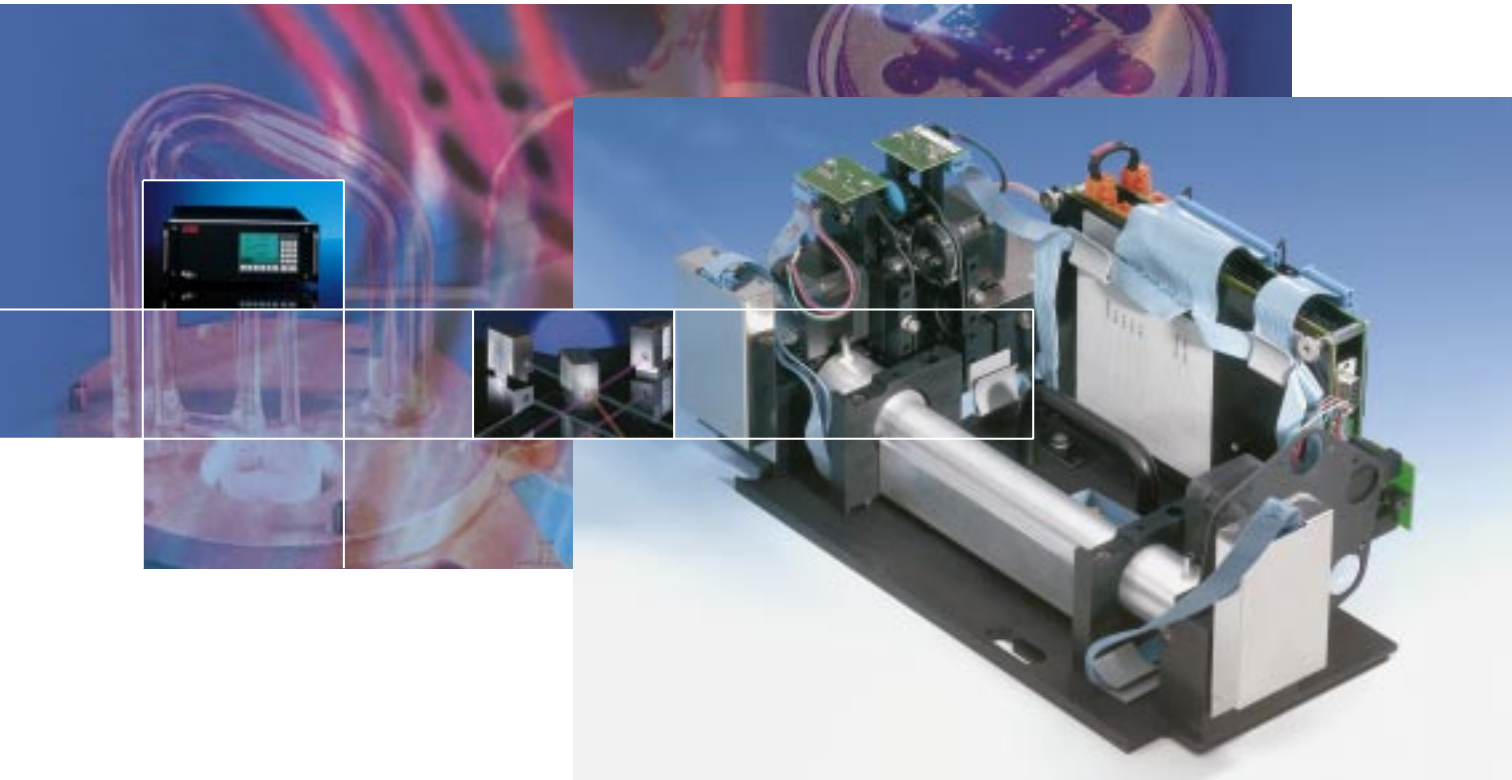


Advance Optima – High Performance Measurement Technology

Photometer Limas 11-UV – The Multi-Talented



- Part of the Advance Optima product family, with all advantages
- Up to five components measured simultaneously
- High degree of stability, selectivity and sensitivity
- Calibration without test gas bottles through integrated calibration cells
- UV-radiation source with extremely long life span
- Corrosion-resistant gas paths for use in the chemical process industry

The Advance Optima features one housing, a single system controller module, one user interface and multiple analyzer modules. All these analyzer modules have the same mechanical and electrical interfaces and plug directly into the standard housing. Other than the configurable analyzer modules, all components are standard throughout the system.

