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
**SPECIFICATIONS**

**Technology**
Radioisotope identification device (RIID)

**Product Variants**
ULCS-NG1, ULCS-NGH2, UL-LG1, UL-LG4

**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 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-Müller 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 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

**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**
.64 lbs (.29 kg)

**Enclosure & Protection**
Aluminum housing; protection rating IP54 according to IEC 60529