

MedeX Portal

High performance screens for radiotherapy imaging

MedeX Portal is the screen of choice when system integrators and OEMs need to produce high quality images in a highly irradiative environment.

Applied Scintillation Technologies (AST) has substantial experience in addressing the complex imaging and detection requirements of the medical imaging market.



Our work has culminated in the production of a unique X-ray screen product with key benefits to the market place:

- enhanced image quality with a signal to noise ratio up to 50 times greater than competitive screens due to high quantum efficiency and good resolution
- considerable cost savings over a Caesium Iodide based system
- ability to acquire images in rapid succession with no image lag
- screen has a long-lifetime owing to unique non-burn characteristics
- largest area commercially available X-ray screens for medical imaging (up to 20" x 20")

At high energies X-rays interact with matter in a complex combination of processes. Taking advantage of this, AST mounts the MedeX Portal screen on a metal substrate, which will produce high-energy photoelectrons, which helps to maximise the efficiency of the imaging process.

Technical data

Comparative performance data showing benefits of optimisation in AST's screen

	MedeX Portal	Kodak Lanex
phosphor	Gd ₂ O ₂ S:Tb	Gd ₂ O ₂ S:Tb
particle size	>20um median	7 – 10um
coating weight	up to 400mg/cm ²	137mg/cm ²
sizes	up to 20" x 20"	<17" x 17"
reflector	plastic	plastic
MTF @ 1 lp/mm	0.20	0.20
relative signal:noise	100	16
relative light out	100	41
relative absorption	100	34

Data for equivalent screens mounted on metal substrate – X-ray energy 6MeV

Availability

A free sample screen 75mm x 75mm is available on request. MedeX Portal screens come in standard sizes: 30cm x 40cm, 14" x 17" and 17" x 17. Custom sizes are available so please call a member of our sales team for further details. All screen sizes can be optionally mounted to a variety of backing plates.

Should our standard product not meet your requirements, AST has the knowledge and expertise based on years of experience to partner you in the development of custom products for X-ray imaging in the medical market.

