

# Model L-051

## TG-51 Linac Filter



Ludlum Measurements, Inc.



### Introduction

The primary purpose of the AAPM TG-51 dosimetry protocol was to provide a uniform methodology for a clinical reference dosimetry measurement. Both the photon and electron beams from accelerators needed to be within the recommended nominal energies (Beam Quality). The methodology included the application of a 1 mm thick lead foil that is placed just below the accelerator head, to reduce the electron contamination and therefore help to specify the beam quality. The lead foil is typically attached to the accelerator head or to the blocking tray using surgical tape, wires or whatever material was available.

The Ludlum Model L-051 "TG-51 Linac Filter" has been designed to simplify the task of making the prescribed Beam Quality Measurements, by providing a true 1 mm thick lead foil ( $\pm 0.2$  mm) that has been specially bonded to a 30.5 x 30.5 cm (12 x 12 in.) polycarbonate (Lexan<sup>®</sup>) plate. The plate has an opening cut into the center, exposing a 10 x 10 cm (3.9 x 3.9 in.) area of the bonded 11 x 11 cm (4.3 x 4.3 in.) lead foil. This plate can be customized by the user to fit the tracks of most blocking trays. The polycarbonate material is easily cut with a standard utility knife or shears. The combination lead foil and polycarbonate plate also helps to maintain the integrity of the lead foil and also makes it easier to handle and store the filter.

### Specifications

Part Number: 99-9432

**Polycarbonate Plate:** 30.5 x 30.5 cm (12 x 12 in.)

**Lead Foil:** 11 x 11 cm (4.3 x 4.3 in.), 1 mm thick