

Product Overview



MIRAN SapphIRe Portable Infrared Ambient Analyzer

The most versatile and powerful gas-detection system on the market.

Analyze • Detect • Measure • Control™

Thermo
ELECTRON CORPORATION

The most versatile gas detection system on the market today

Infrared spectroscopy provides the MIRAN SapphIRe Analyzers with the unique ability to specifically and accurately measure many gases with a single unit. The MIRAN's wavelength generator filter has a unique design that allows accurate and fast wavelength selection. This feature alone separates the MIRAN SapphIRe Analyzer from other gas analyzers

Three models to fit your needs

The MIRAN SapphIRe XL.
Offers optimal measurement capabilities for high-end users who need to measure a wide variety or mixed atmosphere of gases. Contains over 120 single gas applications with customization capability. Ideal for consultants, industrial hygienists, regulatory agencies, research scientists and emergency response professionals.

The MIRAN SapphIRe SL:
Provides flexibility for users who perform similar measurements on a routine basis. Contains over 50 single gas applications with customization capability. Popular with indoor air quality specialists and anesthetic gas monitoring technicians

The MIRAN SapphIRe DL:
Designed for users who regularly encounter a limited number of air monitoring applications. Features quick and easy opera-

tion for enforcement agencies and specified compound measurement projects.

Key Features

- Easy to use
- Selective
- Sensitive for sub-ppm detection
- Versatile and upgradable
- Lightweight and portable

Applications

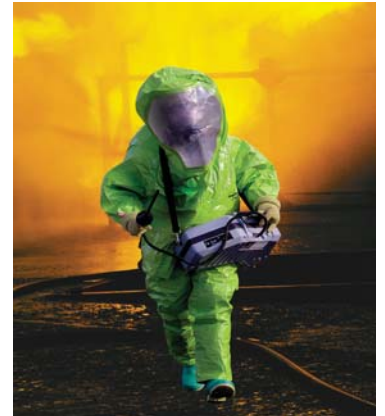
- *Industrial Hygiene.*
Real-time detection of vapors in job environments promotes safe work habits. MIRAN SapphIRe analyzers monitor at typical government-regulated levels.
- *Emergency Response Analysis.*
The MIRAN SapphIRe assists emergency response personnel by quantifying knowns and assisting in qualifying unknowns
- *Indoor Air Quality Studies.*
The MIRAN SapphIRe makes precise spot measurements for compounds such as CO₂, CO, formaldehyde, or organic vapors.
- *Waste Anesthetic Gases.*
Service technicians can identify leaks on anesthetic delivery systems by using the MIRAN SapphIRe Ambient Air Analyzer as a part of Preventative Maintenance (PM) work.
- *Fume Hood / Tracer Gas Analysis.*
The MIRAN SapphIRe serves as an effective monitor for

evaluating fume containment of laboratory hoods. Confirming proper operation of the ventilation systems with a fume hood is critical to assuring worker safety.

- *Leak Detection for process maintenance.*
Using a leak detection probe you can set up the MIRAN SapphIRe to check for leaks around many types of process equipment, either in survey mode or in response to a specific compound.

Training and Support

Need technical assistance? Our experienced team of laboratory and technical specialists are available to help you determine that right system for your application. And... we back it up with the support you need.





Spectrum Correlation Software Option

Designed with the needs of the industrial hygienist and emergency response community in mind, ThermoMatch helps identify unknown airborne compounds. You can bring the analyzer to the incident resulting in quicker corrective action and less money expended on "blank" samples being analyzed at a lab.

The software includes 150 commonly observed compounds, and may be modified to a user library of hundreds more. This permits industrial users to include all site specific compounds, increasing the quality of the results. First responders can include SARA Tier 2 compounds for critical facilities to aid in containment actions.

Three Easy Steps

1. Contaminated air is drawn into the sample cell of the MIRAN SapphiRe.
2. An infrared scan of the air sample is performed and the absorption data is stored in the MIRAN SapphiRe.
3. Absorption data is downloaded to a PC and ThermoMatch performs a correlation function against the selected library. Spectral similarities between the unknown scan and the library of spectra are com-

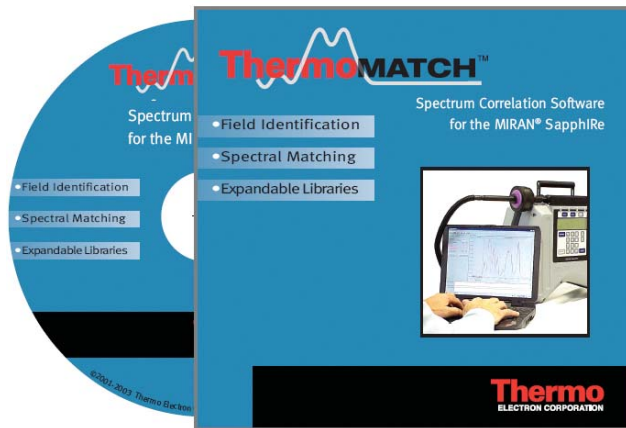
pared with the most appropriate match.

Advantages

- *Speed of Analysis* with on-the-spot correlation of unknown compounds.
- *Increased Savings* by eliminating costly and time consuming lab fees and analysis.
- *Data Logging* saves spectra absorption files for further analysis and record keeping.
- *Compound Library* of over 150 of the most commonly requested toxic industrial chemicals.
- *User Library* for customization of site specific compounds
- Non destructive infrared technology means you can send a field analyzed sample to the laboratory for further analysis.

ThermoConnect Software

ThermoConnect is a graphical users interface that enables users of the MIRAN SapphiRe to transfer, display, analyze, and configure data from the instrument using a computer. ThermoConnect is Windows based and facilitates the importing of data into other Windows based applications making it easier to retrieve logged data.



MIRAN SapphiRe

MIRAN SappHRe (Model 205B) System Specifications

Detector Type	Single beam infrared spectrophotometer
Pump Flow Rate	14 liters per minute
Analysis Time	Following Purge (typical): single wavelength - 20 seconds 5 wavelengths - 50 seconds Spectral scan - 165 seconds
Alarms	User definable
Readout	8 line x 40 character LCD
Response Time	18 seconds to 90% of final reading
Pathlength	0.5m & 12.5m
Sample Cell Vol.	2.23 liter
Battery	Internal, Rechargeable NiCd. 7.2V nominal; 5.7 Ah capacity. Discharge time 4 hrs; recharge time 4 to 6 hrs.
Output	0-1VDC, Parallel, Serial
Dimensions	Approximately 553 mm (21.8in) wide x 365 mm(14.4 in) high x 193 mm (7.6 in) deep
Mass	Approximately 10 kg (24 lbs.)
Intrinsic Safety Certifications	User specified models are certified for ETL (Class 1, Div. 1. Groups B, C & D, Temp. Class T4) ETL-C (Class 1, Div. 1. Groups B, C & D, Temp. Class T4)

Accessories

Leak Detection / Sampling Wand	P/N CR014QC 15 3/4" (40cm) long, and is composed of anodized aluminum tubing and chemically stable plastic.
Transportation / Carrying Case	P/N CR013XM Wheeled case with telescoping handle doubles as a sturdy shipping case which will hold a spare battery, battery charger, cables, sample wand, carrying strap and filters.
Field Performance Check Kit	P/N CR014LG

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