BOREAL

GasFinder-Line of Sight (LoS)

Laser Based–Open Path Gas Detection

All-in-One Open Path Gas Detection
Complete analyzer in a compact field device

Speed of Response
1 second results with no cross sensitivity

No Calibration or Bump Test Required
Automatic health and calibration check

Free of consumables
Reduce maintenance time and costs

#1 - Select your Target Gas

More gas ranges available. Common industry alarm thresholds, exact alarm setpoints should be determined by the end user.

HF — Hydrogen Fluoride
Lo-Range: 0.4-250 ppm-m
Hi-Alarm: 3 ppm
HiHi-Alarm: 9 ppm

H_2S — Hydrogen Sulfide
Lo-Range: 100-100,000 ppm-m
Hi-Alarm: 10 ppm
HiHi-Alarm: 40 ppm

NH_3 — Ammonia
Lo-Range: 8-6,500 ppm-m
Hi-Alarm: 25 ppm
HiHi-Alarm: 50 ppm

CO_2 — Carbon Dioxide
Hi-Range: 1,000-500,000 ppm-m
Hi-Alarm: 20,000 ppm
HiHi-Alarm: 30,000 ppm

CO — Carbon Monoxide
Hi-Range: 250-500,000 ppm-m
Hi-Alarm: 100 ppm
HiHi-Alarm: 200 ppm

CH_4 — Methane
Hi-Range: 100–500,000 ppm-m
Hi-Alarm: 1 LEL-m
HiHi-Alarm: 3 LEL-m

HCN — Hydrogen Cyanide
Lo-Range: 8-2,500 ppm-m
Hi-Alarm: 4.7 ppm
HiHi-Alarm: 10 ppm

HCl — Hydrogen Chloride
Lo-Range: 2-2,500 ppm-m
Hi-Alarm: 2 ppm
HiHi-Alarm: 5 ppm

C_2H_4 — Ethylene
Lo-Range: 0-5,000 ppm-m
Hi-Alarm: 20% of LEL-m
HiHi-Alarm: 40% of LEL-m

#2 - Select your Path Length

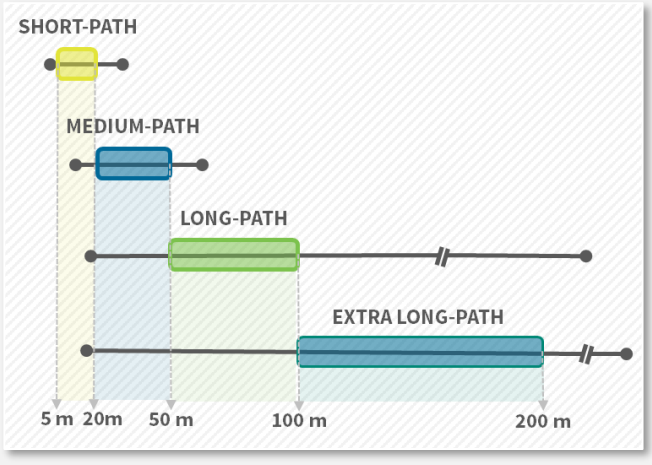
Suggested Path Length: Consideration has been given to optimizing the ability to obtain & maintain optical alignment.

Short-Path (IMOS)
Suggested Path Length: 5-20 m (15-65 ft)

Medium-Path (Wafer)
Suggested Path Length: 20-50 m (65-165 ft)

Long-Path (Cornercube)
Suggested Path Length: 50-100 m (165-330 ft)

Extra Long-Path (Cornercube)
Suggested Path Length: 100-200 m (330-650 ft)



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#3 – Mounting Height/Structure

Suggested Mount Size for Short-Path
>4” Post @ 7’ Height or >6” Post @ 13’ Height

Suggested Mount Size for Medium-Path
>6” Post @ 7’ Height and >8” Post @ 13’ Height

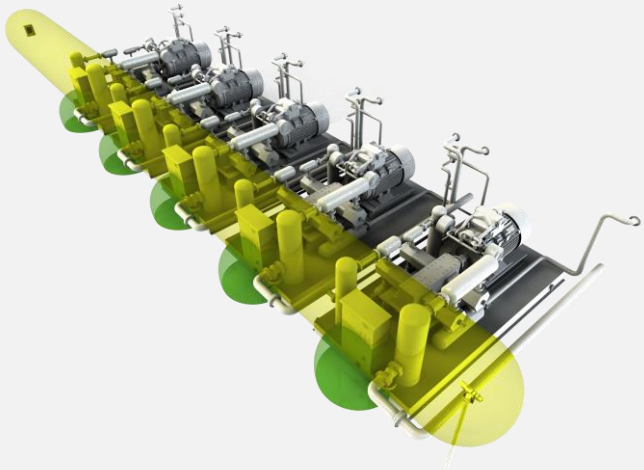
Suggested Mount Size for Long-Path
>8” Post @ 7’ Height and >10” Post @ 13’ Height

Suggested Mount Size for Ultra Long-Path
>10” Post @ 7’ Height and >12” Post @ 13’ Height

Suggested Mounting Structure: End-User to confirm the Mechanical Suitability with their own Geo-Technical and Wind-Loading Study.

Laser Based – Open Path Gas Detection is *typically mounted* at a height between **2m (7ft) - 4m (13ft).**

#4 – Optimize Installation



The need for numerous point detectors (green) can be eliminated with a single GasFinder-LoS (yellow).

Reference: Center for Chemical Process Safety – Continuous Monitoring for Hazardous Releases

Increase your Probability of Detection
With area and perimeter monitoring strategies

Detector Placement Relative to Source
Multiple sources covered with single path

Gas Dispersion and Movement
Air currents dictate plume direction and size

Beware of Potential Optical Obstructions
Such as cranes, forklifts, trucks, people, etc.

#5 – Power + Communication

3 or 4 Wire 24 VDC Device
Polarity protected and internally fused

Analog, Relay, and MODBUS
HART7 4-20mA , dry contact relay, RS-485

Wireless Configuration
Configuration via wired handheld HMI (optional)

Continuous Onboard Logging
USB accessible data storage

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