

Product Datasheet

identiFINDER R425 UW

Next Generation Radionuclide Identification in any environment

The identiFINDER R425 UW builds on the legacy and capabilities of the identiFINDER R400 and identiFINDER R425. Combining the powerful sensing capabilities of the R425 with underwater operation and ruggedness of the R400.

The R425 UW is IP 68 rated to a depth of 20 meters (66 feet) and is MIL STD 810G (Salt Fog) compliant. It is three and a half times more gamma sensitive and more than two times more neutron sensitive than its underwater predecessor, the R400. The cubic detector provides all round detection capability and optimal angular dependance, ensuring an accurate dose rate, across the entire energy range, even from an angle! This ensures that nothing goes undetected, even underwater.

Operate the R425 UW quickly with the familiar identiFINDER user interface and 3-button control and Teledyne FLIR's trusted algorithms with advanced heuristics and hybrid identification techniques. The R425 UW provides an idea balance of size, weight, and performance in any environment, even underwater.



Better detection in all directions

With over 25,000 deployed RIDs, the R425 UW builds on a solid legacy of performance in every way.

- Threats come from every direction. The cubic detector design allows for high performance in all directions.
- Greater sensitivity with 75% larger detector, and 2X Neutron sensitivity.
- 15% lighter weight than previous generation.
- The LaBr detector option will provide $\leq 3.5\%$ resolution.

Operate in any environment

This handheld detector is IP 68 rated to 20 meters (66 feet) and ready for any environment.

- Assist in dive operations to search, locate, and identify radioactive materials from sunken vessels or containers.
- For use in maritime environments to protect the device from falling into water.
- Optimal for tropical climates with high humidity.
- Easy to decontaminate.

Situational awareness when you need it

When threat detection occurs, getting results communicated as quickly as possible is critical. R425 UW makes it easier than ever before, no matter the method.

- Remote viewing, operation, and reachback over Bluetooth via available app (iOS/Android) or over USB-C via FLIR's intuitive Web Interface.
- Universal API to enable integration with user deployed networks such as Mobile Field Kit, ATAK, Sigma Edge, Safe Environment Gateway, and others.
- Wi-Fi and Cellular connectivity via optional adapter.

Specifications

Technology	
Technology	Radionuclide identification device (RID); Gamma and Gamma/Neutron Models
Gamma Detector – NaI (TI) (G & NG Models)	45 x 45 x 45 mm cubic detector with silicon photomultiplier (SiPM)
Gamma Detector – LaBr3 (Ce) (LG & LNG Models)	35 x 35 x 35 mm cubic detector with silicon photomultiplier (SiPM)
Neutron Detector – ZnS (GN & LGN models only)	27 x 58 x 5 mm moderated panels (2 each)
Energy Range (Gamma)	20 keV - 3 MeV
Gamma Sensitivity (Cs-137)	1610 cps/μSv/h (G & GN models) 1000 cps/μSv/h (LG & LGN models)
Neutron Sensitivity	Up to 15 cps/nv
Gamma Spectrum Length	1024 channels
Dose Rate Range (Cs-137)	10 μrem/h – 1 rem/h ± 10%, 100 nSv/h – 10 mSv/h ± 10%
Dose Rate Range ID Mode (Cs-137)	0.1 μrem/h – 5 mrem/h 1 nSv/h – 50 μSv/h
High Dose Rate Range	1 - 100 rem/h ± 30% 10 mSv/h - 1 Sv/h ± 30%
Stabilisation	Sourceless gain stabilisation
Linearisation	Real time linearisation of gamma energy
Typical Resolution	≤ 7% FWHM at 662 keV (20°C) (G & GN models) ≤ 3.5% FWHM at 662 keV (20°C) (L & LN models)
Sampling and Analysis	
Sample Introduction	Absorption of EM gamma and neutron emissions
Threats	Detects neutron and gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
Nuclide Identification	According to ANSI N42.34
Library Categories	SNM, IND, MED, NORM
Sampling and Analysis	From a few seconds to minutes

System Interface	
Display and Alerts	2.7" diagonal (400 x 240 pixels) screen; sunlight readable; visible through polarised glasses
Communication	USB-C (2x), Bluetooth (BLE 5.0)
Data Storage	8GB internal memory
Training Requirements	<10 mins for operator; 1 hour for advanced user
Software	On-board webserver software
Data File Format	According to ANSI N42.42
Power	
Input Voltage	100-240 AC (wall adapter and USB-C cable supplied)
Battery Specification	Internal Li-ion cells; additional user-selectable external battery (1 each 16650 Li-ion or 2 each CR123); hot-swappable
Cold Start Time	≤20 seconds from cold start
Environmental	
Operating Temperature	-22 to 140 °F (-30 to 60 °C)
Operating Humidity	0 to 100%
Storage Temperature	0 to 140 °F (0 to 60 °C)
Physical Features	
Dimensions (L x W x H)	235 x 100 x 95 mm
Weight	≤1.2 kg
Enclosure and Protection	Injection moulded housing with overmould; rating IP68 according to IEC 60529; MIL-STD 810g Salt / Fog compliant

Specifications are subject to change without notice.
For the most up-to-date specifications, please visit www.flir.com

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