

# scintacor

THE CENTRE OF SCINTILLATION

## for Security

Technology for high resolution  
X-ray imaging and high performance  
neutron detection



# custom scintillation products at the core of your security system

**High resolution and sensitivity are key advantages of using a Scintacor customised scintillation solution.**

Using our established phosphor technology we have developed a number of products for the security market. These products are designed for integration into X-ray imaging and neutron detection systems.

We manufacture scintillators for mail, parcel, baggage and cargo inspection, as well as for use in radiation detectors and monitors. Our flexible manufacturing capabilities allow us to customise our products to meet the high performance demands of your market. The resulting products allow you to choose the right level of performance that best suits your requirements and application.

## **securing the market**

With the continuing increase in illegal and terrorist activities, integrated security is now accepted as being essential for the smooth running of public and commercial facilities.

A high level of security is now routinely observed at air and sea ports, prisons, embassies, banks and military locations.

Scintacor has a long established history in the design and manufacture of high performance X-ray and neutron detection screens. With our established relationships with global system integrators, we have developed a range of products that are used extensively in security applications around the world.

## **custom products**

Our established X-ray and neutron detection technologies can be tailored to meet specific requirements for emission spectra, decay time and radiation absorption characteristics, as well as physical dimensions, to provide customised high performance products.

We continue to be involved in innovative programmes and work on new scintillators to provide solutions for high throughput screening and future system requirements.

## **intelligent technology**

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

Our security products are optimised to give the image resolution and speed of response required to meet the escalating demands of the security market.

With flexible manufacturing, 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 screens
- Customised phosphor coatings
- Excellent sensitivity

## Neutron Detection Technology

- Large area neutron detection screens
- Excellent neutron/gamma discrimination
- Helium-3 equivalent performance

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



# clever scintillation for security applications

## Neutron Detection

Lithium-6 based neutron detectors

- Radiation Portal Monitoring (RPM) applications
- Good gamma discrimination
- Robust
- High sensitivity

Our specialist neutron detectors offer excellent neutron/gamma discrimination for low false detection rates.

Our neutron detection products offer:

### **a high performance, sensitive screen used for the detection of neutrons**

Manufactured in sheet form, which can be tiled to produce large area detectors, our neutron detectors are primarily used in RPM's to detect radiation within a container or vehicle.

Scintacor screens couple well to light guides. With emission being efficiently collected from both surfaces, exceeding most customers' requirements.

The screens can be supplied as self-supporting sheets as well as mounted to a variety of substrates. The screens can be supplied to custom sizes or moulded into novel constructs.

## X-ray Screens

X-ray imaging for mail, parcel, baggage and cargo inspection

- Security and inspection applications
- Customisable size & shape profiles
- High resolution
- Fast decay

The excellent sensitivity of our phosphor based screens allow 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 security applications**

Constructed using a phosphor based scintillator mounted on to a range of substrates, providing an optimised solution for your requirements.

Our manufacturing flexibility allows us to fully customise the size and shape of our screens, and can be supplied as self-supporting sheets as well as mounted to a variety of substrates.

With size and shape, emission spectra, decay time and X-ray absorption characteristics customisable to your requirements, we can design and manufacture each screen to suit your exact application and operational demands.



*advanced screens, utilising our X-ray and neutron detection technologies for efficient, tailored and cost effective security solutions*

#### **Cargo Inspection**

Optimised for high volumes and moving freight using a very fast decay phosphor for instant, sharp, high contrast images.

Our cargo inspection screens are ideal for the detection of weapons, drugs, explosive materials, bundled currency and other contraband to ensure border security.

#### **Baggage Check**

Fast response phosphor strips are combined with linear photodiode arrays to provide rapid response X-ray based detection systems. Ideal for security checks at airports and other transport terminals.

Optimised for high throughput applications, providing high contrast and good definition to aid accurate and rapid identification of prohibited items.

#### **Mail and Parcel Inspection**

Screens designed for static cabinet-based X-ray detection systems with low throughput security checks at locations such as banks, prisons, embassies and corporate buildings.

Highly efficient phosphors provide high light output, ideal for lens-coupled imaging systems operating in low light conditions. This optimisation also extends to the detection of plastic explosives, incendiary devices and drugs.



# customised at the core

## Customer Support

Your scintillation partner

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

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.

## 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 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 and neutron detection 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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# excellence of your system



## 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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