



EZ320 Series UV-DOAS Analyzers

Overview

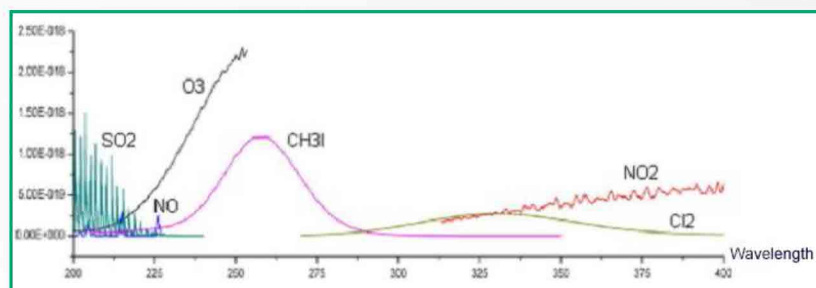
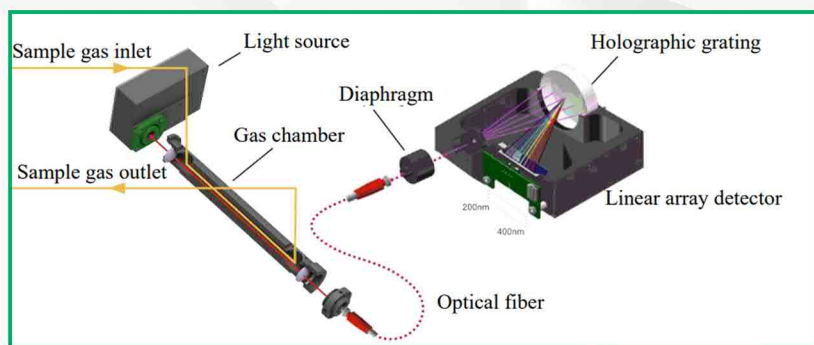
EZ320 Series UVDOAS is an independently self-developed gas analysis product which is suitable for online gas analysis of environmental protection and industrial control sites. Based on Ultraviolet Absorption Spectrometry and Differential Optical Absorption Spectroscopy, it adopts the special optical technology platform to online analyze and measure multiple components including SO₂, NO, H₂S, Cl₂, NH₃ and NO₂, etc. One analyzer can simultaneously carry out measurement for 5 gas components at a maximum. The product owns features of high measurement accuracy and reliability, fast response and wide application.



Principle

Ultraviolet Differential Optical Absorption Spectroscopy (UV-DOAS):

As the same gas has different absorption in different spectral bands, and the absorption of different gases in the same spectral band has superposition effect, a variety of gases can be measured at the same time through the analysis of continuous spectrum. The holographic grating is used for light splitting of the light absorbed by the measured gas; the sensor array is used to convert the spectral optical signals into electrical signals after light splitting. After obtaining the continuous absorption spectrum of the medium, a variety of gases can be measured at the same time.



Absorption diagram of various gas components in ultraviolet band

Features

- ▶ **The product adopts advanced online analysis technology with high accuracy; lower detectable limits and small temperature drifts.**
 - Adopt Ultraviolet Absorption Spectrum Gas Analysis Technology and Chemometrics Algorithms. The measurement accuracy is not affected by water or dust, with lower detection limits and small temperature drifts.

- ▶ **Strong gas chamber, low operation and maintenance cost.**
 - The gas chamber of analyzer is made of stainless steel and the internal part is not required for mirror polish and gold plating. The gas chamber is very strong, with low cost and little effect by water and dust.
 - The detector is connected to the gas chamber via the optical fiber, which is convenient for replacement and achieves low maintenance cost.

- ▶ **The service life of the light source is up to 10 years**
 - The light source adopts the pulse xenon lamp, with long service life, good stability and no preheating time.

- ▶ **No optical moving parts, strong vibration resistance and high measurement reliability**

- ▶ **Modular design, good expansibility and convenient maintenance**
 - Configured to produce diversified and customized products to meet all kinds of requirements.



Specification

| Items | Description |
|---------------------|---|
| Method | Ultraviolet-Differential Optical Absorption Spectroscopy (UV-DOAS) |
| Measured Gases | SO ₂ , NO, H ₂ S, Cl ₂ , NH ₃ and NO ₂ , |
| Range | Ranges are parameter specific which customer has to specify |
| Linearity | <=±1%F.S. |
| Repeatability | <=±1% |
| Span Drift | <=±1%F.S./half year |
| Zero Drift | <=±1%F.S./half year |
| Maintenance Cycle | <=2 times/year(related to working condition) |
| Calibration Cycle | <=2 times/year |
| Enclosure Rating | Ex Proof |
| Response Time | <=1 second |
| Analog Output | 4-20 mA (isolated, max load 750 ohm) |
| Digital Output | RS485-Modbus RTU |
| Power Supply | 100VAC ~ 240VAC |
| Ambient Temperature | -20°C ~ 60°C |

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