



UNIDOS® Universal Dosemeter

*High performance secondary standard
and reference class dosimeter / electro-
meter for universal use*

Features

- ▶ Suitable for universal dosimetry in radiation therapy, diagnostic radiology and health physics
- ▶ Complies with the standards
 - IEC 60731¹⁾ as a reference class dosimeter
 - IPEM guidelines on dosimetry transfer instruments as a secondary standard dosimeter
 - IEC 60601-2-9 as a dosimeter for patient contact
 - IEC 61674²⁾ as a diagnostic dosimeter
- ▶ High accuracy, excellent resolution (1fA) and wide dynamic measuring ranges
- ▶ HV power supply (0 ... ±400)V in increments of ±50V
- ▶ Measures integrated dose (or charge) and dose rate (or current) simultaneously

UNIDOS is well known and accepted worldwide as the dosimeter of choice with best performance available on the market. Thousands of international users enjoy the high quality, the reliability and the excellent adaptation of this unique dosimeter. UNIDOS is a high precision secondary standard reference class dosimeter.

A comprehensive chamber library makes it possible to store calibration data of up to 30 chambers. Air density corrections are done by keying in air pressure and temperature, or by means of radioactive check devices. The check device data are stored in a database. An internal clock calculates the decay of the isotope radioactivity. The device includes automatic leakage compensation, an automatic built-in system test and an RS232 interface. It features both mains and battery operation. The delivery includes a manual in English.

Ordering Information

T10005 UNIDOS, connecting system BNT, 115/230 V
T10002 UNIDOS, connection system TNC, 115/230 V
T10001 UNIDOS, connection system M, 115/230 V

Options

S100002 UniSet Software for computer communication
L522021 UNIDOS Carrying case

- ¹⁾IEC 60731: "Medical electrical equipment - Dosimeters with ionization chambers as used in radiotherapy"
²⁾IEC 61674: "Medical electrical equipment - Dosimeters with ionization chambers and/or semi-conductor detectors as used in X-ray diagnostic imaging"

Specification

- ▶ Type of product High precision dosimeter according to IEC 60731¹⁾ and IEC 61674²⁾
- ▶ Application Dose and dose rate measurements (charge and current measurements) in radiation therapy, X-ray diagnostics and radiation protection
- ▶ Measuring quantities and units
 - Absorbed dose to water (Gy)
 - Absorbed dose to air (Gy)
 - Air Kerma (Gy)
 - Photon equivalent dose (Sv)
 - Exposure (R)
 - Dose length product (Gy·cm)
 - The corresponding dose rates
 - Charge (C)
 - Current (A)
- ▶ Measuring ranges:
 - Charge 2 pC ... 65 mC
 - Current 200 fA ... 1 µA
- ▶ Resolution:
 - Charge 10 fC
 - Current 1 fA
- ▶ Long-term stability < ± 0.1 % p.a.
- ▶ Non-linearity < ± 0.5 % according to IEC
- ▶ Accuracy of the C and A measurement < ± 0.5 % ± 1 digit
- ▶ Interval time (6 ... 9999) s
- ▶ Temperature range (10 ... 40) °C, (50 ... 104) °F
- ▶ Relative humidity (10 ... 85) %, max 20 g/m³ range
- ▶ Leakage current < ± 1 fA
- ▶ Amplifier zeroing automatically within approx. 75 s
- ▶ Chamber voltage (0 ... ± 400) V in 50 V increments
- ▶ Interface RS232
- ▶ Power supply 115/230 VAC, (50 ... 60) Hz resp. rechargeable NiCd batteries
- ▶ Dimensions (H x W x D) 152 mm x 257 mm x 262 mm
5.98 in x 10.12 in x 10.31 in
- ▶ Weight approx. 6.4 kg, 14.11 lbs