

# Cloud Droplet Analyzer



High-Resolution Aerosol spectrometer for insitu cloud monitoring of droplets and ice crystals

## Description

The Cloud Droplet Analyzer is a high-resolution optical aerosol spectrometer optimized for measuring size distribution and number concentration of cloud aerosols like droplets and ice crystals. Based on the measurement principle of optical light scattering ( $90^\circ$ ) on single particles and high resolution components droplets and ice crystals can be distinguished.

The optical sensor is also used in research applications from KIT for Ice Nucleation Studies at [AIDA -Chamber](https://www.imk-aaf.kit.edu/73.php)<sup>1</sup>

Additionally the cloud water content as well as mean droplet diameter can be reported.

---

<sup>1</sup>AIDA-Chamber: <https://www.imk-aaf.kit.edu/73.php>

# Cloud Droplet Analyzer

## Datasheet

<i>Parameter</i>	<i>Description</i>
<b>Interfaces</b>	USB, Ethernet (LAN), RS232/485, Wi-Fi
<b>Measurement range (size)</b>	0.4 – 40 $\mu\text{m}$ , 0.8 – 100 $\mu\text{m}$
<b>Measuring principle</b>	Optical light scattering on single particle with evaluation of signal length and amplitude
<b>Measurement range (number <math>C_N</math>)</b>	0 – 200 particles/ $\text{cm}^3$
<b>Volume flow</b>	5 l/min
<b>Data acquisition</b>	Digital, 20 MHz processor, 256 raw data channels
<b>Reported data</b>	Particle size distribution, number concentration, water content, mean volume equivalent diameter

# Cloud Droplet Analyzer



## Applications

- Insitu-Cloudmonitoring
- Environmental Research
- Climate Research
- Cloudformation
- Ice Nucleation Events

**Palas GmbH**  
Partikel- und Lasermesstechnik  
Greschbachstrasse 3 b  
**76229 Karlsruhe**  
Germany

**Managing Partner:**  
Dr.-Ing. Maximilian Weiß, Udo Fuchslocher  
**Commercial Register:**  
register court: Mannheim  
company registration number: HRB 103813  
USt-Id: DE143585902



**Contact:** E-Mail: [mail@palas.de](mailto:mail@palas.de) Internet: [www.palas.de](http://www.palas.de) Tel: +49 (0)721 96213-0 Fax: +49 (0)721 96213-33