portable DOSIMETER

Portable Dosimeter TN-RD-90

The Portable Dosimeter, model TN-RD-90, is an economical, compact, stand-alone system for radiation dose measurement.

Patient dosimetry measurements are available at the touch of a button and display on the integrated LCD, without the need for software or a computer. Additionally, the rechargeable battery powered dosimeter allows easy transportation from room-to-room, or hospital-to-hospital.

The Portable Dosimeter supports up to two simultaneous dose points with any of the Best Medical Canada single MOSFETs on standard or high bias setting for optimal dose reproducibility. An automatic mode is available to continuously sample dose data at a fixed time interval during a session.

After every measurement the dosimetry data is automatically stored to memory for later viewing and can be downloaded to a computer via a USB connection and the PortableDose Connect software. A simple, menu driven interface allows customization of calibration factors, dose units and operational settings directly on the Portable Dosimeter. To save you time, a library of default calibration factors is stored in the memory, but the user also has the choice of entering their customized calibration factors.

Radiotherapy clinics can utilize the Portable Dosimeter for patient dose QA, or to measure exposures to regions-at-risk. In diagnostic radiology, the system is ideal for residual exposure dose measurements, and protocol evaluation.

For one-to-two dose points, the Portable dosimeter is a fast, simple solution for patient dosimetry that can be used for a wide range of applications in radiotherapy and radiology.

TN # to 102086.04

Features:
▸ Stand-alone reader with LCD
▸ Portable and compact
▸ Quick set-up time
▸ Simple menu operation
▸ Supports two MOSFET dosimeters
▸ Supports all single Best Medical Canada MOSFETs
▸ Optional data export via USB and PortableDose Connect software
▸ Calibration factor library
▸ Long rechargeable battery life
▸ Manual measurement mode, or Automatic Sequential mode
▸ No software or computer necessary

Applications:
Radiotherapy
▸ *In vivo* dose – photon or electron
▸ Skin entrance and exit dose (TBI)
▸ D_{max} dose measurements
▸ IMRT and Tomotherapy
▸ Brachytherapy
Radiology
▸ Pediatric CT dose
▸ Fluoroscopy dose

Best Medical Canada MOSFETs

An "Independent" sensor

▸ MeV energy independent – photons and electrons

▸ Dose rate independent

▸ Temperature independent

▸ Angular independent – Isotropic (±2% for 360°)

▸ The "Independent" MOSFET saves you time calculating correction factors and calibrating. You can use the same single calibration factor for both photons and electrons at all MeV energies.

More MOSFET Sensor Features:

▸ Real-time, instantaneous, integrated dose measurement

▸ Active area of 0.2 x 0.2 mm

▸ Pinpoint measurement for high gradient fields

▸ Lightweight, flexible and low attenuation

▸ Standard MOSFET is 2.5 mm wide

▸ microMOSFET is 1.0 mm wide

Supported MOSFET Dosimeters

All single MOSFETs** are supported by the Portable Dosimeter including, Standard and High Sensitivities, microMOSFETs, Heat shrink Reinforced, and Radio-opaque Marker dosimeters.

▸ TN-502RD

▸ TN-502RDM

▸ TN-502RD-H

▸ TN-502RDM-H

▸ TN-502RD-HRO

▸ TN-502RDM-HRO

▸ TN-1002RD

▸ TN-1002RDM

▸ TN-1002RD-H

▸ TN-1002RDM-H

▸ TN-1002RD-HRO

▸ TN-1002RDM-HRO

** Linear 5 Array not supported.

Specifications (TN-RD-90):

Units .... Gy, cGy, mGy, rad, mV
Internal clock .... Time and date in 24 hour format
Bias settings .... High and Standard for customized sensitivity
Batteries .... Two AA batteries. Estimated battery life of more than 1 month
Rechargeable .... Integrated recharging circuit for NiMH AA batteries
Software .... PortableDose Connect software provides data download support with Windows 2000/XP/Vista
Resolution .... 0.1 mV over an accumulated total of 20,000 mV
Linearity .... ± 1 mV for the total 20,000 mV
Dose Range .... Typically 20,000 cGy for standard sensitivity and 7,000 cGy for high sensitivity

Dose Reproducibility (^{60}Co, 1 □)		
Dose	Bias Setting	
	High	Standard
200 cGy	<1%	<2%
20 cGy	<1%	<3%