

# Aurora 2000

## PM correlation nephelometer

**User friendly and easy to maintain, the Aurora 2000 makes PM<sub>2.5</sub> correlation studies simple and easy to perform.**

The Aurora 2000 is part of the 'new generation' nephelometers using a single wavelength to measure particulate scattering. The Aurora is available in two configurations:

- Configured with a PM<sub>2.5</sub> Size selective inlet (SSI) to sample PM<sub>2.5</sub>, Ideal in areas with stable aerosol chemistry
- Configured to communicate directly with a beta attenuation particulate monitor providing 1 minute PM corrected data, ideal in areas with multiple aerosol sources



### Increased accuracy

- Automatic optical reference calibration
- Enhanced high powered LED light-source
- PM<sub>2.5</sub> sampling inlet head

### Ease of use

- Compact and portable
- Automated instrument calibration using the selected span gas, with pressure and temperature compensation
- Internal sample heater which can be enabled by the user to eliminate the effects of humidity (RH: <40% to <90%)
- Automatic zero/span (check or adjust) available in intervals of 1,3,6,12, 24 hrs or weekly
- Holds up to 45 days of 5 minute data averages or 10 days of 1 min data averages
- Data downloader and firmware upgrade software supplied on CD

### Lower cost of ownership

- Internal 12V heater eliminates the need for expensive external inlet heater
- Long lasting LED light source reduces replacement costs

**ECOTECH**WORLD CLASS  
environmental  
MONITORING

## Specifications

Parameter:	mg/m <sup>3</sup> or $\sigma_{sp}$ at (450, 525 or 635nm)
Ranges:	<0.3 to >2 000 Mm <sup>-1</sup>
Lower Detectable limit:	<0.3 Mm <sup>-1</sup> (60 second averaged data)
Secondary Measurements:	Sample air temperature, chassis temperature, relative humidity and sample pressure
Flow rate:	≈5 l/min
Operating Temperature:	0 to 45°C
Operating RH:	10 to 95%
Calibration:	Span gas selection and calibration values for CO <sub>2</sub> , SF <sub>6</sub> , FM- 200, R-12, R-22, R-134 or a user defined gas
Optics:	Reference brightness measurement
Light source:	Stable LED light source
Wavelength:	525nm (green), 450nm (blue) or 635nm (red)
Operating Voltage:	12 VDC (includes 110-240 VAC 50/60 Hz power converter) (60 watts with heater active)
Dimensions:	170mm x 700mm x 215mm (L x W x H)
Weight:	12kg

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## Communications/Data logging

Outputs:	4 analogue outputs (2 voltage & 2 current) and RS 232 multidrop serial port
Filtering:	Kalman (digital adaptive filter), Moving average (30 seconds) or no filter
Stored Parameters:	Date & Time, $\sigma_{sp}$ (635, 525 or 450), Air temp, Enclosure temp, RH, Pressure, Status
Capacity:	Maximum of 45 days of 5 minute averages, or 10 days of 1 minute averaged data

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## Options

- PM<sub>2.5</sub> inlet head
- Additional sample tube
- Roof flange kit
- Rain cap with insect screen
- Gas Calibration kit
- Wall mount bracket
- BAM 1020 communication protocol

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## Applications

- Source apportionment studies of particulate matter
- PM<sub>2.5</sub> mass measurement correlation studies
- Particulate monitoring with multiple sources

### World Wide contact details

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