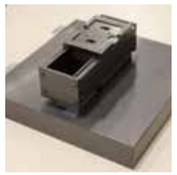
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Harshaw 5500 Ordering Information

Part Number	Description
5500READERMI	MODEL 5500 TLD READER INSTRUMENT (Micro pick version)
5500READERMA	MODEL 5500 TLD READER INSTRUMENT (Macro pick version)



Accessories and Options

Additional carrier disks
Neutral Density Filter Assembly (10:1, 100:1, 316:1,1000:1)
Nitrogen Gas Flow Meter/Regulator,
Nitrogen Generator with Integrated Compressor
Model 2210 Table Top ^{90}Sr/Y Irradiator with 0.5 mCi/18.5 MBq Source
Programmable Annealing Furnace
Stainless Steel Annealing Tray with Cover
Dosimeter Storage/Transfer Case (Plexiglas) with Cover
Aluminum Quench Block
Mechanical Tweezers, Stainless Steel - Teflon Tipped
Vacuum Tweezers - Includes vacuum tweezers, pump, tubing, filter, assorted metal and rubber tips

Harshaw 5500 Specifications

Range	Six decades
Warm-up time	30 minutes
Photronics Linearity	Less than 1% deviation.
Stability	Better than 1.0 µGy, based on one standard deviation of ten consecutive measurements
Repeatibility	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)	50 – 100 dosimeters/hr
Electrical	110 or 120 VAC ±10%, 60 Hz. 220 or 240 VAC ±10%, 50Hz.
Operating Temp range	15˚ C to 40˚ C
Storage Temp range	-10˚ C to 60˚ C
Shock resistance	Will withstand a 20mm drop onto a concrete surface
Humidity tolerance	Functions within specification after 24-hour exposure to 95% humidity and subsequent 6-hour recovery with use of the nitrogen supply
Light exposure	Tested to withstand a minimum of 1,000 W/m^2
Weight	40kg (90 pound))
Height x Width x Depth	38 cm (15 inches), 46 cm (18 inches), 48 cm (19 inches)



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Throughput realized

Thermo Scientific Harshaw 5500 TLD Reader



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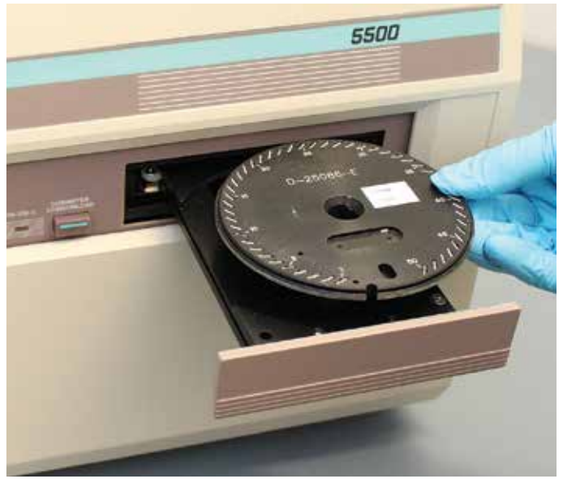
Thermo Scientific Harshaw 5500 TLD Reader

The Thermo Scientific™ Harshaw™ 5500 TLD Reader is an automated, high capacity hot-gas TLD reader designed for processing un-mounted dosimeters. Ideal for **higher volume applications** in health physics, material research, and industrial applications, the Harshaw 5500 can automatically process up to 50 dosimeters per reading session, to efficiently deliver **accurate results** with **reduced manpower**.

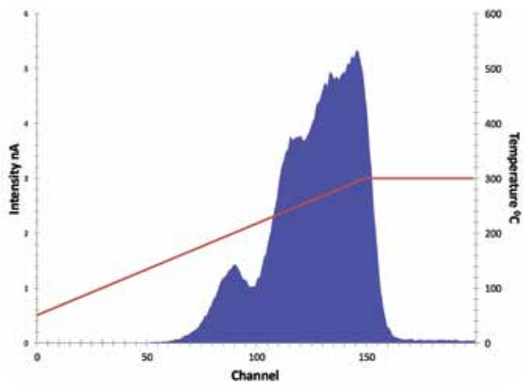
The Harshaw 5500 uses a programmable hot-gas heating system and a cooled photomultiplier tube to measure the thermoluminescent output. The automated operation improves productivity by processing 50 dosimeters in one processing run without any intervention needed by technician.

Peace of Mind

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



The Harshaw 5500 is offered with a variety of carrier disks, designed to handle a wide range of material, in a number of different formats (ribbons, chips, rods, and micro-cubes) and sizes, allowing you to choose the approach that best suits your application.



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.

Applications

Individual TLD elements made from the highest quality tissue equivalent material available in the form of ribbons, chips, disks, rods, and micro cubes suitable for:



Research Dosimetry

- Total body irradiation dose verification
- Skin irradiation dose verification
- Radiation measurement verification
- Dose planning studies
- Stereotactic beam output factor measurement



Industrial Dosimetry

- Radiation hardening studies
- Environmental studies



Materials

Harshaw TLD materials have a linear useful range from 1µGy to 20 Gy. Lithium Fluoride based materials are **near tissue equivalent** and **not light sensitive** to provide flexibility in handling the dosimeters and confidence in analyzing results. Calcium Fluoride materials are available for increased dose range.

Harshaw 5500 is available in two different versions to accommodate different sizes and forms of material. Refer to the below table for material compatibility and carrier disk ordering information.

Material Shape	Micro Pick	Macro Pick	Applicable Dosimeter Carrier Disk
Rod – 1 mm dia. x 3 mm	X		T25356
Rod – 1 mm dia. x 6 mm	X	X	T25086
Square Rod – 1 mm x 1 mm x 6 mm	X	X	
Chip – 3.2 mm x 3.2 mm x 0.38 mm (1/8” x 1/8” x 0.015”)	X	X	T25085
Chip – 3.2 mm x 3.2 mm x 0.89 mm (1/8” x 1/8” x 0.035”)	X	X	
Cube – 1 mm x 1 mm x 1 mm	X		24854
Disk – 3.0 mm dia. x 0.25 mm (0.010”)	X	X	26155
Disk – 3.0 mm dia. x 0.38 mm (0.015”)	X	X	
Disk – 3.6 mm dia. x 0.25 mm (0.010”)	X	X	26467
Disk – 3.6 mm dia. x 0.38 mm (0.015”)	X	X	
Disk – 4.5 mm dia. x 0.6 mm (0.024”)		X	T25387
Disk – 4.5 mm dia. x 0.89 mm (0.035”)		X	
Disk – 5.0 mm dia. x 0.89 mm (0.035”)		X	25647

Note: Macro pick has O.D. of 0.065” (1.65 mm)
Micro pick has O.D. of 0.032” (0.81 mm)