

Model 1100/1150 Dosimetry Electrometer



The CNMC Models 1100 and 1150 are high quality, compact and affordable dosimetry electrometers that will meet the needs of most therapy applications, including brachytherapy. A unique, simple design eliminates many of the current leakage problems associated with complicated electrometer designs.

Model 1100 and 1150 electrometers meet or exceed the requirements of the AAPM ADCLs and have features found in electrometers costing far more.

The pricing of the 1100 is such that, when packaged with a Farmer chamber, it compares favorably with the cost of a ⁹⁰Sr constancy check source. The added benefit of having two dosimetry systems for intercomparison purposes is the convenience of having a back-up system.

Standard range setup for either model suits most teletherapy applications, including HDR brachytherapy. Standard units are nC and nA.

The Model 1150 includes a built-in timer circuit for accumulation of charge vs. time. Timing periods of 50, 100 and 200 seconds have been chosen for convenient conversion of nC to nA.

The bias supply is electronic, and the unit is powered by an internal rechargeable battery. The standard input connector is triaxial BNC, but TNC is available by request.

Specifications

Accuracy:	±0.1% of reading, +1 digit
Linearity:	±0.1%, +1 digit or precision of reading, whichever is greater
Timer:	(1150 only) can be preset for 50, 100 or 200 seconds
Leakage:	< 5 x 10 ⁻¹⁴ A
Long Term Stability:	< ±0.5% per year all scales except 20,000 nC scale which is ±1.5% per year
Display:	4-1/2 digit LCD
Temp. stability:	20 ppm/°C
Warm-up time:	15 minutes
Input:	triaxial BNC (TNC optional)
Output:	analog, 2 V corresponds to full scale
Bias:	internal electronic bias supply 300 V, -50%, -100%, off, +100%, +50%, selectable on back panel. Bias voltage may be read on display. 400 V bias potential also available.
Power:	internal rechargeable 12 V sealed lead acid battery, voltage maybe read on display. Low battery indicator on front panel. 120 VAC UL listed adapter provided.
Dimensions:	21 cm wide x 22.9 cm deep x 8.25 cm high (8.25 in x 9 in x 3.25 in)
Weight:	1.7 kg (3.75 lbs)

Features:

- ▶ A superb performer - Best Value
- ▶ 4-1/2 digit LCD display
- ▶ Internal electronic bias: full, half & reverse polarity
- ▶ Powered by a rechargeable battery
- ▶ Extended 20,000 nC range for HDR
- ▶ Internal timer (1150 only)

Units	Low	High	Application
nA, nC	0.001 - 19.999	0.01 - 199.99	Teletherapy
20,000 nC	none	1 - 19999	HDR