



identiFINDER[®] R500

Highly Sensitive Handheld Spectroscopic Detection & Identification

The FLIR identiFINDER R500 is the most sensitive radio-isotope identification device (RIID) available and is capable of rapidly locating and identifying radioactive material in difficult monitoring scenarios. Like other identiFINDER R-series products, the R500 contains on-board Bluetooth®, web server, and GPS technologies. It produces rapid alerts that expedite response measures and enable field operators to make a next step determination. The common operating interface and template matching technology provides immediate comfort and confidence when using the device. The additional detector volume allows the R500 to identify radioactive material where other instruments cannot. When large areas need to be screened rapidly or truck and cargo scanned for shielded sources, the identiFINDER R500 provides superior sensitivity and performance.



CUSTOM APPLICATIONS

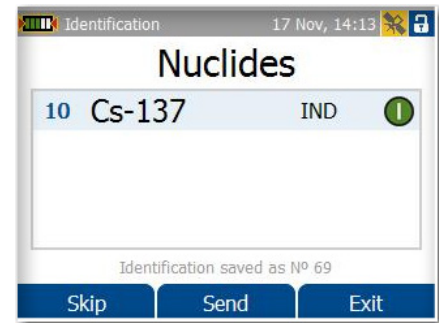
- Truck and cargo checks
- Large area scanning
- Locate and identify shielded sources
- Critical infrastructure security

FEATURES & BENEFITS

- Detects radiation source within a few seconds
- Gamma and neutron detection
- Identifies ANSI N42.34 library
- Rugged (1.0-m drop tested)
- High resolution and low false alarms
- Rapid visible, audible, and tactile alerts
- Fast, two-minute start up
- 5 year factory maintenance

Specifications

idf R500	
TECHNOLOGY	
Technology	Radioisotope identification device (RIID)
Product Variants	ULCS-NG ¹ , ULCS-NGH ² , UL-LGH ³ , UL-LG ⁴
Gamma (NaI) ^{1,2}	4.0 x 0.7 in (102 x 19 mm)
Gamma (LaBr3) ^{3,4}	1.5 x 1.5 in (38 x 38 mm)
Neutrons (He-3) ^{2,3}	0.7 x 4.2 in (19 x 106 mm)
Gamma (High Dose Rate)	Geiger-Müller
Energy Range (Gamma)	20 keV – 3 MeV
Corrections	Real-time linearization of gamma spectrum
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate / Accuracy (Cs-137)	0.000 nSv/h – 1.00 mSv/h (0 nrem/h – 100 mrem/h) / ±30 %
Scintillator Dose Rate Range	0 nSv/h - 50 µSv/h (0 nrem/h - 5.0 mrem/h)
Geiger-Müller Dose Rate Range	10 µSv/h - 1.0 mSv/h (1.0 mrem/h - 100 mrem/h)
Dose Range	0 µSv - 1 Sv (0 µrem - 100 rem)
Overload Dose Rate Range	1 mSv/h - 10 mSv/h (100 mrem/h - 1.0 rem/h)
Neutron Sensitivity	Variants ^{2,3} : 9 cps/nv; ±15 %
Stabilization	Calibration source; LED
Typical Resolution	Variants ^{1,2} : ≤8 % FWHM; Variants ^{3,4} : 3.5% FWHM at 662 keV
Service Interval	5 year factory maintenance
SAMPLING & ANALYSIS	
Sample Introduction	Absorption of EM gamma or neutron emissions
Threats	Detects neutron or gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
Nuclide Identification	According to ANSI N42.34
Sampling & Analysis	From a few seconds to minutes
SYSTEM INTERFACE	
Display & Alerts	Transflective color LCD
Communication	USB 2.0; mini-B socket; Bluetooth® Class 2.0, ≤10m range (removable)
Data Storage	2GB internal memory; up to 600,000 spectra
Training Requirements	<10 mins for operator; 1 day for advanced user
GPS (removable)	12-channel SiRF III receiver
Software	On-board webserver software
POWER	
Input Voltage	100-240 VAC (wall and car adapters and USB cable supplied)
Battery Specs	FLIR powerPACK ultra 2 (LSD NiMH, rechargeable): ≥8h operational battery life; recharge ≤4h when using AC; recharge >4h when using USB
Cold Start Time	<2 mins from cold start
ENVIRONMENTAL	
Operating Temp	-4 to 122 °F (-20 to 50 °C)
Operating Humidity	10 to 80%
Storage Temp	14 to 95 °F (-10 to 35 °C)
PHYSICAL FEATURES	
Dimensions (L x W x H)	8.3 x 5.1 x 12.7 in (21.1 x 12.9 x 32.3 cm) - with battery
Weight	≤6.4 lbs (≤2.9 kg)
Enclosure & Protection	Aluminum housing; protection rating IP54 according to IEC 60529



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