

In vivo patient dosemeter  
**DPD-3**



# Accurate dosimetry system

Sophisticated treatment techniques are of little value if you cannot verify the delivered dose. The best way to perform this essential verification function is to use a direct in vivo dosimetry system giving you the required information in real time. In vivo dosimetry is also an important element in the quality assurance documentation for today's radiotherapy department.

Together with the wide range of our renowned high quality 3G-pSi detectors, the DPD-3 system can handle a variety of treatment situations: entrance dose, exit dose, risk organ monitoring and intracavitary dosimetry in brachytherapy.

## Applications

The DPD-3 is a 3-channel electrometer system intended for in vivo dosimetry. Typically, two of the channels are used for photon and electron energies and the third for risk organ monitoring.

## User friendliness

The DPD-3 is designed for ease of use, particularly in routine situations. Up to 99 correction factors can be defined for immediate access. Commonly used functions such as selection of correction factors, printing results and electrometer reset are accessed through separate, clearly marked keys. A large LCD display for each channel is easily readable from a distance.

The electrometer works as a stand-alone system but also comes standard with a serial communication port for control from a personal computer.

## Accuracy

To allow high precision measurements with a minimum of work load, the calibration factor has been divided into a sensitivity factor correlated to the detector sensitivity and a correction factor. Clinics demanding a high accuracy can define up to 99 correction factors which correct for different physical conditions in varying measurement situations.

When a recalibration has to be done due to change in detector sensitivity, only the corresponding sensitivity factor has to be updated. The user defined correction factors can be used unchanged.

## Technical specifications



### DPD-3 Electrometer

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Input channels:	3
Display:	LCD, 3x4 digits + 2x16 characters
Input sensitivity in dose mode:	10 – 70 nC/Gy
Input sensitivity in dose rate mode:	0.17 – 1.2 nA/Gy/min
Accuracy:	better than 0.3% (zero drift compensated)
Leakage:	< 0.2% (zero drift compensated)
Mode:	dose or dose rate
Units:	Gy, rad, cGy, ADC-units
Dose range:	0 – 9.999 Gy
Dose rate range:	0.4 – 19.99 Gy/min (0.1 – 0.4 Gy/min with reduced accuracy)
Alarm:	sound or relay
Power supply:	220 – 240 VAC/100 mA or 110 – 117 VAC/200 mA, 50 or 60 Hz
Warm-up time:	15 min
Operating temperature:	18°C to 27°C (64°F to 80°F)
Relative humidity:	30 – 70%, non condensing
Interface:	RS232
Dimensions:	220 x 140 x 330 mm <sup>3</sup>
Weight:	3 kg

### Standards/Requirements

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Regulatory requirements:	MDD 93/42 EEC
Electrical standards:	IEC 601-1, IEC 601-1-2, IEC 601-2-9

Technical data is subject to change without prior notice.

## Product range

### Dosimetry in Radiotherapy

- Relative Dosimetry
- IMRT
- Absolute Dosimetry
- In Vivo Dosimetry
- Software Applications
- Film Dosimetry
- Quality Assurance
- Patient Positioning Lasers

### Dosimetry in Radiology

- Patient Dose Monitoring
- QA of Film Processing Units
- QA of X-Ray Units
- QA of Computed Tomography
- QA of Ultrasound Units

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