

we invent solutions

we develop customized solutions from idea to production and beyond

Project details: Chemiluminescence detector (CLD) for NO_x measurement

Industries

- Automotive, Gas Analysis

Technology fields

- Measurement, Control and Regulation Technology; Optical Measuring Systems

Project requirements

- The aim of the project was to develop a device for measuring the concentration of nitrogen oxides (NO and NO_x) in the exhaust gas of vehicles and combustion processes. The challenge here was to cover an extremely high dynamic range with measuring ranges between 0 - 1ppm as well as 0 - 5000ppm. The detection limit should be only a few parts per billion (1 - 5ppb). Another challenge is to minimize the distortion of the measurement signal by components in high concentrations, such as water and carbon dioxide. In addition, the unit had to be designed for a limited space.

Facts / Highlights

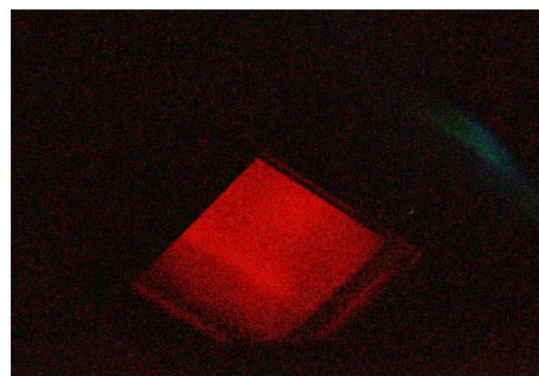
- T90: <1 second
- Limit of detection (LOD): 1 - 5 ppb
- no delay time
- Measuring range: 0 -1 ppm / 0 - 5000 ppm

Services of KNESTEL

- Target price estimate, project management, requirements specification, project planning, development of hardware, electrical and mechanical construction, EMC testing, prototyping, serial production

Possible applications

- Exhaust gas analysis in the automotive sector
- Immission Measurement
- Emission Measurement



Chemilumineszenz Detektor (CLD) leuchtend in Kammer