

# CLOUD DROPLET ANALYZER



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.

## OPERATION PRINCIPLE

### AEROSOL SPECTROMETER FOR IN-SITU CLOUD MONITORING

Droplets and ice crystals can be distinguished based on the measurement principle of optical light scattering ( $90^\circ$ ) on single particles and high-resolution components.

The optical sensor is also used in research applications from KIT for Ice Nucleation Studies at [AIDA -Chamber](#).<sup>1</sup>

The cloud water content and mean droplet diameter can also be reported.

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

## DATASHEET

Measurement range (number $C_N$ )	0 – 200 particles/cm <sup>3</sup>
Measurement range (size)	0,6 – 40 $\mu\text{m}$ , 0,8 – 100 $\mu\text{m}$
Measuring principle	Optical light scattering on single particle with evaluation of signal length and amplitude
Reported data	Particle size distribution, number concentration, water content, mean volume equivalent diameter
Volume flow	5 l/min
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Interfaces	USB, Ethernet (LAN), Wi-Fi, RS-232/485

## APPLICATIONS

- In-situ-Cloud monitoring
- Environmental Research
- Climate Research
- Cloud formation
- Ice Nucleation Events



Mehr Informationen:  
<https://www.palas.de/product/cda>