

# InLight® Complete Dosimetry System Solution

microStar® Dosimetry Reader



The microStar reader is a compact, lightweight, portable reader that can be taken anywhere immediate dose results are required. Just as accurate and effective as LANDAUER's InLight Auto 200 and Auto 500 readers, it uses aluminum oxide ( $Al_2O_3$ ) detectors to measure radiation exposure and reads the measurement with our proprietary optically stimulated luminescence (OSL) technology.



The InLight Dosimetry System is an example of LANDAUER Fleximetry, the industry's most flexible dosimetry program. This flexibility lets you choose from the options below that best meet your organizational requirements.



Single point measurements for skin entrance dose:



**InLight® nanoDot™**

Dose equivalent for whole body measurements and special environmental dose option:



**InLight® Whole Body Basic**



**InLight® Whole Body**



**InLight® Environmental**

### Overview

microStar, the smallest InLight reader available, provides immediate and accurate radiation dose assessments for single point measurements (nanoDots) and reads the entire line of InLight dosimeters—whole body and environmental. Its unique portability allows readings onsite, in the field, or in the clinical setting—anywhere you need to protect employees or monitor your environment. Plus, the uncomplicated design and durable equipment help reduce costs in maintenance, training and power consumption.

The microStar quickly and efficiently reads InLight nanoDot, whole body or environmental dosimeters. Its software stores multiple calibrations, allowing the microStar to establish a variety of radiation environments for accurate analysis; and providing flexibility to incorporate correction factors based on the clinical environment. The transparent, non-linear calculations are designed to account for non-linear response of  $Al_2O_3$  at “high” doses (>300cGy) and allow the user to “see” how the dose is computed from the measurement. There are a variety of measurement units available (mrem, mrad and cGy), and the reports are customizable to download in XLS, PDF, XML or CSV formats.

### Features and benefits

- Portable—ideal for in-field use or in locations requiring immediate analysis, whether for emergency response activities or for patients in a clinical setting
- Appropriate for small laboratories (<10,000 participants; little or no automation)
- One dosimeter read-out at a time; fast, efficient throughput with read-out in 13 seconds
- Works with a laptop computer; can be networked with additional microStar readers
- Non-destructive readout allows for reanalysis
- No dosimeter preparation required
- No annealing required
- No heating parameters to maintain
- No gas required
- Effective replacement for older radiation measuring technologies (e.g., TLD)

### Technical specifications

<b>Operation:</b>	$Al_2O_3$ with OSL is linear from 10 $\mu$ Gy to >100 Gy
<b>Speed:</b>	Readout in 13 sec.
<b>Capacity:</b>	1 slide (1 dosimeter)
<b>Energy dependence:</b>	Within $\pm 10\%$ over diagnostic energy range; within $\pm 1\%$ for photons and electrons from 5 MeV–20 MeV
<b>LED array:</b>	36
<b>Size:</b>	4.3"Hx12.9"Wx9.1"D
<b>Power requirements:</b>	110–220V, 1.5 amps, 50–60 Hz
<b>Weight:</b>	17.7 lb.
<b>Bar code input:</b>	Keyboard; external bar code reader; file upload

## LANDAUER®

### Corporate Office

2 Science Road  
Glenwood, Illinois 60425  
800 323 8830  
www.landauer.com

4004.1/2010.LCP

©2011 LANDAUER, Inc.  
All rights reserved.

To minimize our environmental impact, this brochure was printed using renewable energy on papers containing fibers from environmentally appropriate, socially beneficial and economically viable forest resources.