

# Product Datasheet

# identiFINDER R425

## Next Generation Radionuclide Device

The FLIR identiFINDER R425 is the next generation of the most deployed radionuclide identification device (RID), offering 360-degree coverage so you can locate and measure gamma and neutron radioactive sources with confidence.

It builds on FLIR's trusted algorithms with advanced heuristics and hybrid identification techniques. With the familiar identiFINDER user interface and 3-button control, you can operate the R425 quickly, communicate results, and take command of any situation, in any environment, remotely. When other systems fail in extremely high gamma fields, the FLIR identiFINDER R425 provides pinpoint accuracy and remains fully operational.

The identiFINDER R425 goes the distance with balanced ergonomic design, unparalleled ruggedness, flexible power management, and usability.

The R425 provides an ideal balance of size, weight, and performance for various missions including surveying, emergency response, and environmental monitoring.



### Better detection in all directions

- New cubic detector design allows for high performance in all directions.
- 3 x more sensitive gamma detection (G).
- 2 x more sensitive neutron detection (GN).
- Advanced heuristics and hybrid identification techniques.
- Sourceless stabilisation.
- 15% lighter weight than previous generation.

### Power through your mission

- Internal battery lasts up to 12 hrs; additional power options include disposable or rechargeable batteries that are hot swappable and user-replaceable.
- Ready in  $\leq 20$  seconds from cold start.
- Fully enclosed solid-state detector.
- IP67-rated.
- Balanced, ergonomic design.
- Sunlight readable screen; visible through polarised glasses

### Situational awareness and support

- Established FLIR GUI and 3-button control.
- Remote data viewing, operation, and reach back.
- Dual USB-C ports and FLIR's trusted web interface.
- FLIR RAD Mobile App.
- Universal API enables integration with user deployed networks (Mobile Field Kit, ATAC, Sigma Edge, Safe Environment Gateway, etc.).
- Built-in Bluetooth and GPS.

# Specifications

Technology	
<b>Technology</b>	Radionuclide identification device (RID); Gamma and Gamma/Neutron Models
<b>Gamma Detector – NaI (TI)</b>	45 x 45 x 45 mm cubic detector with silicon photomultiplier (SiPM)
<b>Neutron Detector – ZnS (GN model only)</b>	27 x 58 x 5 mm moderated panels (2 each)
<b>Energy Range (Gamma)</b>	25 keV - 3 MeV
<b>Gamma Sensitivity (Cs-137)</b>	1610 cps/μSv/h
<b>Neutron Sensitivity</b>	> 4 cps/nv
<b>Gamma Spectrum Length</b>	1024 channels
<b>Dose Rate Range (Cs-137)</b>	100 nSv/h - 50 μSv/h ± 10 %
<b>Dose Rate Range ID Mode (Cs-137)</b>	0 nSv/h - 50 μSv/h
<b>Overload Dose Rate Range</b>	50 μSv/h - 10 mSv/h
<b>Stabilisation</b>	Sourceless gain stabilisation
<b>Linearisation</b>	Real time linearization of gamma energy
<b>Typical Resolution</b>	≤ 7% FWHM at 662 keV (20°C)
<b>Service Interval</b>	5-year factory maintenance

Sampling and Analysis	
<b>Sample Introduction</b>	Absorption of EM gamma and neutron emissions
<b>Threats</b>	Detects neutron and gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
<b>Nuclide Identification</b>	According to ANSI N42.34
<b>Library Categories</b>	SNM, IND, MED, NORM
<b>Sampling and Analysis</b>	From a few seconds to minutes

Specifications are subject to change without notice.  
For the most up-to-date specifications, please visit [www.flir.com](http://www.flir.com)

System Interface	
<b>Display and Alerts</b>	2.7" diagonal (400x240 pixels) screen; sunlight readable; visible through polarised glasses
<b>Communication</b>	USB-C (2x), Bluetooth (BLE 5.0)
<b>Data Storage</b>	8GB internal memory
<b>Training Requirements</b>	<10 mins for operator; 1 hour for advanced user
<b>Software</b>	On-board webserver software
<b>Data File Format</b>	According to ANSI N42.42

Power	
<b>Input Voltage</b>	100-240 AC (wall adapter and USB-C cable supplied)
<b>Battery Specification</b>	Internal Li-ion cells; additional user-selectable external battery (1 each 16650 Li-ion or 2 each CR123); hot-swappable
<b>Cold Start Time</b>	≤20 seconds from cold start

Environmental	
<b>Operating Temperature</b>	-22 to 140 °F (-30 to 60 °C)
<b>Operating Humidity</b>	10 to 93%, non-condensing
<b>Storage Temperature</b>	14 to 95 °F (-10 to 35 °C)

Physical Features	
<b>Dimensions (L x W x H)</b>	235 x 100 x 95 mm
<b>Weight</b>	≤1.2 kg
<b>Enclosure and Protection</b>	Injection molded housing with overmold; rating IP67 according to IEC 60529

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