

scintacor

THE CENTRE OF SCINTILLATION

for NDT

Advanced scintillator
solutions for X-ray and
neutron imaging



custom scintillation at the core of your NDT system

High resolution and customisable size and shape profiles are key advantages of using a Scintacor customised scintillation solution.

Using our established phosphor and caesium iodide technologies we have developed high performance products for use in non-destructive testing (NDT) applications. These products are designed for integration into X-ray imaging and neutron detection systems.

Our flexible manufacturing capabilities allow us to customise our products to meet the high performance demands of the NDT market. The resulting products allow you to choose the right level of performance that best suits your requirements and application.

leading the market

Scintacor has a long and established history in the non-destructive testing market. We have been responsible for developing the largest X-ray screens for waste drum inspection as well as the first green emitting neutron imaging screens.

Our experience and expertise in the design and manufacture of high performance X-ray and neutron detection screens has established relationships with global system integrators, developing a range of products that are used globally across various NDT applications.

custom products

We continue to lead the market applying our established phosphor technologies to create high performance X-ray and neutron screens that are used extensively in NDT applications around the world.

Our screens are incorporated into imaging systems for industrial NDT, health and safety, quality control and nuclear decommissioning projects.

intelligent technology

As an established authority in the use of phosphor and caesium iodide technologies, we have developed a number of manufacturing processes for superior sensitivity.

Our advanced non-burn formulations maintain high performance imaging over longer lifetimes compared to competitive screens.

Together with our flexible and large area manufacturing capabilities, we provide you with custom solutions, at consistent quality, in small and large volumes.

