



SOR/RF

Enhanced Ambient/LLR
Electronic Dosimeter



Nuclear
Power



Homeland
Security
& Defense



Industrial and
Manufacturing



Healthcare



Labs and
Education

OVERVIEW

An important special feature of the SOR Line is its ability to meet the needs of various applications with one product. Given its multi-detector architecture the measurement range covered is broad, and includes high level gamma dose rates as well as low level radiations (L.L.R).

These dosimeters are qualified in accordance with current military and civil standards. The SOR line has even exceeded some of the standards currently in effect in order to account for harsh operational environments.

The SOR dosimeter has been selected by most NATO countries.

KEY FEATURES

- The SOR/RF Electronic Dosimeter represents a substantially increased EMI resistance over the SOR-R and SOR-T product lines. It has been enhanced to exceed the EMI interference requirements of MIL STD-461/810.
- Assignable electronic dosimeters
- Waterproof, light and small
- Rugged for battlefield use
- Hands free communication, pass-by exchange
- Data communication through clothing layers
- Enhanced EMI resistance over 250V/m

RADIOLOGICAL CHARACTERISTICS

- Hp(10) dose equivalent measurements
- Flash gamma dose measurement^{**}: 5 cGy to 10 Gy
- Relative error of flash measurement^{**}:
+/- 30 % over measurement range
- Ambient gamma dose measurement range: 1µGy to 10 Gy
- Gamma dose rate measurement range: from background to 10 Gy/h
- Gamma dose rate display: from 1 or 10 µGy/h to 10 Gy/h
- Saturation indication (above 10 Gy/h)
- Relative error of ambient measurement:
< +/- 20 % over the dose measurement range
- Energy response:
< +/- 20 % in the range 60 keV to 2 MeV
< +/- 50 % in the range 2 MeV to 6 MeV

FUNCTIONAL CHARACTERISTICS

- Redundant architecture with passive measurement components ^{**}
- Selectable units: cGy; cGy/h; mSv; mSv/h; mrem; mrem/h
- 4 configurable dose and dose rate alarm levels
- Typical one year lifetime with standard battery
- User selectable display modes
- Backlighting display (option)
- Periodic exhaustive self-testing including the detector
- Historical record of measurements and events (750 steps; 10 s; 1 min, 10 min; 1 h; 24 h)
- Data storage in EEPROM (qualified > 10 years without battery)
- Battery fault pre-alarm (16 h) and alarm
- Neck lanyard or clip
- Training mode (option)

MECHANICAL CHARACTERISTICS

- Dimensions: 80,4 x 48 x 9 mm (flat housing)
(3.16 x 1.85 x 0.35 in)
- Weight: 55 g (1.94 oz)

* LLR : Low level Radiation

**a specific configuration software is required for the XOM reader

ENVIRONMENTAL CHARACTERISTICS

- -20° to + 50°C (-4°F + 122°F) (normal operating range, standard battery 3V LiMnO2 CR2450)
- -40° to + 50°C (-40°F + 122°F) (option with battery module 3.6V LiSoCl2)
- Resistant to EMP, EMC, radars
- Resistant to water immersion, drops, shocks, vibrations, low pressure, initial conditions, NBC environmental conditions
- Meets/exceeds the following standards:
 - MIL-STD-810 and MIL-STD-461 requirements
 - IEC 1283, ANSI 42-20 and NATO D104
- Qualified by most of the NATO military laboratories



SOR/RF inside the arm-band pouch (accessory)



SOR/RF worn round the neck



SOR/RF version to be clipped on a pocket

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