



MIRA XTR DS handheld Raman spectrometer

The evolution
of fluorescence-free
material identification

**PEOPLE
YOU
CAN
TRUST**

 **Metrohm**

The most compact fluorescence-free handheld Raman spectrometer on the market

MIRA XTR DS is THE solution for first responders and military personal who deal with illicit drugs, hazardous material, and improvised explosive devices (IEDs).

Explosives, chemical warfare agents (CWAs), and narcotics created in clandestine labs are often dirty and may confound the Raman signal. When fluorescence is an issue, our competitors turn to 1064 nm.

A 1064 NM SYSTEM HAS ITS DISADVANTAGES:

- Higher laser power for sampling with greater potential for sample damage.
- Short Battery life, which can limit field use
- 1064 nm is only 30% as sensitive as 785 nm

Above all, 1064 nm devices tend to be bulkier and heavier and often do not permit single-handed operation.



MIRA XTR DS – THE BENEFITS OF 1064 WITHOUT THE DISADVANTAGES

Mira DS XTR is the next evolution in Raman spectroscopy. It combines the smaller size, higher resolution and lower power consumption of a 785 nm Raman instrument with advanced patent-pending algorithms to eXTRact Raman data, even from fluorescent samples – no need for a 1064 laser!

- Low power 785 nm laser allows interrogation of sensitive samples
- Higher sensitivity and resolution in a smaller footprint than 1064 nm instrument
- 20,000 + library entries – the largest library available on any handheld Raman system
- Capable of both bulk Raman and trace identification of fentanyl and other illicit drugs (ID KIT «Illicit Materials»)

A person wearing a white lab coat and yellow nitrile gloves is using a handheld device to analyze a sample in a blue tray. The device has a screen showing a green and blue interface. The background is dark and out of focus.

Unlimited scope of applications

Standard Military Threats include IEDs and chemical and biological warfare agents. Narcotics are a threat, also – terrorism is often funded by the trade of illicit drugs, usually manufactured in clandestine labs. Mira XTR DS is the most compact and versatile answer to these threats.



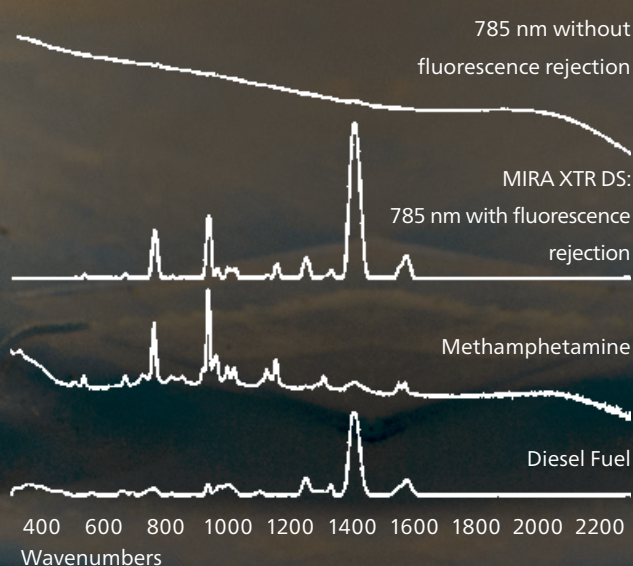
Applications for MIRA XTR DS include Sensitive Site Exploitation/Intelligence Surveillance Reconnaissance (SSE/ISR) of clandestine labs and determination of synthetic routes to illicit products, explosives, and CWAs.

MIRA XTR DS is designed for real-world scenarios like analysis of methamphetamine lab residues and identification of narcotics in street drug samples. This includes ID of narcotics, despite cutting agents that traditionally fluoresce and fail analysis with 785 nm systems. Due to fluorescence rejection at 785 nm, MIRA XTR DS can also delicately interrogate sensitive materials like colored compounds.

