

## 10.8.

### Title

**Optoelectronic Module For Gas Detection**

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### Description

Optical gas detection module consists of vertical emitting laser diode (VCSEL), optical flux control photodiode, a thermoelectric cooler, thermo-resistor - all integrated in one chip. The gas chamber consists of a parallel mirrors system. Optical beam is multiply reflected in the mirror system after it is recorded by a photo-detector. Optical path of beam in the gas medium is changed by the rotation of mirrors that reflect the optical beam, increasing the absorbed energy by the gas.