



# GAS LEAK DETECTION



## LMF G2

REMOTE LASER DETECTOR DESIGNED FOR INSTALLATION  
ON UNMANNED AERIAL VEHICLES.



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# LMF G2

The **LMF G2** is a sensor which is used for remote detection of methane utilizing a laser-beam and is installed on an unmanned aerial vehicle (UAV).

It allows for measuring of total methane content along an optical path of the laser beam from the device to any ground-based object. Remote detection can be made from distances up to 100 meters, by measuring absorption of the laser by the methane.

**LMF G2** may be applied for remote monitoring of natural gas pipelines including other gas facilities where leaks may be suspected.

- < Full automation
- < Detects faster than conventional method
- < (detection speed: 0.1sec)
- < Methane-only sensitivity; no false reports
- < User-friendly software
- < Archives data for the entire period of operation
- < Automatic calibration and self-check during the operation

## SPECIFICATIONS

Power supply voltage LMF	12 V
Power consumption	30 W
Working temperature	-10 ... +40 °C
Humidity, not more than	90%
Sensitivity from distance 100 m	150 ppm×m
Weight of the device	1.8 kg
Power cable length	2 m
Time for auto testing	5 min
Video camera	Full 1920 × 1080/30p High Definition

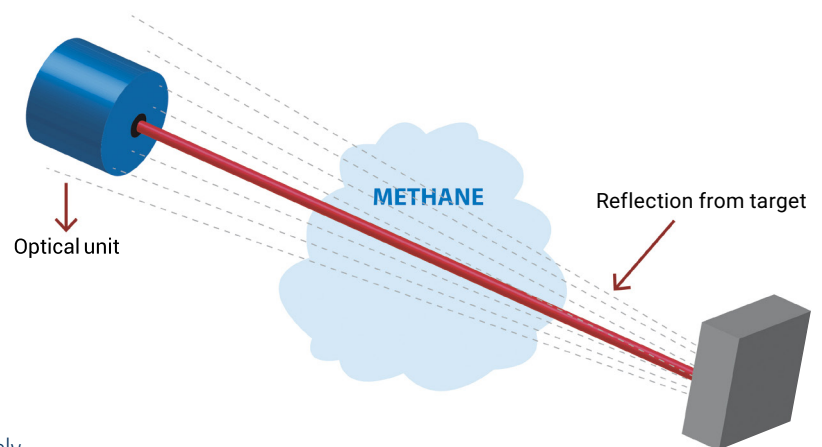


## Principle of Remote Detection

**LMF G2** is based on the utilization of laser absorption spectrophotometer of methane gas for gas measurement. The system detects natural gas leaks by emitting a laser at a particular wavelength and analyzing the light reflection from an object to determine how much was absorbed by the methane in the natural gas.

The measured gas volume is expressed by methane column density (ppm×m): methane density (ppm) multiplied by thickness (m).

The Optical Unit (OU) of the **LMF G2** detector is installed on a gyro stabilized platform so that the laser beam is continuously directed towards pipelines and other natural gas facilities.



*We Invent to Prevent*

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