CAPABILITIES OF MIRA XTR DS:

- Fluorescence rejection – better detection and better ID of colored substances, e.g., widely used explosives like Semtex
- ID of synthetic reagents used in the preparation of illicit materials, e.g., solvents, building blocks, activators, and other common chemicals
- ID of trace level concentrations of Heroin and Fentanyl (with ID Kit «Illicit Materials»)
- Preliminary analysis of street samples. Positive ID of sucrose, bicarbonate, caffeine, or benzocaine in the search for heroin or cocaine

30% METHAMPHETAMINE IN DIESEL FUEL:



MIRA XTR DS cuts through fluorescence to eXTRACT the Raman signal and identify target substances.

MIRA XTR DS

Supporting your mission with sampling power and flexibility

Intelligent Universal Attachment (iUA)

Sampling through barriers from thin plastic bags to thick glass bottles. In «Container Mode», MIRA XTR DS and iUA recognize container materials (e.g., plastics) for better identification of the contents.



Autofocus Standoff Attachment

Sampling of potentially hazardous materials from a safe distance as far as 2.0 meters.

Contact Ball Probe Attachment

For identification of unknowns, e.g., in a barrel.

SERS Attachment

Automatically switches Mira DS XTR from bulk ID mode to trace analysis mode when you need to detect trace drug residues or find the active drug component in a mixture.

OUR HARDWARE PROVIDES UNIQUE FLEXIBILITY FOR SAFE AND CONVENIENT SAMPLING

MIRA XTR DS is your pocket-sized companion for long missions in the field – identifying trace and bulk materials on a surface, in a bottle,

down a barrel, through containers or even from a distance across a room. Our interlocking Smart Attachments attach simply and securely, and they automatically let the system know what kind of test you are performing. Our PowerPack supports your mission all day, every day with hot-zone swappable power.

Right Angle Attachment

For identification of unknowns on a surface.



Vial Attachment

For identification of powders or liquids in a vial.



Calibration Standard

Verify device performance before collecting evidence.



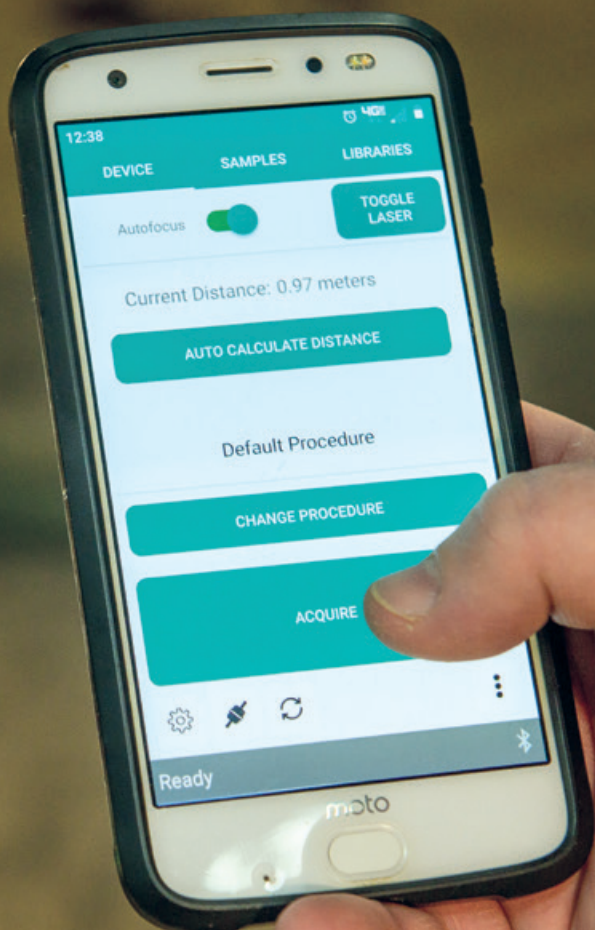
PowerPack

Your independent power source for long hours in the field.

