

FT-IR Gas Leak Monitor

GF380

Features

- Monitors 500+ gases, including alkanes, aldehydes, and alcohols.
- Non-reactive materials ensure stability and longer maintenance.
- 360-degree scanning with ppm detection limit.
- Long-distance monitoring (≥ 2 km).
- Standard protocols for easy integration with systems.
- Preset gas types reduce leak risks.
- Visualizes gas diffusion and emission sources.
- Supports intelligent event detection for intrusions and boundaries.

Application

- Identification and quantification of pollutants at industrial boundaries;
- High-precision analysis of trace gases;
- Urban air quality analysis;
- Volcanic gas analysis.

Description

The FT-IR Gas Leak Monitor employs advanced passive Fourier Transform Infrared (FT-IR) technology for remote sensing of gas leaks. Constructed from non-adsorbing materials that resist reaction with gaseous pollutants, it ensures longer maintenance cycles and enhanced stability, meeting the demands of real-world applications.

This device leverages the temperature difference between the target gas and background, capturing unique infrared spectral fingerprints for rapid, highly sensitive qualitative identification and semi-quantitative concentration analysis of various toxic gases.

It displays real-time dynamic distribution and diffusion trends of hazardous gases within the scanned area, providing acoustic and optical alarms for exceeded limits. In scenarios where danger is indeterminate, the FT-IR Gas Leak Monitor enables remote, non-contact risk assessments, mapping hazardous gas distributions and their chemical compositions while tracking diffusion trends, effectively supporting emergency response efforts. For more insights on FT-IR Gas Leak Monitor products and industry trends, consider exploring Optosky solutions in gas leak detection technology.



1. Parameter

Parameter	
Gas Types	Over 500 gas types (alkanes, alkenes, aldehydes like formaldehyde, ammonia, sulfides, alcohols, ketones, esters, acids, etc.; customizable for industrial needs)
Detection Method	Passive Fourier infrared fingerprint continuous spectral remote sensing principle
Dual Channels	7 μm - 14 μm ; InSb detector: 2 μm - 5 μm
Wavelength Range	2 - 16 μm (625 - 5000 cm^{-1})
Spectral Resolution	$\leq 1 \text{ cm}^{-1}$
Wavelength Stability	$\leq 0.009 \text{ cm}^{-1}$
Wavenumber Accuracy	$\pm 0.03 \text{ cm}^{-1}$
Measurement Speed	≥ 10 spectra/second
SNR	$\geq 40,000$ (peak-to-peak)
Noise Equivalent Radiance	MCT $\leq 4 \times 10^{-9} \text{ W}/(\text{cm}^2 \cdot \text{sr} \cdot \text{cm}^{-1})$, InSb $< 4 \times 10^{-10} \text{ W}/(\text{cm}^2 \cdot \text{sr} \cdot \text{cm}^{-1})$
Measurement Range	$\geq 5 \text{ km}$
Detection Limit	SF6: $< 5 \text{ ppm} \cdot \text{m}$
Alarm Response Time	< 2 seconds
Visible Light Bitrate	$3840 \times 2160 @ 25 \text{ fps}$
Chip Processing Power	$\geq 2 \text{ T}$
Gyroscope Module	Support for built-in capabilities
Telescope Diameter	$\geq 235 \text{ mm}$
Spectral Database	> 500 gases
Cooling Method	Stirling refrigeration
Structure Type	Dual-arm swinging Michelson with tilt compensation

2. Accessories List

Item	Quantity	Optional/Standard
Equipment	1	Standard
Sunshade	1	Standard
Pipe Wrench	1	Standard
Product Certificate, User Manual	4	Standard