

A white, dome-shaped sensor device is mounted on a metal bracket on the roof of a white vehicle. The device has a yellow-rimmed lens and a black lens. The background is a solid dark blue.

# SELMA Dome

## VEHICLE-BASED GAS LEAK DETECTION

SELMA Dome (Street Evaluating Laser Methane Assessment) is one of the most modern gas leak detector device. The main application is the Leak detection in gas pipelines, compressor stations and other potential sources of methane emissions. The principle of SELMA is a pulsating infrared laser.

Infrared laser beam can be directed on each item / location in a distance from up to 60 meters. If a methane cloud is crossing the laser beam at any point between the system and the reflection object the discharged amount is recognized and will be measured.

### Features and Benefits

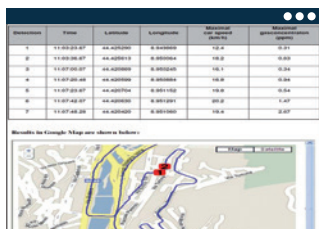
- Simple operation and data processing
- Detects leaks in front and to the side of the driving path
- Detection distance — up to 60 m
- Max velocity — 60 km/h
- Methane sensitivity — 5 ppm×m
- Installation on any type of chassis

# SELMA Dome Technical Specifications

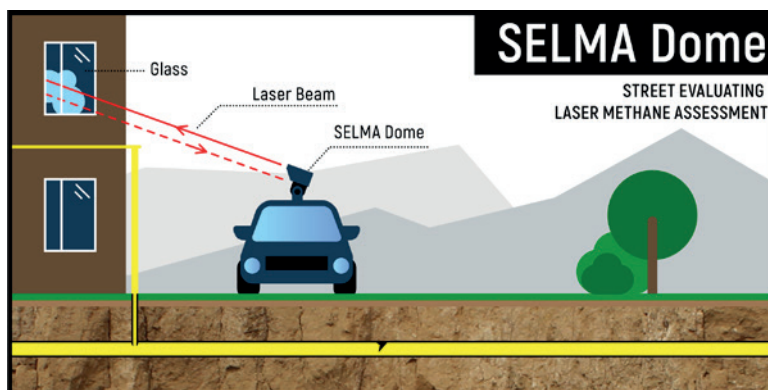
Target Gas	Methane (CH <sub>4</sub> ) and methane-containing gases (natural gas and similar).
Sensitivity	5 ppm×m
Detection Range	0 to 99999 ppm×m
Detection Distance	60 m (75% reflectivity)
Response Time	0.1 seconds
Operating Temperature Range	-10°C ... +50°C
Pump Flowrate	max 1080 l/h
Target Position	GPS coordinates
Data Output	Pergam Software
Power Supply	12 V
Max Velicity	60 km/h
Measurement Time	0.1 sec
Laser Safety Class	Guide light (green laser light): Class 3R Measurement light (infrared laser light): Class 1
Dimensions	197 (D) × 316 (H) mm
Weight	6.5 kg



SELMA Dome



Pergam Software



## Principle of Remote Gas Detection

**SELMA Dome** 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 laser length (m).

