounting brackets

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