

identiFINDER R400

Handheld Spectroscopic Radiation Detection and Identification

The FLIR identiFINDER R400 is the most widely deployed handheld radiation detection and identification product in the world. At half the size and weight of competitive radioisotope identification devices (RIID), the R400 helps operators feel comfortable using the instrument even in hazardous and stressful environments. Operators use the handheld R400 to detect, quickly locate, measure, and identify the source of radioactive material.

Like other identiFINDER R-series products, the R400 contains on-board Bluetooth®, web server, and GPS technologies and produces rapid visible, audible, and tactile alerts that expedite response measures.

The common operating interface reduces training time and costs, while increasing operator confidence and inter-operability between agencies using FLIR products.

The identiFINDER R400 provides the ideal balance of size and weight for a wide variety of scenarios including all-purpose surveying, emergency response, and environmental monitoring.

Custom Applications

- All-purpose surveying.
- Emergency response.
- Environmental monitoring.
- Port and border scanning.

Features and Benefits

- Field-proven with over 20,000 deployed globally.
- Gamma and neutron detection.
- Identifies ANSI N42.34 library.
- High resolution and low false alarms.
- Rapid visible, audible, and tactile alerts.
- Fast two-minute start up.
- 5 year factory maintenance.



Specifications

Technology	
Technology	Radioisotope identification device (RIID)
Product Variants	NG ¹ , NGH ² , ULCS-NG ³ , ULCS-NGH ⁴ , ULK-NG ⁵ , ULK-NGH ⁶ , UW-NG ⁷ , R400-UW-NGH ⁸ , UW-ULCS-NG ⁹ , UW-ULCS-NGH ¹⁰ , T1 ¹¹ , T2 ¹² , LG ¹³ , LGH ¹⁴
Gamma (NaI)¹⁻¹⁰	35 x 51 mm
Gamma (NaI)¹¹⁻¹²	23 x 21 mm – Tungsten shielded
Gamma (LaBr3)¹³⁻¹⁴	30 x 30 mm
Neutrons (He-3)^{2,4,6,8,10}	15 x 54 mm
Gamma (High Dose Rate)	Geiger-Müller
Energy Range (Gamma)	20 keV - 3 MeV
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate / Accuracy (Cs-137)	0 nSv/h - 10.00 mSv/h (0 nrem/h - 1.0 rem/h); ±30 %
Scintillator Dose Rate Range	0 nSv/h - 500 µSv/h (0 nrem/h - 50 mrem/h)
Geiger-Müller Dose Rate Range	100 µSv/h - 10 mSv/h (10 mrem/h - 1.0 rem/h)
Dose Range	0 nSv - 1 Sv (0 nrem - 100 rem)
Overload Dose Rate Range	10 mSv/h - 1 Sv/h (1.0 rem/h - 100 rem/h)
Neutron Sensitivity^{2,4,6,8,10,14}	2.6 cps/nv; ±20 %
Stabilisation	Variants ^{1,2,3,4,6,7,8,9,10} : Calibration source Variants ^{3,4,5,6,9,10,13,14} : LED
Typical Resolution	Variants ¹⁻¹² : ≤8 % FWHM / ^{13,14} : 4,5 % FWHM at 662 keV
Service Interval	5 year factory maintenance

Sampling and 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 and Analysis	From a few seconds to minutes

System Interface	
Display and Alerts	Transflective color LCD
Communication	USB 2.0; micro-B socket ^{1,2,3,4,5,6,11,12} or LEMO Series K socket ^{7,8,9,10} ; 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 (Removeable)	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 Specifications	Either rechargeable NiMH or 4 x AA pack (supplied); ≥8 h operational battery life; recharge ≤4 h when using AC; recharge >4 h when using USB
Cold Start Time	<2 mins from cold start

Environmental	
Operating Temperature	4 to 122 °F (-20 to 50 °C)
Operating Humidity	10 to 80%; variants ^{7,8,9,10} ≤100 %
Storage Temperature	14 to 95 °F (-10 to 35 °C)

Physical Features	
Dimensions (L x W x H)	9.4 x 26.9 x 8.1 cm – with battery
Weight	≤1.5 kg
Enclosure and Protection	Aluminum housing; protection rating IP53 according to IEC 60529 variants ^{7,8,9,10} IP68 according to IEC 60529; 10 m; 8 h

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



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