Supporting your mission with actionable intelligence

The HazmasterG3™ smart phone App is your virtual expert on site

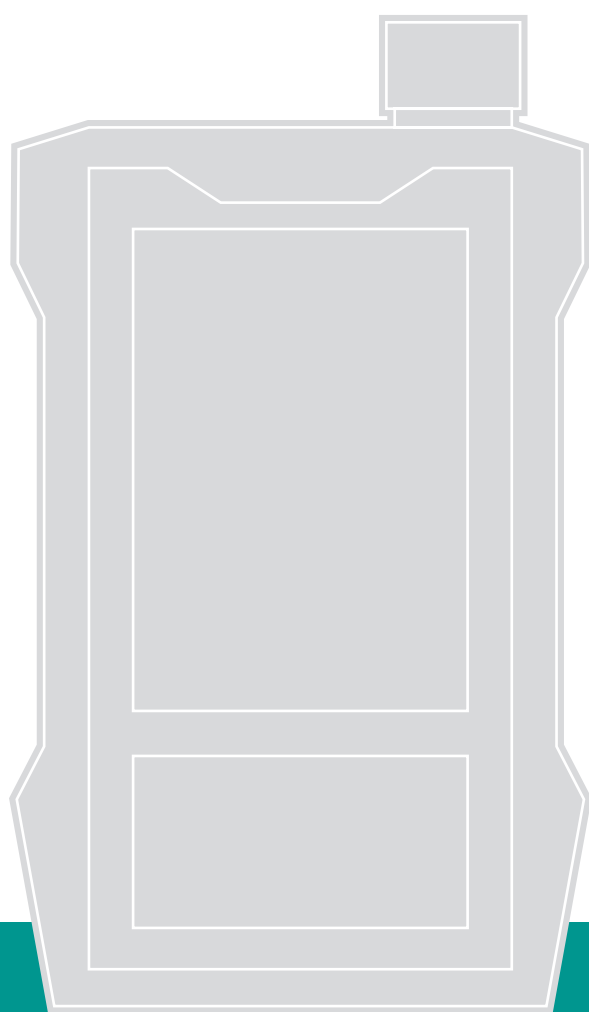
Fully automated, guided workflows make MIRA XTR DS easy to use from sampling to results. MIRA XTR DS can be interfaced with the HazmasterG3™ App to instantly provide actionable intelligence. You can predict products and get important chemical information about drugs, explosives, and CWAs. With this information, you can take immediate action to protect yourself, your team, and everyone else.





- SmartAquire: From sampling, library search, and mixture matching follow a simple guided procedure on the instrument's touch screen
- Mixture Matching automatically gives you the top three potential components of a mixture and reports them with color-coded chemical warnings.
- The MiraCal M smart phone App allows you to connect to the world for instant in-field risk management. Send results, provide chemical advice, and alert.
- HazMasterG3™ is a powerful smart phone App that provides color-coded chemical hazard warnings for >176,000 materials, including exposure and first aid advisories. HazMasterG3™ can also calculate likely mixture outcomes, giving you meaningful results about drugs, explosives, and CWAs.
- Our 24 Hour Reachback program provides answers to complicated spectral results, when you need extra help from Raman experts.

