LACO

Model 35040 Electrometer

Long term reputation in the medical industry.

Assurance we will offer competitive pricing.

Customer service #1 priority.

One Stop.

LACO Inc.

does it all!

- **Now with Timer Function and wider dynamic range**
- **Ultra long-term stability error of approximately 0.1% per five years**
- **Virtually removes effects of system leakage during measurement**
- **Uncorrected leakage < 10 fA over temperature range**
- **Eleven user-defined bias settings from - 500 to + 500 V**
- **Read out in C, A, R, Gy, Sv, Bq, and more**

Introduction

The Model 35040 Advanced Therapy Dosimeter (ATD) is a reference grade instrument used to measure the charge and current from ion chambers in Radiation Therapy, and provides bias voltage for all commonly used chambers. The ATD large clear display offers direct readings of charge, current, time, and radiation units over a wide range. The user can customize the display for basic use or for specialized applications such as brachytherapy. The Advanced Therapy Dosimeter exceeds the recommendations of calibration laboratories for leakage, linearity, and stability by a wide margin. This instrument raises the standard of Radiation Therapy measurements.

Applications

Radiation Therapy requires great accuracy in the measurement of dose and dose rate values associated with linear accelerators and radioactive sources. The Model 35040 Advanced Therapy Dosimeter provides the long-term stability and accuracy demanded for calibrations, quality assurance programs, and protocols in Radiation Therapy. A unique electrometer design provides more accuracy than high meg resistor or capacitor feedback electrometers.

The Advanced Therapy Dosimeter is fully stable within five minutes, a fraction of the time of conventional dosimeters. The flexibility of the instrument optimizes user efficiency and saves time. In battery operation or using AC Line, the ATD measures dose and effective exposure time in a single exposure, thus eliminating the need for multiple exposures for 60Co and brachytherapy measurements. Front panel controls select ion chamber calibration factors, facilitate entry of temperature and pressure values for air density correction, allow bias voltage selection, threshold level, timer control, and choice of display screens. The user-customized display screens can simultaneously show dose, exposure time, dose rate, effective exposure time, average current/rate, accumulated charge/dose, bias voltage, leakage, and other important information that ensures the validity of the instrument.

The customization software allows design of 16 screens that display conditions, parameters, values and text. Up to 32 chamber factors, 11 bias voltages can be programmed. It is PC compatible and connects via a RS-232 cable.

Features

- Wide measurement range, up to 1.000 µA and 19.999 mC for HDR Brachytherapy applications
- Automatic reset and hold of measured values between exposures
- Front panel adjustment of exposure threshold and user disable of threshold to permit manual operation
- Thirty-two ion chamber calibration factors
- Automatic power-down after user-specified time period, when operating from battery supply
- Annunciators warn of low battery, low bias, and operational errors
- Large capacity battery provides eight hours of continuous operation; fast recharge in less than three hours, even during operation
- AC line operation over the range 100 to 240 VAC and 47 to 63 Hz without operator intervention
- Charge and current calibration factors entered by calibration laboratories at user's option
- Front and rear panel ion chamber connections
- Optional carrying case (Model 37780)

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