

PI Neph | AirPhoton Polar Imaging Nephelometer

The Polar Imaging Nephelometer is a high grade laboratory instrument designed for an in-depth understating of particulate properties. It provides a full particle characterization including the size distribution and the complex refractive index from hyperangle scattering measurements. Its high capabilities include: light scattering from 3° to 176° , angular resolution of less than 1° , customizable option for 1 - 3 wavelengths and polarization.



Specifications

- Operational temperature: 5 to 40°C
- Wavelengths: Up to 3 in the range of 400-680 nm
- Polarization: P11 and P12 measurements. Other stokes parameters options available
- Angular Range: At least 100 angles from $5-175^{\circ}$
- Range: 0.0 to $>20000 \text{ Mm}^{-1}$
- Lower detectable limit: $< 1 \text{ Mm}^{-1}$ for phase function measurements
- Programmable flow rate: Available
- Flow range: 2 to 20 lpm & Optional
- Particle size selection: Optional cycling up to 4 cut off sizes
- External pump option: Available
- Automatic Zero and Span check: Automatic Zero with clean air system. GRASP software. Included for span calibration
- Light source: Laser
- Dimensions: $200*100*50\text{cm}$
- Weight: $< 30 \text{ Kg}$
- Storage memory: Internal SSD hard drive
- Data Transfer: USB, Ethernet, wifi
- Environmentally rugged: For Indoor or Aircraft Use

Capabilities

- Size Distribution retrieval.
- Determines sphericity.
- Measures complex refractive index.
- Full particle characterization from hyper-angle scattering measurements.
- Measures light scattering ($3^{\circ}-176^{\circ}$).
- Angular resolution of $< 1^{\circ}$
- Standard configuration: 2 visible wavelengths (customizable for 1-3 wavelengths).
- GRASP™ software analysis package included.

Suggested use

For specific scientific research purposes looking for in depth and advanced characterization of particulate properties in laboratory or aircraft settings.