True single-handed operation



Their device
SCALE 1:2



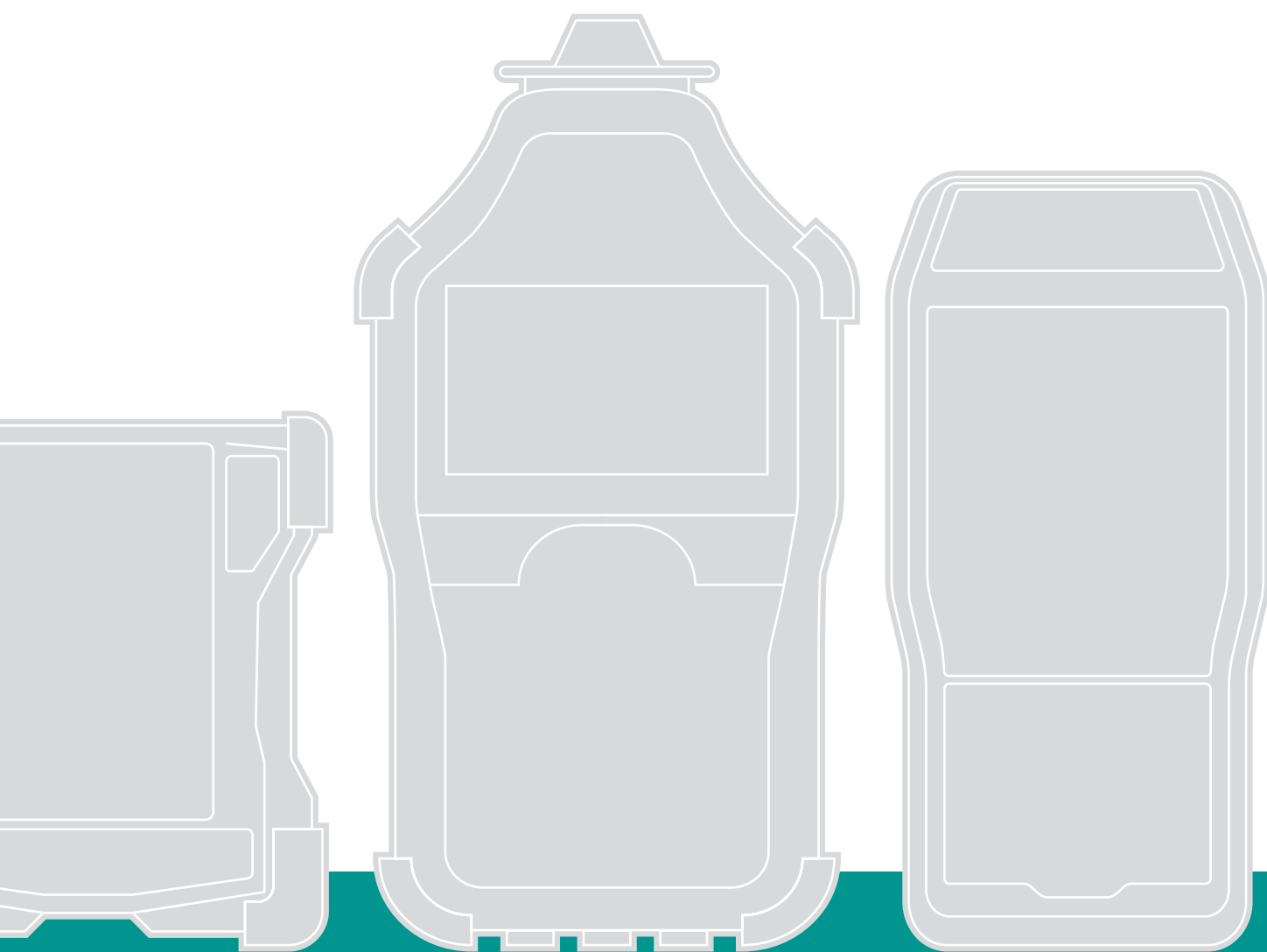
3.462 in
SCALE 1:2

4.978 in



MIRA XTR DS is the most compact Raman material identification system on the market. Ready for action at a moment's notice.

Simply compare!



Their device
SCALE 1:2

Their device
SCALE 1:2

Their device
SCALE 1:2

ORDERING INFORMATION

MIRA XTR DS Advanced 2.9260.120	
6.02707.020	MIRA DS Ruggedized Carrying Case
6.06071.020	Mira Cal DS USB Stick
6.07501.010	ASTM Calibration Standard
6.07506.000	Right Angle Attachment
6.07506.060	Intelligent Universal Attachment
6.07506.040	Mira SERS Attachment Collection Optics Accessory
6.07502.000	Mira Vial Holder Accessory
6.07507.000	Mira Blackout Cloth
6.2133.020	Lithium Battery AA 1,5 V / 2900 mAh
6.7430.060	NIR micro fiber cleaning cloth
6.02108.010	Cable USB Mini B – USB A 1,5m
6.7560.010	Protective Laser Glasses for Mira
6.6071.650	Mira Lib KnowItAll Full Raman Library Collection
MIRA XTR DS Basic 2.9260.110	
6.07501.010	ASTM Calibration Standard
6.07506.060	Intelligent Universal Attachment
6.02108.010	Cable USB Mini B – USB A 1,5m
Optional Accessories	
6.07506.030	Contact Ball Probe Attachment
6.07506.070	Autofocus Standoff Attachment
6.7560.200	MIRA PowerPack Kit
6.07507.100	MIRA DS Field Carry Pouch
6.6071.640	HazmasterG3 License