

Harshaw 8800 PLUS Specifications

Range	Seven decades
Warm-up time	20 minutes
Photonics Linearity	Less than 1% deviation.
Stability	Better than 1.0 µGy, based on one standard deviation of ten consecutive measurements
Repeatability	Less than 2% variation (based on 1 standard deviation of 10 sequential measurements at 1 mGy (100mrad) ¹³⁷ Cs)
Readout time (based on standard LiF: Mg, Ti)	TLD cards: 140 per hour EXT-RAD Chipstrates: 280 per hour DXT-RAD Ringlets: 560 per hour
Card Identification	Codabar, Interlaced 2 of 5, Code 39 Code 128 alphanumeric
Electrical	110 or 120 VAC ±10%, 60 Hz. 6 amp, 220 or 240 VAC ±10%, 50Hz. 3 amp
Operating Temp range	15° C to 40° C
Storage Temp range	-10° C to 60° C
Shock resistance	Will withstand a 1 cm drop onto a concrete surface
Humidity tolerance	-10° C to 60° C, and RH up to 90% (not condensing)
Light exposure	Tested to withstand a minimum of 1,000 W/m²
Weight	180kg (400 pound)
Height x Width x Depth	105 cm (41.25 in.), 78 cm (30.5 in.), 68 cm (25.5 in.)

Accessories and Options

- Built-in Internal ⁹⁰Sr/Y Irradiator (0.5 mCi/18.5 MBq)
- Model 8810 high capacity TLD card irradiator
- Built-in triple barcode scanner for use with EXT-RAD extremity dosimeters
- Built-in camera barcode scanner for use with DXT-RAD extremity dosimeters.
- Model 8800 Plus Basic and Enhanced Spare Parts Kit
- Model 8800 Plus Neutral Density Filter Lens Drawer Assembly (10:1, 100:1, 1000:1)
- Load & Unload Card Cartridge for Model 8800 Plus
- Nitrogen Gas Flow Meter/Regulator
- Nitrogen Generator with Integrated Compressor
- WinREMS-SQL Version
- 8800 Plus Card Sorting Option



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Harshaw 8800 PLUS Ordering Information

Part Number	Description
8800PLUS	MODEL 8800 PLUS TLD CARD READER INSTRUMENT
8800PLUSEXT	MODEL 8800 PLUS TLD CARD READER INSTRUMENT with EXTRAD Option.
8800PLUSDXT	MODEL 8800 PLUS TLD CARD READER INSTRUMENT with DXTRAD Option.

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What Readers
aspire to be

Thermo Scientific Harshaw 8800 PLUS TLD Reader

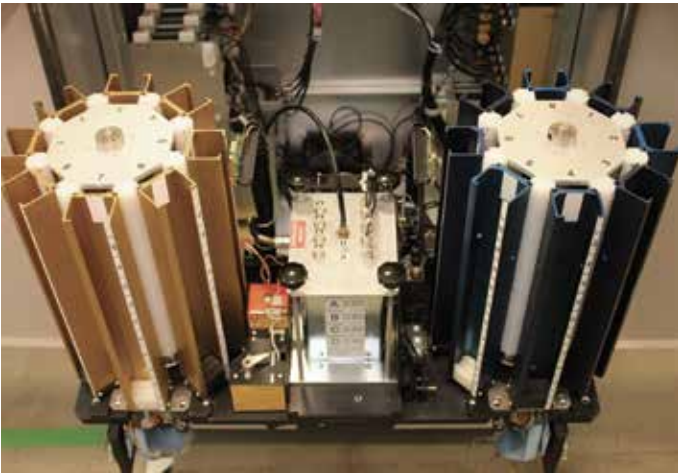


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Thermo Scientific Harshaw 8800 PLUS TLD Reader

The Thermo Scientific™ Harshaw™ 8800 Plus TLD Reader is the ideal solution for dosimetry services and independent dosimetry labs that require **maximum processing efficiency**. Delivering the **highest capacity** and the **fastest reading capability**, the versatile Harshaw 8800 Plus can process whole body, environmental and extremity dosimeters for gamma, beta and neutron dose measurements, enabling the flexibility necessary to **increase productivity** and **decrease operating costs**.

