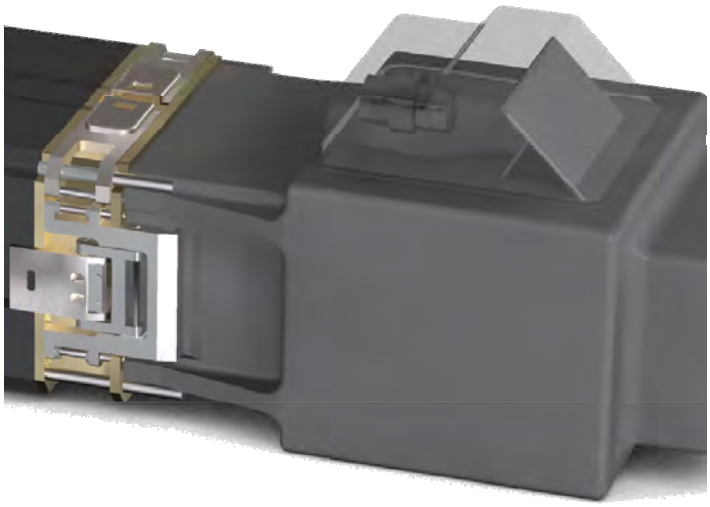
Lexitek, Inc.

Innovative Optical Solutions

Fast-Tracking Detector for Particle Therapy (*Prototype*)



Lexitek's patented[1] Fast Tracking Detector for Particle Therapy provides real-time monitoring of hadron beams for safety and dosimetry. The detector consists of a custom scintillator and a custom camera system integrated into a scanning treatment nozzle. The camera consists of a CMOS detector combined with powerful real-time electronics to record a moving region of interest that surrounds the beam. It computes and reports beam position, size, and shape at kHz rates and integrates a larger image that measures hadron flux over the entire treatment field.

PRELIMINARY SPECIFICATIONS/FEATURES

- Custom scintillator provides beam position, size, hadron flux
- Low scattering in the nozzle allows the beam spot size to be optimized
- Measures position and profile with a resolution of <1 mm and with a time resolution of <1 msec.
- Fast scintillator response enables rapid, real-time beam tracking
- Sensitivity of .002 nA/cm^2 for 1 ms, SNR = 1 (protons)
- Linearity range of 0.002-10 nA/cm^2 (protons)
- Scintillator is robust and inexpensive to replace

Related products: QA Detector for Particle Therapy

Please consult us with your custom requirements and interest in becoming a beta site

[1] U.S. Patent 7,515,681

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