

## FLIR **identiFINDER R440**

**Highly Sensitive, Sourceless  
Handheld RIID**



The **FLIR identiFINDER R440** is a lightweight, sourceless radioisotope identification device (RIID) that delivers sensitive detection and fast results for routine survey or secondary screening response missions. The 2x2 NaI (sodium iodide) detector responds to radiological threats from farther away, behind heavier shielding, and with better resolution than similarly-sized RIIDs. The extended energy range provides neutron indication. Its light weight makes single-handed operation easy on extended operations, while the IP67-rated enclosure is built to survive. The bold, easy-to-read interface with 360° EasyFinder™ mode expedites decision-making to keep personnel and the community safe.



### **SMALLEST, LIGHTEST RIID WITH 2X2 NaI DETECTOR**

Accurate identification and faster time to alarm

- 3.5 times more sensitive with 10% better resolution than comparatively sized RIIDs
- High dose rate range provides stability and accuracy even in high dose rate environments
- Two models: gamma only (with neutron indication); gamma and neutron detection and measurement
- Sourceless stabilization improves data collection, reducing false positives



### **RUGGED, IP67-RATED ENCLOSURE**

Built to survive fast-paced, rigorous missions

- Protected from total dust ingress and water immersion (rain, splashing and accidental submersion) up to 1 meter in depth for up to 30 minutes
- ANSI N42.42 and ANSI N42.34 compliant
- Drop-tested up to 1 meter
- Completely enclosed crystal provides enhanced ruggedization



### **STATE-OF-THE-ART USER FEATURES**

Clear results and enhanced communications keep responders and the community safe

- 360° EasyFinder mode collects and interprets data and then pinpoints the exact location of source for user
- Built-in wireless communications
- Built for interagency standardization - common user interface provides familiarity for users of any identiFINDER product

## SPECIFICATIONS

Model Number	FLIR R440
Technology	Radioisotope identification device (RIID)
Gamma - NaI(Tl)	2.0 x 2.0 in (51 x 51 mm)
Gamma / Neutron - NaIL (optional)	2.0 x 2.0 in (51 x 51 mm)
Energy Range (Gamma)	10 keV to 10 MeV
Gamma Sensitivity (Cs-137, NaI)	1850 cps/μSv/h
Gamma Spectrum Length	1024 channels
Dose Rate Range (Cs-137, NaI)	10nSv/h - 10mSv/h (1μrem/h - 1rem/h) / ±30 %
Dose Rate Range ID Mode (Cs-137, NaI)	10nSv/h - 250μSv/h (1μrem/h - 25mrem/h)
Overload Dose Rate Range (Cs-137, NaI)	10mSv/h - 500mSv/h (1rem/h - 50rem/h)
Stabilization	Sourceless gain stabilization (patents pending)
Linearization	Real-time linearization of gamma energy
Typical Resolution	≤7% FWHM at 662 keV with NaI detector at 20 °C
Service Interval	1 year factory maintenance suggested, not required

### Sampling & Analysis

Sample Introduction	Absorption of EM gamma (NaI) or gamma and neutron emissions (NaIL)
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
Library Categories	SNM, IND, MED, NORM

### System Interface

Display & Alerts	Transflective color LCD / 3" (2.72" x 1.61") Color TFT Display, Resolution: 800 x 480 pixels
Communication	USB 2.0, USB OTG; Bluetooth® Class 2.0 ≤10m range (removable); WiFi 802.11 g/n
Data Storage	32GB internal memory
Training Requirements	<10 mins for operator; 1 day for advanced user
GPS (removable)	12-channel SiRF III receiver
Software	On-board webserver software

### Power

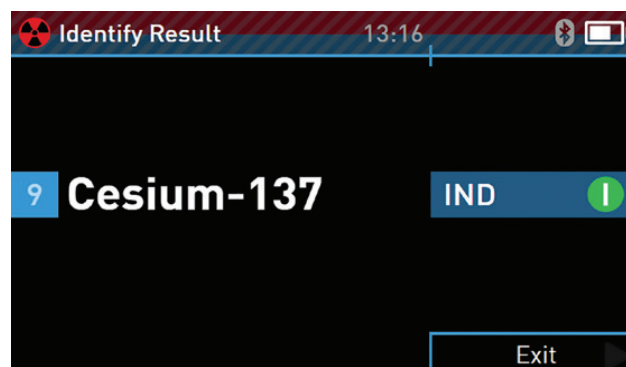
Input Voltage	100-240V AC (wall adapter and USB cable supplied)
Battery Specs	Supplied: 2x rechargeable Li-Ion smartpacks and 1x 4x AA pack; ≤6h runtime with one Li-Ion smartpack, ≤12h with both Li-Ion; runtime of ≤4h with AA battery pack (Li-ion); Optional rechargeable NiMH ion smartpack with ≤5h runtime; recharge ≤4h when using AC; recharge >4h when using USB; run times specified are obtained with a mix of Dose Rate, Finder, and ID operating mode
Cold Start Time	<2 mins from cold start

### Environmental

Operating Temp (ambient)	-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)	≤ 4 x 10.6 x 3.7in (10.2 x 26.9 x 9.4 cm) – with battery
Weight	≤3.2 lbs (≤1.5 kg)
Enclosure & Protection	Aluminum housing; protection rating IP67 according to IEC 60529



Common user interface with clear results