*flexibility to deliver clever
and custom scintillation
components*

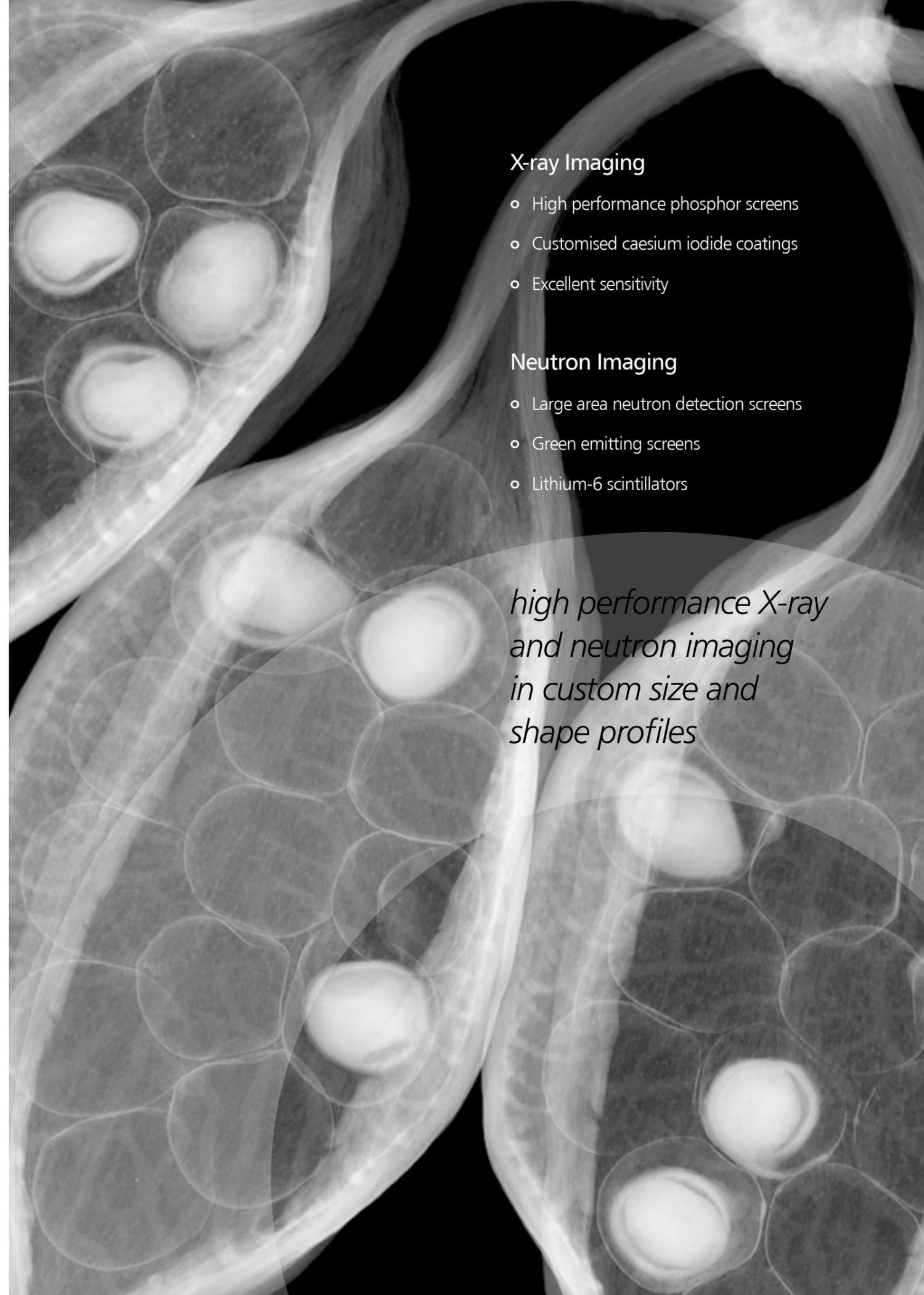
X-ray Imaging

- High performance phosphor screens
- Customised caesium iodide coatings
- Excellent sensitivity

Neutron Imaging

- Large area neutron detection screens
- Green emitting screens
- Lithium-6 scintillators

*high performance X-ray
and neutron imaging
in custom size and
shape profiles*



clever scintillation for NDT applications

Neutron Screens

Lithium-6 based neutron screens

- Good gamma discrimination
- Spectrally matched to CCD/CMOS devices for excellent imaging performance
- High sensitivity

Neutron radiography is an advanced technique for NDT of materials and is an exact analogue of X-ray radiography.

Our specialist neutron detection products offer:

a high performance, spectrally matched, sensitive screen, used for neutron imaging

Manufactured in sheet form, which can be tiled to produce large area detectors, our neutron screens are primarily used in border control applications but are now increasingly being used in imaging systems.

Neutron imaging is used routinely to highlight light materials such as hydrogenous substances with high contrast in engine parts or in hydrogen storing tanks and fuel cells. Neutron imaging also allows the visualisation of the movement of fluids, such as oil or water, in large metal objects.

Neutron imaging has attracted the attention of companies in the automotive and aeronautical industries, which regularly visit neutron imaging facilities to carry out quality control tests or studies on engines, gear boxes or other metal parts.

Neutron imaging is non-destructive in nature, which also makes it an attractive method to analyse archaeological artefacts or pieces of art.

X-ray Screens

For use in industrial NDT, health and safety and quality control

- Non-destructive testing applications
- Customisable size & shape profiles
- High resolution
- High light output

The excellent sensitivity of our phosphor based screens allows for reliable, high resolution X-ray imaging.

Customisable to your requirements, our range of screens offer:

a high performance, reliable product for X-ray imaging in non-destructive testing applications

Constructed using a phosphor based scintillator mounted onto a range of substrates, providing an optimised imaging solution for many different products within the NDT spectrum.

Our technology provides significant improvements in image resolution over alternative technologies, with unique non-burn properties providing a longer screen life with superior resolution and light output.

Fully customisable size and shape profiles allow us to design and manufacture each screen to suit your exact application and operational demands.

CsI X-ray Scintillators

Caesium iodide coated fibre optic plates

- High resolution imaging
- Excellent uniformity
- Dynamic image capture
- Excellent spectral match to CCD/CMOS devices

Thallium doped caesium iodide (CsI:Tl) is grown in a columnar 'needle-like' structure which provides excellent resolution, through reduced scattering, as each column of CsI acts as a light pipe channelling the visible light through the fibres to the CMOS/CCD sensor below.

