PROMO® LED 2000



The new light-scattering aerosol spectrometer Promo® LED 2000 can be equipped with different sensors for particle size analysis and concentration determination from 0.145 to 100 μm can be fitted with different sensors. The heart of the optical sensors is the new LED technology with an extra-long lifetime at the highest stability in particle sizing and counting applications.

OPERATION PRINCIPLE

HIGH-RESOLUTION LED AEROSOL SPECTROMETER

Sensors with different measurement volumes can be connected to Promo® LED 2000 via signal cables and interchanged as required. These sensors allow reliable measurement in the concentration range from < 1 particle/cm^3 to 10^6 particles/cm^3 in gases.

Measurements are performed continuously with Promo® LED 2000 as a standalone measuring device (i.e., without an external computer). All incoming data can be stored with a maximum temporal resolution of 1 s. Promo® LED 2000 can therefore measure and save data over weeks independently. The unit can also be integrated into a company network for data transfer.

A touch display ensures user-friendly operation. Measurements can be started quickly, and all data, such as the current number distribution, number concentration, and 24 further statistical values, can be evaluated and displayed in real time.

Promo® LED 2000 has a standard interface and can be controlled by a process control system or a simple Labview program. For this reason, Promo® LED 2000 is especially well suited for control and monitoring applications.

The following special features guarantee high classification accuracy and high particle size resolution:

- Polychromatic light and 90° light-scattering detection ⇒ Unambiguous calibration curve
- Patented T-aperture ⇒ No border zone error
- New digital individual signal processing ⇒ Coincidence detection and correction of the individual signal making it possible to measure higher concentrations

BENEFITS

- Self-explanatory operation
- Quick and highly resolved measurement of particle size distribution
- Long lifetime on lamp due to new LED-Technology
- Large measurement range from 0.145 up to 100 μm
- Photometer mode for measurements according to DIN EN 13274-7

NORMS AND CERTIFICATES

EN 13274-7

DATASHEET

Measuring principle	Optical light scattering with integrating photometer
Measurement range (number C_N)	< 1 • 106 particles/cm3
Measurement range (size)	0.145 – 100 μm
Volume flow	5 l/min
Size channels	Max. 64 (32/decade)
Interfaces	USB, Ethernet (LAN), Wi-Fi, RS-232/485
User interface	Touchscreen, 800 • 480 pixel, 7″ (17.78 cm)
Data logger storage	4 GB Compact Flash
Software	PDAnalyze
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Light source	LED
Support options	Direct remote access, Palas webserver service
Operating system	Windows 10 IoT (LTSC)
Power consumption	Approx. 200 W
Installation conditions	+5 – +40 °C (control unit)
Pressure	-100 – +50 mbar
Dimensions	185 • 483 • 313 mm (H • W • D) (19″), external sensor: 240 • 180 • 120 mm (H • W • D) (19″)
Weight	Control unit: approx. 8.2 kg, sensor: approx. 3.2 kg

APPLICATIONS

- Process monitoring of particle size and concentration
- Measurement of penetration of face masks
- Measurement of fractional efficiency of particle size

Mehr Informationen:
https://www.palas.de/en/product/promoled2000