



# LaserWarn™ Open-Path Chemical Detection System for Leaks and Fugitive Emissions

*detection of chemical leaks and fugitive emissions for chemical and petrochemical plants*

## Product Highlights

- Specially designed for Environmental Monitoring and Leak Detection and Repair (LDAR) applications.
- Detection within seconds up to 300 meters away at parts-per-million sensitivity. Wide-area coverage indoors or outdoors of thousands of square meters.
- AI-driven software enables concurrent chemical identification. System can identify specific targets within complex chemical mixes.
- Ability to link to command and control centers for immediate alarm responses and reactions. Near-zero false alarm rate.
- Multi-level graphical user interface provides easy to understand Green/Red screens for operators, and detailed technical information for managers.
- 24/7 autonomous operation.

Block Engineering's LaserWarn is a laser-based chemical identification system for detection of leaks and fugitive chemical emissions.

The system can be used to monitor thousands of square meters within refineries, chemical/petrochemical plants, and other industrial settings. A 300 meter perimeter or fenceline can be continuously monitored for emissions or leaks. Most chemicals can be detected at ppm sensitivities.

Powered by eye-safe long wave infrared lasers, LaserWarn continually monitors and detects multiple chemicals within seconds. Unlike traditional point sensors, LaserWarn allows for rapid detection at a distance, and distinguishes between simultaneously occurring chemicals.

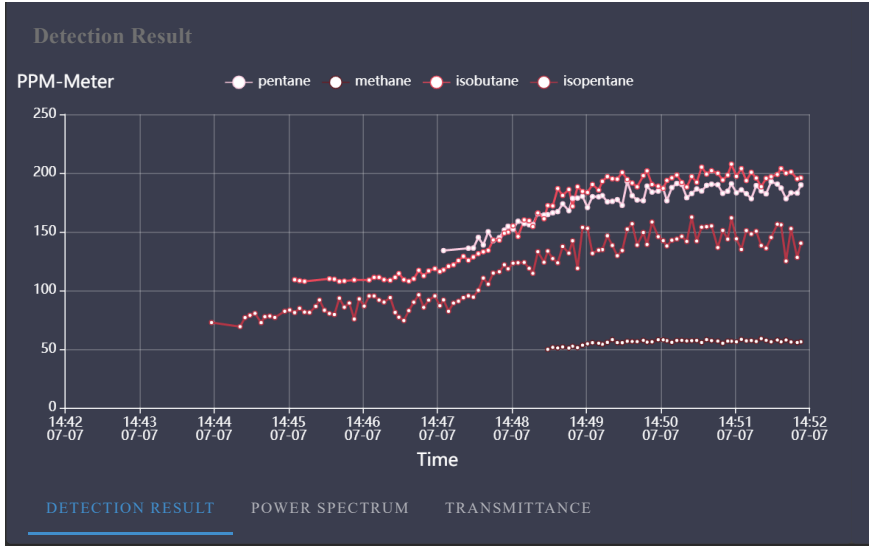
The system is available in a ruggedized IP66-certified version for harsh environments or a standard configuration for portable or indoor use.

LaserWarn requires no consumables and minimal maintenance. The simple multi-level user interface and alarm options allow for fast detection and analysis by non-technical personnel.

## Options

- Standard chemical libraries may be customized to specific customer requirements.
- Ruggedized IP66-certified version for harsh environments or a standard configuration for interior use.
- Fixed or portable configurations.
- Multi-language user interface options available.





LaserWarn is capable of detecting multiple gases in real time, simultaneously distinguishing between targeted chemicals and background interferants.

The screenshot to the left illustrates the system's advanced AI-based software detecting several chemicals simultaneously. Each chemical's unique spectral signature is displayed, enabling precise identification in chemically "noisy" environments.

### Specifications

	LaserWarn	LaserWarn Ruggedized
Maximum Path Length	300 meters (one way)	300 meters (one way)
Gases Detected	SOCMI chemicals, including MDI; Refinery chemicals, including Benzene and C1-C5; Polymer precursors; Ammonia; and most other Toxic Industrial Chemicals	SOCMI chemicals, including MDI; Refinery chemicals, including Benzene and C1-C5; Polymer precursors; Ammonia; and most other Toxic Industrial Chemicals
Sensitivity	Varies with gas and distance in path	Varies with gas and distance in path
Response Time	Less than 5 seconds	Less than 5 seconds
Detection Technology	Infrared Absorption Spectroscopy	Infrared Absorption Spectroscopy
Dimensions	Approx. 18 x 14 x 7 inches (46 x 35.5 x 18 cm)	Approx. 41.5 x 19.2 X 11.5 inches (105.5 x 49 x 29.5 cm)
Weight	32 lbs (14.5 kg)	125 lbs (56.7 kg) for LaserWarn plus tip/tilt stage. 36 lbs (16.3 kg) for electrical junction box with shroud.
Electrical Power	110/220 VAC, 50/60 Hz, 100 Watts	110/220 VAC, 50/60 Hz, 100 Watts
Enclosure Type	IP 20	IP 66
Simultaneous Detection of Multiple Types of Gas	Yes	Yes
Operating Temperature Range	10° C to 30° C	-20° C to 60° C
Installation	Fixed position; Portable configurations available as an option	Fixed position