

Scintillator Array Market to Reach USD \$2.45 Billion by 2029 at 11.5% CAGR

*The Business Research Company's
Scintillator Array Global Market Report
2025 – Market Size, Trends, And Forecast
2025-2034*

LONDON, GREATER LONDON, UNITED
KINGDOM, October 30, 2025
/EINPresswire.com/ -- What Is The
Estimated Industry [Size Of Scintillator
Array Market?](#)

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The market size of the scintillator array has seen rapid expansion in the previous years. It is projected to increase from \$1.42 billion in 2024 to \$1.59 billion in 2025, with a compound annual growth rate (CAGR) of 11.9%. Factors responsible for this historical growth include the escalating

demand in the medical imaging sector, broader homeland security provisions, growth in industrial applications, a heightened emphasis on nuclear power production, and an upsurge in the demand for lightweight and mobile detectors.



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The market for scintillator arrays is predicted to experience swift expansion in the upcoming years, reaching \$2.45 billion by 2029 with a compound annual growth rate (CAGR) of 11.5%. This predicted rise during the forecast period is linked to the growth in fields such as medical

imaging, nuclear power, and security, as well as the development of advanced scintillator materials. Additionally, increased safety standards and research funding, as well as broader applications in environmental monitoring are contributing to the growth. Key trends for this period feature improvements in radiation detection technology, incorporation of artificial intelligence (AI) and smart detection systems, merging photonic-chip sensor technology with scintillators, advances in radiation detection methods, and the adaptation of smart digital integration.

Download a free sample of the scintillator array market report:

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What Are The Major Factors Driving The [Scintillator Array Global Market Growth?](#)

The increasing need for medical imaging is predicted to stimulate the expansion of the scintillator array market. Medical imaging pertains to the utilization of diverse technologies and methods for creating visualizations of the inner workings of the human body to facilitate medical evaluation, diagnostics and intervention. The upsurge in demand for this service is due to the aging global population, who frequently need diagnostic tests to track and identify age-related health issues. Scintillator arrays facilitate medical imaging by transforming high-energy x-rays or gamma rays into perceivable light with exceptional spatial resolution and efficiency. This allows for exceptional detection and accurate imaging in diagnostic tools such as CT scanners, PET systems, and gamma cameras. The resulting precision improves image quality and enhances diagnostic capabilities. For example, data from the National Health Service, a UK government division, indicates that England conducted 45.0 million imaging tests in November 2023 - an increase of 2.2% from the 44.0 million in the previous year. The total also encompasses 10.3 million diagnostic ultrasound tests (an increase of 1.8%); 7.1 million CT scans (up by 5.5%); and 4.1 million MRI scans (a hike of 6.2%). Hence, the rising need for medical imaging is fuelling the scintillator array market's growth. The burgeoning development of nuclear power plants is also expected to stimulate the expansion of the scintillator array market. Nuclear power plants, which use nuclear reactions to produce electricity, expand via the creation of new reactors and modernization of existing facilities. The increasing expansion is attributable to the increased call for clean energy, the pressing drive to lessen greenhouse gas emissions, and the push for sustainable, low-carbon electricity. Scintillator arrays assist nuclear power plants in providing precise radiation detection and monitoring capabilities. They ensure accurate readings of radioactive emissions, secure operational safety, safeguard personnel and gear, and aid in efficient maintenance and regulatory adherence. According to the International Atomic Energy Agency, an Austrian intergovernmental organization, in August 2024, power generation from nuclear energy rose by 2.6% in 2023 relative to 2022. The same organization reported that there were 413 operational nuclear reactors across 31 countries in December 2023, contributing to a total global capacity of 371.5 GW(e). Hence, the growth of nuclear power plants is fueling the scintillator array market's expansion.

Who Are The Leading Companies In [The Scintillator Array Market?](#)

Major players in the Scintillator Array Global Market Report 2025 include:

- Thermo Fisher Scientific Inc.
- Siemens Healthineers AG
- Koninklijke Philips N.V.
- GE HealthCare Technologies Inc.
- Hamamatsu Photonics K.K.
- Mirion Technologies Inc.
- Ludlum Measurements Inc.
- Kromek Group plc
- Berkeley Nucleonics Corporation
- Crytur Ltd.

What Are The Primary Segments Covered In The Global Scintillator Array Market Report?

The scintillator array market covered in this report is segmented as

- 1) By Type: Organic Scintillators, Inorganic Scintillators, Plastic Scintillators, Ceramic Scintillators
- 2) By Form Factor: Single-Channel Detectors, Multi-Channel Detectors, Custom Configurations
- 3) By Application: Medical Imaging, Nuclear Power Plants, High Energy Physics, Homeland Security, Other Applications
- 4) By End-User: Healthcare, Industrial, Defense, Research Institutions, Other End-Users

Subsegments:

- 1) By Organic Scintillators: Liquid Organic Scintillators, Crystal Organic Scintillators, Glass Organic Scintillators
- 2) By Inorganic Scintillators: Alkali Halide Scintillators, Oxide Crystal Scintillators, Fluoride Crystal Scintillators
- 3) By Plastic Scintillators: Polyvinyl Toluene Based Scintillators, Polystyrene Based Scintillators, Polyester Based Scintillators
- 4) By Ceramic Scintillators: Garnet Based Scintillators, Perovskite Based Scintillators, Rare Earth Doped Scintillators

View the full scintillator array market report:

<https://www.thebusinessresearchcompany.com/report/scintillator-array-global-market-report>

Which Region Is Forecasted To Grow The Fastest In The Scintillator Array Industry?

For the year specified in the Scintillator Array Global Market Report 2025, North America was recognized as the dominating region. In terms of future growth, Asia-Pacific is projected to expand most rapidly during the predicted period. The report provides comprehensive coverage of various regions which include Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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