

ALD Equipment Market by Deposition Method (Plasma Enhanced ALD, Thermal ALD, Spatial ALD), Film Type (Oxide Films, Fluoride Films), Semiconductor Application (More than Moore, More Moore), Non-semiconductor Application and Region - Global Forecast to 2028

<https://marketpublishers.com/r/AFABF1217228EN.html>

Date: October 2023

Pages: 216

Price: US\$ 4,950.00 (Single User License)

ID: AFABF1217228EN

Abstracts

The ALD equipment market is projected to reach USD 6.2 billion by 2028 from USD 3.9 billion in 2023, at a CAGR of 10.0% from 2023 to 2028. The major factors driving the market growth of the ALD equipment includes the growing demand for 3D NAND SSDs, benefits offered by ALD equipment and the rising demand for memory devices from AI-based servers. Moreover, the increasing utilization of AI and IoT in the healthcare sector and the surging demand for photovoltaics has led to an increased deployment of ALD equipment which is expected to provide several growth opportunities for market players in the ALD equipment market.

Fluoride film type is expected to account for the highest CAGR in the ALD equipment market during the forecast period

In recent times, the demand for ALD of fluoride films has increased due to their low refractive index. This characteristic enhances transmission at both UV and IR wavelengths which makes them highly preferable for optical applications. Moreover, ALD deposition of metal fluorides, such as MgF₂, AlF₃, and LiF, ensures superior transmission at UV wavelengths while allowing the deposition of ultra-thin films to prevent the absorption losses. Therefore, the increasing need for low refractive index and superior transmission properties at UV wavelengths drives the market growth. Hence, fluoride film-based ALD equipment is expected to have the highest CAGR in the

ALD equipment market.

Energy application is expected to account for the largest market size in the ALD equipment market during the forecast period

ALD equipment can create exceptionally uniform films which makes it a highly valuable choice for various energy applications such as Li-ion batteries and solar cells, among others. In recent years, there has been a significant surge in the adoption of Li-ion batteries (LIBs) across a wide range of consumer electronics and automotive applications. Furthermore, there is a significant rise in demand for solar cells, in recent years, which plays a critical role in contributing towards the market growth of the energy application in ALD equipment market.

North America is expected to account for the second- largest market size during the forecast period

Presence of fabrication plants and establishments of consumer electronics and semiconductor manufacturing companies is expected to drive the market growth of ALD equipment in the region. Furthermore, the growing adoption of renewable energy such as solar cells, is anticipated to contribute to the market growth of ALD equipment in the region.

The break-up of profile of primary participants in the ALD equipment market-

By Company Type: Tier 1 – 30%, Tier 2 – 50%, Tier 3 – 20%

By Designation Type: C Level – 25%, Director Level – 35%, Others – 40%

By Region Type: North America – 30%, Europe – 25%, Asia Pacific – 35%, Rest of the World (RoW) – 10%

The major players of ALD equipment market are ASM International N.V. (Netherlands), Tokyo Electron Limited. (Japan), Applied Materials, Inc. (US), LAM RESEARCH CORPORATION. (US), and Veeco Instruments Inc. (US) among others.

Research Coverage

The report segments the ALD equipment market and forecasts its size based on

ALD Equipment Market by Deposition Method (Plasma Enhanced ALD, Thermal ALD, Spatial ALD), Film Type (Oxide Fi...

deposition method, film type, application (non-semiconductor), application (semiconductor), and region. The report also provides a comprehensive review of drivers, restraints, opportunities, and challenges influencing the market growth. The report also covers qualitative aspects in addition to the quantitative aspects of the market.

Reasons to buy the report:

The report will help the market leaders/new entrants in this market with information on the closest approximate revenues for the overall ALD equipment market and related segments. This report will help stakeholders understand the competitive landscape and gain more insights to strengthen their position in the market and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of key drivers (increasing market of semiconductor industry, the growing demand for 3D NAND SSDs, benefits offered by ALD equipment and the rising demand for memory devices from AI-based servers), restraints (High costs related to ALD equipment and lack of skilled workforce), opportunities (increasing utilization of AI and IoT in the healthcare sector and the surging demand for photovoltaics has led to an increased deployment of ALD equipment), and challenges (the increasing technical difficulties and process complexities) influencing the growth of the ALD equipment market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the ALD equipment market.

Market Development: Comprehensive information about lucrative markets – the report analyses the ALD equipment market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the ALD equipment market

Competitive Assessment: In-depth assessment of market shares, growth

strategies and product offerings of leading players like ASM International N.V. (Netherlands), Tokyo Electron Limited. (Japan), Applied Materials, Inc. (US), LAM RESEARCH CORPORATION. (US), and Veeco Instruments Inc. (US).

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