

EXRADIN W2 SCINTILLATOR



THE OPTIMAL WATER EQUIVALENT DETECTOR FOR SMALL FIELD DOSIMETRY

Measurement without perturbation



● SIGNIFICANT CLINICAL ADVANTAGES

Unlike other detector types, the water equivalent W2 scintillator does not perturb small field dose distributions when it is placed in the beam, so you can measure small fields with greater accuracy.

● HIGH DEFINITION

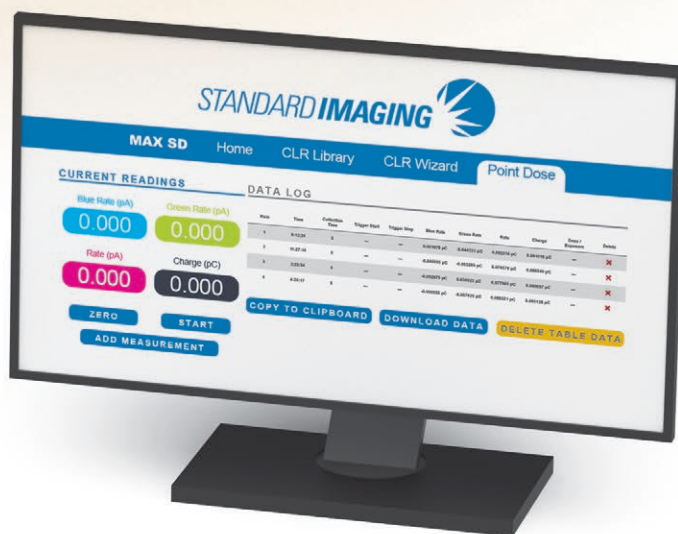
The W2 system features a fiber with a 1 mm x 1 mm scintillator, improving measurement resolution for the smallest field characterization measurements.

● MULTIPLE DETECTORS INCLUDED

Easily switch out fibers to meet your measurement needs. Use a 1x1 mm detector when resolution is the primary need and a 1x3 mm detector when higher signal strength is required.

● BUILT IN CORRECTIONS

Use the W2, with the MAX SD optical detection and signal processing unit, to perform water scanning characterization and point dose measurements directly. Access the MAX SD through a web page interface on desktop or mobile.





Features and Benefits

- AAPM/IAEA TRS 483 states the scintillator is the only detector with a kQ of 1.000, making the W2 the ideal SRS detector
- All corrections are built in
- Water equivalent
- Inherently waterproof
- Can be used for both water scanning and point dosimetry
- User replaceable fiber, includes both 1x1 mm and 1x3 mm
- No dose rate, temperature, or energy dependencies
- The W2 system features Čerenkov corrected measurement signals that can be converted to a proportional analog output, which can be read by any electrometer. This allows the W2 system to be connected to a water phantom system for scanning.



The **Exradin W2 Scintillator** is the ideal small field measurement tool overcoming dependencies present in conventional detectors

EXRADIN W2 SCINTILLATOR (REF 72435 [1X3], 72436 [1X1]) SPECIFICATIONS

EXRADIN W2 SCINTILLATOR

COLLECTING VOLUME

Scintillating fiber	W2-1x1 W2-1x3	1.0 mm diameter x 1.0 mm long 1.0 mm diameter x 3.0 mm long
Scintillator housing		2.8 mm diameter x 42 mm long
Optical fiber		1.0 mm diameter core x 2.2 diameter jacket x 4 m long

MATERIALS

Scintillating fiber	Polystyrene with ABS plastic enclosure and polyimide stem
Optical fiber	Acrylic (PMMA) with Polyethylene jacket
Optical fiber minimum bend radius	6 cm
Scintillating fiber physical density	1.05 g/cm ³
Radiation degradation	~2% / kGy

OPERATING PARAMETERS

Pressure	650 to 770 mm Hg
Temperature	15 to 30° C
Relative humidity	20 to 80%

PRODUCT STANDARDS Designed to meet IEC60601-1, CE 0413

MAX SD

MAX SD size	21 x 16 x 9 cm
MAX SD Weight	3.6 kg (7.9 lbs)

ELECTROMETER INTERFACE

Input	Scintillating fiber optical (SMA-905)
Output	Analog current (Two lug triaxial BNC)

POINT DOSE MEASUREMENT MODE - DISPLAY RANGE

Rate	-4.8pA to 1.2nA, 1fA resolution (corrected output)
Charge	0.000pC to ± 999.9µC, 1fC resolution

SCANNING MODE - DISPLAY RANGE

Rate	-4.8pA to 100pA, 1fA resolution (corrected output)
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CHARGE COLLECTIONS

Trigger	Automatic start, stop, reset based on user defined thresholds (0.01 to 100pA).
Timed	User set range (0.5 to 9999.9 seconds, 0.1 second increments)
Continuous	Unlimited duration with manual stop.

PATENT US Patent Number 8183534

Specifications subject to change without notice.



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