

# FLIR identiFINDER R500

## Highly Sensitive Handheld Spectroscopic Detection & Identification



*detection  
monitoring  
identification*

**radiation**



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 there is potential for shielding, as in truck and cargo scanning, the identiFINDER R500 provides superior sensitivity and performance compared to other RIID devices.

### 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 interval



## SPECIFICAT IONS

Technology	Radioisotope identification device (RIID)
Product Variants	ULCS-NG <sup>1</sup> , ULCS-NGH <sup>2</sup> , UL-LGH <sup>3</sup> , UL-LG <sup>4</sup>
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-Muller
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 nrem/h . 100 mrem/h (0.000 nSv/h . 1.00 mSv/h) / ±30 %
Scintillator Dose Rate Range	0 nrem/h - 5.0 mrem/h (0 nSv/h - 50 uSv/h)
Geiger-Muller Dose Rate Range	1.0 mrem/h - 100 mrem/h (10 uSv/h - 1.0 mSv/h)
Dose Range	0 urem - 100 rem (0 uSv - 1 Sv)
Overload Dose Rate Range	100 mrem/h - 1.0 rem/h (1 mSv/h - 10 mSv/h)
Neutron Sensitivity	Variants <sup>2,3</sup> : 9 cps/nv; ±15 %
Stabilization	Calibration source; LED
Typical Resolution	Variants <sup>1,2</sup> : ≤8 % FWHM; Variants <sup>3,4</sup> : 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 <sup>R</sup> Class 2.0, .10m range
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