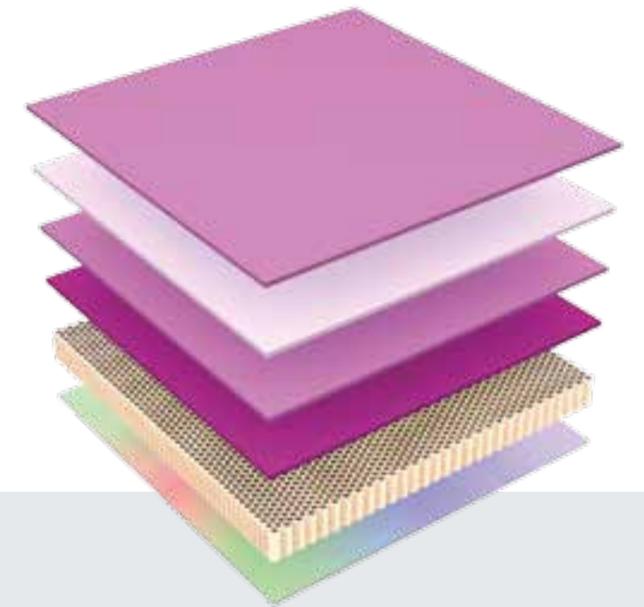
Our CsI X-ray scintillators provide:

high resolution and uniformity for X-ray imaging

The excellent sensitivity of our caesium iodide coated fibre optic plates enable high resolution X-ray imaging, optimised for dynamic applications.

Suitable for use in computed tomography and coupled into flat panel imagers allowing smaller defects to be identified.

Our scintillators are fully customisable for size and shape profiles, with a range of coating thicknesses and optional absorber/reflector layers available.



efficient, tailored and cost effective non-destructive testing solutions

X-ray Imaging Applications

High speed in-line X-ray inspection of components and materials to identify foreign objects or faults is now commonplace in many industries including food, pharmaceuticals, medical, waste, aerospace and automotive. It is certainly a key requisite in the food industry to ensure no foreign objects, bones or packaging elements are shipped to consumers.

The ability to use fast decay phosphors custom cut for bonding to line scan arrays makes Scintacor the ideal partner for you in-line monitoring requirements.

Computed tomography of intricate parts makes our CsI scintillators the material of choice. Marrying an X-ray blocking fibre optic component to our low lag CsI scintillators allows for both static as well dynamic high resolution imaging to be performed. This technique is commonly used in the inspection of critical structures such as automotive and aeronautical welds and components.

Multilayer PCB inspection in the electronic industry is a key quality assurance technique allowing dry solder joints or misplaced components to be readily identified. Our non-burn X-ray and CsI scintillators provide reliable imaging for such applications.

Our expertise in selecting the most appropriate material for your application, flexibility of manufacturing and supply, and our ability to give you a fully customised product ensure that we are your partner of choice for NDT screens and scintillators.

customised excellence at the core of your system

Customer Support

Your scintillation partner

- Continued product development
- Dedicated technology specialists
- Highly knowledgeable sales team
- Quality Assurance systems
- Customer defined delivery schedules

Custom Components

Designed and manufactured for you

- Designed to meet your requirements
- Dedicated development programme
- Product development process including prototyping and design reviews
- Quality Assurance guaranteed



Scintacor's flexible production capabilities and exemplary customer service allow for a collaborative approach to the design, manufacture and delivery of bespoke scintillation solutions.

We believe that ongoing collaboration allows us to adapt and improve our product offering in line with customers requirements. We are committed to continued product improvement and further understanding of our customers future, as well as current requirements.

As a BS EN ISO 9001:2008 accredited company our quality procedures allow for full product traceability. Our commitment to quality has led to a high level of confidence among our customer base in the integrity of our products.

Scintacor has the knowledge and expertise, based on years of experience, to partner you in the development of custom products using phosphor technology.

Resolution, sensitivity, and speed of response, are a few of the parameters that can be influenced in the production of a customised product that more clearly relates to your customers' needs.

Our experience with X-ray technologies along with our flexible manufacturing processes will provide product differentiation and a unique product positioning.

Talk to our expert team to see how together we can deliver clever scintillation components customised for your needs.

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Company Overview

Scintacor (the new name for Applied Scintillation Technologies) **is a world leader in phosphor and scintillation technology. Our products allow the conversion of many different radiations into light for imaging and detection.**

Our extensive caesium iodide production facilities are backed up by full in house testing and characterisation laboratories; all housed within our clean rooms.