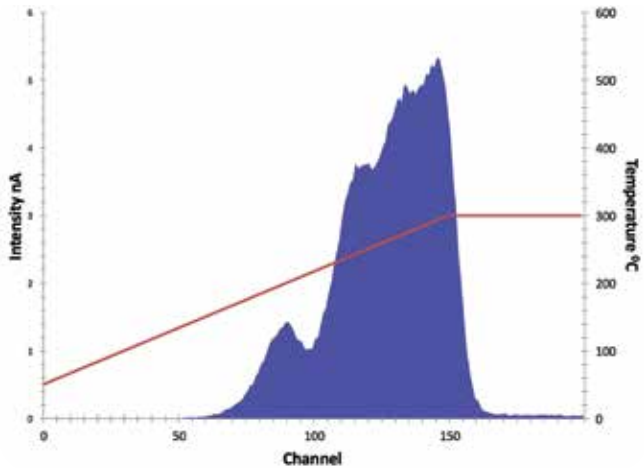
Equipped with four heating/data acquisition channels and a set of four cooled photo multiplier tubes, the Harshaw 8800 Plus can simultaneously process four TL elements, maximizing processing speed. This high efficiency reader can automatically process 1400 TLD cards per processing run, minimizing manual interaction and enabling overnight processing runs which can increase total throughput of the dosimetry lab. With an optional internal irradiator, the Harshaw 8800 PLUS can perform automated calibrations, reducing set up time and further improving process efficiency.



Simple menu driven maintenance routines and features such as small clean out drawers for inspecting and cleaning of the photo multiplier tubes, easily removable covers to access internal parts without disconnection, and a slide-mounted transport mechanism to access moving parts, simplify maintenance to increase reader uptime. The Harshaw 8800Plus has the highest capacity and lowest MTBF in the market today.

Improved Read Quality

The unique glow curve and temperature heating profile provided by Harshaw TLD readers provides verification of read quality. The glow curve is independent of potential inaccuracies induced by environmental conditions in reading, storage and handling to provide trustworthy recordkeeping. In case of errors in reading or a faulty/damaged dosimeter, glow curve analysis could help determine validity of the reading and drive appropriate corrective or preventative actions.



The Harshaw 8800 Plus offers features to provide **complete confidence in quality management system** and data integrity. Utilizing a precision controlled non-contact nitrogen gas heating system, the Harshaw 8800 Plus **maximizes card longevity** and produces well defined glow curves for confirmation of read quality. Unlike competing technologies which calibrate dosimeters in batches, TLD dosimeters are calibrated individually improving confidence in measurement accuracy.

Peace of Mind

- Built in ISO 9001 certified factories for over 40 years
- Used worldwide in IEC, NVLAP, DOELAP, ANSI accredited facilities
- Cards guaranteed up to 500 reads
- Low maintenance requirements
- Long term factory support extends operational life and reduces total cost of ownership



An integrated barcode reader scans cards during processing, time stamping each record, maintaining an unbroken chain of custody and ensuring complete dosimeter data tracking.

Applications

Multi-element card dosimeters or individually bar-coded extremity dosimeters are best suited for:

Personnel and Environmental Dosimetry

- Whole body dose monitoring
- Environmental dose monitoring
- Extremity dose monitoring
- Fast and Thermal Neutron dose monitoring

Multi- Element Card Dosimeters for whole body and environmental monitoring

- Harshaw TLD materials have a linear useful range from 1μGy to 20 Gy, with neutron monitoring capability. Lithium Fluoride based materials are **near tissue equivalent** and **not sensitive to light**.
- Teflon capsulated TL material is mounted in an aluminum card for extended durability
- Variety of tamper-resistant holders, designed with optimized filtration for energy discrimination are available with attachment to lapel and/or belt
- Uniquely bar coded for chain of custody, and available in different colors as an aid to recognition and categorization of issuance or wear periods.



Extremity Monitoring

- Sealed disposable finger rings, finger cots, wrist bands
- Sterilizable dosimeters for maintaining hygienic conditions
- Carrier cards for reading multiple extremity dosimeters
- Optional built-in extremity barcode readers (EXT or DXT) to automatically associate the TL response from the individually-barcodeed extremity dosimeters



Optional ⁹⁰Sr/Y Internal Irradiator – Total control of system calibration

- Optional ⁹⁰Sr/Y Internal Irradiator allows automated system calibration, reducing time and labor costs
- No need for an expensive and large ¹³⁷Cs irradiator
- Provides you complete control over your dosimetry system allowing you to save time and money by not relying on a manufacturer for calibration dosimeters.