Photometer Limas 11-UV

Limas 11-UV continuous UV photometer can selectively measure the concentrations of up to 5 components. It relies on the principle of ultraviolet absorption by gases in the sample.

Technical Data

Measuring Principle:

Gas filter correlation or wavelength comparison in ultraviolet and visible spectrum range

$\lambda = 200\text{...}600 \text{ nm}$

Sample Components and Smallest Measuring Ranges:

NO	0...25 ppm
SO ₂	0...35 ppm
NO ₂	0...125 ppm
H ₂ S	0...25 ppm
Cl ₂	0...125 ppm
CS ₂	0...50 ppm
COS	0...250 ppm

Measuring Ranges:

- 1 or 2 measuring ranges per sample component
- Largest measuring ranges:
0...100 Vol.-% or 0 Vol.-%...saturation or
0 Vol.-%...UEG
- Measuring range ratio
Measuring ranges freely adjustable within the measuring range ratio 1:10, relative to the factory-set reference measuring range
- Measuring ranges with suppressed zero-point
electronic suppression of zero-point,
suppression ratio max. 1:10

Stability:

- Linearity Deviation
≤ 1 % of span
- Reproducibility
≤ 0.5 % of span
- Zero-Point Drift
≤ 1 % of span per week
- Output Signal Variations
≤ 0.5 % of span
- Detection limit
≤ 0.5 % of span

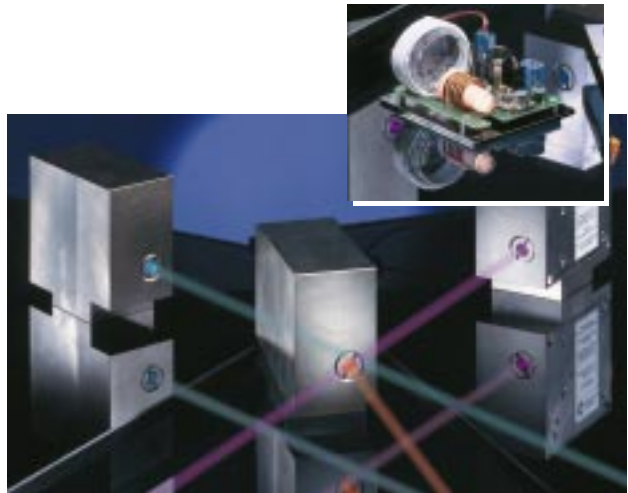
The EDL lamp (Electrodeless Discharge Lamp) used as the radiation source has an extremely long life span.

The high stability will be provided by the use of a four-beam procedure with electronic double-quotient calculation. This procedure makes the Limas 11-UV virtually immune to drifts normally caused by the radiation source, the detectors as well as due to the detectors contamination. The selectivity is achieved by optimum selection of measuring wavelength and reference wavelength, use of gas filters and electronic balancing of cross sensitivity.

Due to the integrated gas-filled calibration cells, the use of test gas bottles is not necessary. Operation and maintenance is therefore simplified, and overall costs are reduced.

Typical applications for the Limas 11-UV include monitoring in power generation plants, burner optimization, NO measurement in exhaust gases, monitoring of NO_x in DeNO_x processes, emission monitoring and process monitoring in paper and viscose/cellulose plants. Further applications are the purity measurement of gases produced from biological waste, sewage as well as from coking plants, natural gas or petrochemical plants.

Due to the sophisticated sample cell technology the Limas 11-UV can be used for applications in the chemical industry. Safety while measuring toxic and flammable sample gases is guaranteed due to the stainless-steel cells.



ABB

Hartmann & Braun