



RS DYNAMICS

Science for Homeland Safety

miniSPECTRE

**Advanced Raman Spectrometer
for detailed identification**



miniSPECTRE delivers the highest accuracy and reliability in chemical identification for a range of response scenarios in military and civilian first responders applications.

Detectable compounds:

- explosives
- narcotics
- chemical warfare
- hazardous material
- pharmaceutical products

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Earth Science & Security Equipment
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» Technical parameters

Identification of pure substances, available in built-in libraries, in liquid or solid form under ideal lab condition. Operator's addition of substances is possible.

Laser type: semiconductor laser

Laser output power: 3 levels available, max 300mW

Floating-lens laser optics for accurate identification and penetration through various container materials

Exposure: manual and automatic mode with presetable scan delay

Max spectral range: 400 cm^{-1} to 2 300 cm^{-1}

Spectral resolution: 8-10 cm^{-1}

Detector type: Linear CCD Array

Connectivity: USB 2.0, WiFi

Battery: Li-Ion battery (up to 100 hours of operation per one charge)

External power supply: USB-C 100 Watts, 110 – 240 V AC, Car adapter 12 V DC with CLA socket optional

Operating temperature: -20 °C to +50 °C

Storage temperature: -30 °C to +50 °C

Robotic integration: Windows-based remote console and customer mechanical adapters (optional)

Included accessories: dust-proof/water-proof case (IP 67) case, shoulder strap, USB cable, laser aperture cap with calibration target, sample vials, point-and-shoot adapter; vial holder, 90° angle adapter; attachment point, AC Adapter for Charging.

» Main features

- Adaptable for various scanning scenarios with 3 laser output levels
- Advanced RAMAN Spectrometry system for detailed identification even through closed/sealed containers with floating-lens laser optics
- Identifies the widest spectrum of substances including explosives, narcotics, chemical warfare agents, hazardous material and pharmaceutical products
- 5 extensive libraries (optional) of detected materials are open for operator's update with unknown compounds
- Advanced mixture identification due to sophisticated determination algorithm
- Heavy-duty, robust case designed for the hardest field conditions, IP67 protection, with reliable cap-sense keyboard operable in protection gloves
- User-friendly and intuitive operation through the simplest possible controls and single hand operation
- Robotic integration includes full remote wire-less operation and mechanical robot mounts (depending on the type of robot)
- Full wire or wire-less remote control (also works via Internet) equipped with factory remote diagnostics and first-level service
- Large color display with self-explanatory graphic output



- Fast USB - C / WiFi data connection with rapid charging capabilities (using 100 W USB-C charger)
- No operational consumables

» Weight

With internal battery pack: 950 g

» Size

Length: 270 mm

Height: 43 mm

Width: 72 - 99 mm

» Factory remote checking, service and calibration

- Available through any Internet connection (WiFi, cellular; satellite or cable network connection)
- Capability to remote factory check & fix of all small problems and calibration.

» Environmental

- No radioactive source inside the unit
- No toxic materials inside the unit (excl. consumables - batteries, det. cartridges)
- Product fully recyclable at supplier side
- Operating environment temperature: -20 to +50 °C (conditions specified in User Manual)

» Training

- No special operator's training required, easy operation understandable to any operator without special qualification
- Easy and simple training of expert/commander to set-up operational parameters via PC

» Consumables

- No consumables required

» Power supply

- Built-in Li-Ion battery offering 20 - 100 hours of continuous operation depending on frequency of measurements
- External USB - C battery charger 110 – 240 V AC



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