

# Genesis/Genesis Ultra TLD Dosimeters



## The cool look in radiation monitoring

The Dosimetry Services Division offers its line of Genesis TLD dosimeters. The Genesis line offers improved performance and superior user factors.

Both the Genesis and Genesis Ultra TLDs respond accurately to beta, gamma, X-ray and neutron radiation. The response of each element is corrected by the application of its own unique element correction factor. Both TLDs allow for the reporting of deep, lens of eye and shallow doses.

Unlike other TLD products, the Genesis Ultra TLD has virtually no fading characteristics. Due to the increase in signal response a minimum reportable dose (MRD) as low as 1 mrem (0.01 mSv) is available, compared to the 10 mrem (0.10 mSv) MRD of other TLD products.

## APPLICATIONS

- Any occupational worker with potential exposure to gamma, X-ray, beta and/or neutron radiation.
- Nuclear medicine facilities, imaging centers, research diagnostic centers and all employees with potential exposure to gamma, X-ray and beta.
- Nuclear power plant workers, research laboratories, hospitals, universities and industrial applications.

## FEATURES

### Genesis TLD

- Wear periods from one week to one year
- Permanently bar-coded for user identification and tracking
- Whole-body, wrist and area monitoring configurations
- Provides thermal, intermediate and fast neutron dosimetry capability
- Improved label with larger fonts and wear locations
- Enhanced ergonomics with redesigned clip

### Genesis Ultra TLD

- Virtually no fade
- Lower MRD available on request
- Wear periods from one week to one year
- Permanently bar-coded for user identification and tracking
- Whole-body, wrist and area monitoring configurations
- Provides thermal, intermediate and fast neutron dosimetry capability
- Improved label with larger fonts and wear locations
- Enhanced ergonomics with redesigned clip

## TECHNICAL SPECIFICATION

<b>Badge Name</b>	Genesis TLD Dosimeter	Genesis Ultra TLD Dosimeter
<b>Badge Type</b>	16 DB= TLD 760 15 DB= TLD 760 with CR39 25 DB= TLD 760 with <sup>115</sup> In* and CR39 26 DB= TLD 760 with <sup>115</sup> In*	36= TLD MCP 35= TLD MCP with CR39
<b>Description</b>	4 element Harshaw TLD ( <sup>3</sup> LiF:Mg, Ti [TLD700] and <sup>6</sup> LiF:Mg, Ti [TLD600])	4 element Harshaw TLD ( <sup>3</sup> LiF:Mg, Cu, P [TLD700H] and <sup>6</sup> LiF:Mg, Cu, P [TLD600H])
<b>Manufacturer</b>	TLD: Thermo Electron RMP CR39: PPG	TLD: Thermo Electron RMP CR39: PPG
<b>Accreditations/Approvals/Licenses</b>	NVLAP (Code: 100555-0) HSE (United Kingdom)	NVLAP (Code: 100555-0) HSE (United Kingdom) DoELAP***
<b>Holder Type</b>	Genesis	Genesis
<b>Wear Location</b>	Area, equipment, collar, lower left extremity, lower-right extremity, non-personal use, non-specific extremity, upper-left extremity, unknown, upper-right extremity, whole body	Area, equipment, collar, lower left extremity, lower-right extremity, non-personal use, non-specific extremity, upper-left extremity, unknown, upper-right extremity, whole body
<b>Minimum Reportable Dose</b>	10 mrem (0.10 mSv)	1 mrem (0.01 mSv)
<b>Useful Dose Range</b>	10 mrem - 1000 rad (0.10 mSv - 10 Gy)	1 mrem - 1000 rad (0.01 mSv - 10 Gy)
<b>Energy Response</b>	Beta (MAX) 0.766 MeV - 5 MeV Photon 5 keV - 6 MeV Neutron (TLD): Thermal - 6 MeV Neutron (CR39): 200 keV - 6 MeV**	Beta (MAX) 0.766 MeV - 5 MeV Photon 5 keV - 6 MeV Neutron (TLD): Thermal - 6 MeV Neutron (CR39): 200 keV - 6 MeV **

\*Not accredited for personnel monitoring

\*\*Neutron energies up to 20 MeV with CR39 and special calibration.

\*\*\*DoELAP accreditation only applies to the Genesis Ultra with CR39

