

DOSIMETRYPRO[®] Advantage (RED)

Film Digitizer for EBT Film Dosimetry, QA and IMRT

The VIDAR Advantage (Red)

VIDAR Systems Corporation — the recognized leader in film digitizing technology — offers the VIDAR DosimetryPRO[®] Advantage (Red), the only medical film digitizer developed in cooperation with International Specialty Products Corporation for use with GAFCHROMIC[®] EBT film.

The fast-growing use of radiochromic film in Film Dosimetry, Quality Assurance and IMRT has increased the need for an accurate medical-grade device that utilizes red-spectrum light. Radiation physicists and oncologists need consistent treatment beams used for cancer treatment. With the industry moving to eliminate film chemistry from modern cancer centers, VIDAR's state-of-the-art DosimetryPRO Advantage (Red) was designed to meet the exacting needs for using radiochromic film in beam analysis and related applications.

DosimetryPRO Advantage (Red) Provides Uncommon Dose Accuracy

Advanced radiation therapy treatments use the penumbral (beam edge) region, instead of just the flat part of the beam, to better treat tumor regions and to spare adjacent tissues. When used with GAFCHROMIC EBT, the VIDAR DosimetryPRO Advantage (Red) with 65,536 shades of gray provides significantly more information in the penumbral regions. This means that dose levels to adjacent tissues can be more accurately measured. It also means that leaf leakage in MLC (Multi-Leaf Collimator) systems is easier to measure. Greater dose accuracy for complex fields used in IMRT (Intensity Modulation Radiation Therapy) and Dynamic Therapies results in greater confidence in the delivered dose. All of which translates to better outcomes for your patients.

Technology Advantage and Innovation

The DosimetryPRO Advantage (Red) film digitizer delivers outstanding geometric accuracy, consistency and reliability, making it the ideal choice for radiation physicists. Incorporating the same advanced technology that is a hallmark of VIDAR's family of film digitizers, the DosimetryPRO Advantage (Red) features VIDAR's proprietary High Definition CCD (HD-CCD[®]) technology, ensuring clinically proven quality and unmatched value. VIDAR has enhanced its ADC (Automatic Digitizer Calibration) which prompts the film digitizer to calibrate automatically before every film digitized. It also guarantees maximum consistency in gray scale values for dose measurement and IMRT analysis from one digitized film to another — first time, every time. The system offers ease-of-use and rugged, reliable performance, allowing clinicians to focus on the patient rather than on the digitizing equipment. VIDAR has filed three patents related to the DosimetryPRO Advantage (Red) technology. Each of these patents applies to critical



product attributes such as image quality, reliability, and system throughput. The DosimetryPRO Advantage (Red) used in combination with GAFCHROMIC EBT Dosimetry film form a high quality dosimetry measurement system ideal for applications in radiotherapy.

Proven Consistency, Reliability, & Outstanding Quality

Unlike other manufacturers that take an evolutionary approach, VIDAR has created a revolutionary design for the DosimetryPRO Advantage (Red) in the important areas of image quality, reproducibility, and productivity. The DosimetryPRO Advantage (Red) delivers an excellent optical density range that results in incomparable diagnostic quality and value.

The DosimetryPRO Advantage (Red) system features 65,536 shades of gray with an optical density range of 0.00-4.00, and the geometric accuracy is better than 1% or 2 pixels, whichever is greater, in both axes. Meeting the highest image quality standards in the industry makes the DosimetryPRO Advantage (Red) ideal for the most demanding applications, including radiation film dosimetry, quality assurance, and IMRT.

DOSIMETRY^{PRO}[®]

Advantage (RED)

Nominal Resolution	Pixels (14"x17" film)	Spot Size (μm)	DPI	Line pairs Per mm	Digitizing Speed
1K x 1.25K	997 x 1211	356	71.25	1.4	10 Seconds
2K x 5K*	1995 x 2442	178	142.5	28	20 Seconds
4K x 5K	3990 x 4845	89	285	5.6	40 Seconds

*ACR Standard for Teleradiology Guidelines [Revision 35 (1998)] recommends 2.5 line pairs/mm minimum

Clinical Optical Density Range	.00 to 4.0
Bit Depth	32-bit mapped to 16-bit (65,536), 12-bit (4,096), or 8-bit (255) Grayscale Output
MTBF	\geq 50,000 hours
Film Sizes	Width: 8" to 14" (20 cm to 35.6 cm) Length: 8" to 17" (20 cm to 43.2 cm) Thickness: 0.006" to 0.008
Auto Film Feeder	Standard 25-film capacity (mixed sized – no presorting necessary) "Light Box" loading: head-up, normal reading, left justified Film sizes up to 14" x 17" (35.6 cm x 43.2 cm)
Translation Tables	Standard look-up tables: linear, log, square root and power tables
Geometric Accuracy	Better than 1% or 2 pixels, whichever is greater, in both axes
Scan Rate	200 lines/second
Hardware Interface	USB 2.0
Software	Windows [®] scanning modules and software development tools available
Power Requirements	Voltage: 85–264 Vac Frequency: 47–63 Hz Power: \leq 100 Watts
Operating Environment	50° to 95° F (10° to 35° C), 20% to 85% relative humidity, non-condensing
Storage Environment	0° to 140° F (-18° to 60° C), 20% to 85% relative humidity, non-condensing
Illuminator	Red LED Illuminator; >500,000 scans
Detector	Solid-state, next-generation High Definition CCD (HD-CCD [®])
Dimensions	With Feeder & Exit Tray: 19" W x 23" D x 29.25" H (483mm x 584mm x 743 mm) Without Feeder & Exit Tray: 19" W x 14.25" D x 16.5" H (483mm x 362mm x 419mm) Shipping: 24" W x 29" L x 24" H (610mm x 737mm x 610mm)
Weight	45 lbs. (21 kg); shipping weight: 60 lbs. (27 kg)

Specifications are subject to change without notice.

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