LUDLUM

RDS Neutron Probe

Solid-state neutron probe, helium-3-free

Probe for the RDS Base Unit that measures neutron dose equivalent rate from thermal energies to 15 MeV. The solid-state detector sits in a high-density polyethylene (HDPE) moderator and is rounded to be sensitive in all directions; it does not use helium-3.



Detector type	Weight	IP rating
Advanced solid-state neutron detector, helium-3-free [1]	**5.33 kg** [2]	**IP67** [2]

Specifications

DETECTOR

Detector type	Advanced solid-state neutron detector, helium-3-free	[1]
Gamma rejection	3000:1	[2]

PERFORMANCE

Accuracy	±25% for dose rates < 1 mrem, ±10% for dose rates ≥ 1 mrem	[2]
Background rate	Typically < 1 cpm	[2]

MEASURING RANGE

Neutron energy range	Thermal (0.025 eV) – 15 MeV	[2]
Neutron dose-rate range	1 µrem/h – 10 rem/h	[2]

POWER & BATTERY

Power supply	Supplied by the RDS Base Unit, 25 mA maximum	[2]

MECHANICAL

Dimensions	21 × 21 × 32 cm (8.3 × 8.3 × 12.4 in)	[2]
Weight	5.33 kg	[2]
Housing material	High-density polyethylene (HDPE)	[2]

ENVIRONMENT & RATINGS

Operating temperature	−30 to 50 °C	[2]
Storage temperature	−50 to 60 °C	[2]
Humidity	3–100% relative humidity	[2]
IP rating	IP67	[2]

ORDERING & ACCESSORIES

Part number	V039097	[2]

GENERAL

Standards met	ANSI N42.17 and N42.34; MIL-STD 461F, 1686C and 810G	[2]
NATO Stock Number (NSN)	6665-01-671-4376	[2]

Sources

[1] **Ludlum RDS Neutron Probe**
Ludlum Measurements · product-page · Neutron Probe Features · checked 2026-11-16
https://www.ludlum-slc.com/neutron-probe/

[2] **RDS Neutron Probe data sheet (V039097)**
Ludlum Measurements · datasheet · p. 2, Radiological – Detection; p. 2, Radiological; p. 2, Radiological – Measurement Accuracy · checked 2026-11-16
https://www.ludlum-slc.com/neutron-probe_v039097/

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.