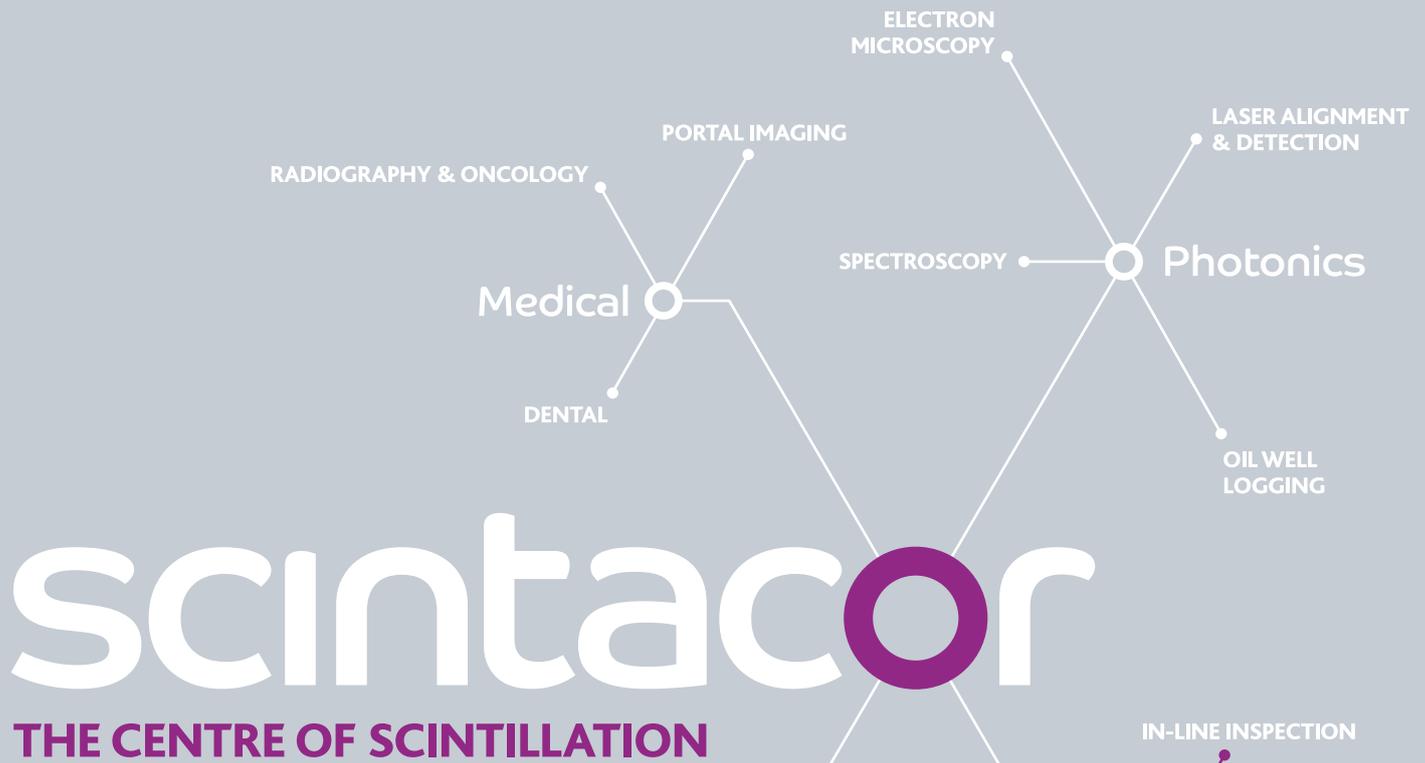
A comprehensive product range provides the interface for the detection of neutrons, alpha and beta particles, gamma rays, electrons, ions, X-rays, and UV/Visible and infra-red radiation. The diverse range of applications for these are listed opposite.

In addition to our standard product range, we are always delighted to discuss the development and manufacture of customised scintillation products for specific applications.

We also offer a range of complete products, patented infra-red digital cameras and adaptive optics, and laser alignment devices.

Continuing to build upon our 80 years of innovative product development and technological advances, Scintacor is committed to delivering flexible and timely customer-focused solutions to meet the future requirements of our key markets.

- Dental X-ray Imaging
- Radiography and Oncology
- Portal Imaging
- Industrial NDT
- In-line Inspection
- Health and Safety
- Nuclear Decommissioning
- Mail, Parcel and Cargo Inspection
- Baggage Check
- Radiation Portal Monitoring
- Spectroscopy and Electron Microscopy
- Laser Alignment and Detection
- Oil Well Logging
- Space Exploration



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