

Semiconductor Manufacturing Equipment Market by Front-end Equipment, Back-end Equipment, Fab Facility Equipment (Automation , Chemical Control, Gas Control), Product Type, Dimension, Supply Chain Participant and Region - Global Forecast to 2028

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Report description:

The semiconductor manufacturing equipment market is projected to reach USD 149.8 billion by 2028 from USD 91.2 billion in 2023, at a CAGR of 10.4% from 2023 to 2028. The major factors driving the market growth of the semiconductor manufacturing equipment market include increasing demand for semiconductor fabrication facilities, and the need for semiconductor parts in electric and hybrid vehicles.

The wafer testing/IC testing segment is projected to grow at the highest growth CAGR during the forecast period. The wafer testing/IC testing segment is projected to grow at the highest growth CAGR during the forecast period. The growth can be attributed to the need for accuracy in ICs. ICs need to be incorporated with multiple functions, and complex circuitry needs proper testing equipment to achieve accuracy. Wafer testing equipment are vital for testing electronic devices for functionality and performance at different points during the semiconductor manufacturing process. With new technological developments, there is an increase in the design complexities and development of new products.

Memory segment held the largest share of the semiconductor manufacturing equipment market in 2022. In 2022, memory held the largest share of the semiconductor manufacturing equipment market. Remote work and education fueled demand for laptop computers, propelling the dynamic random-access memory (DRAM) industry to greater heights in 2021. Solid-state drives (SSDs) using NAND flash storage, a nonvolatile storage that does not require power to maintain data, are being used by automotive and data center sectors. SSDs are now the industry standard for laptops and other mobile devices. A similar

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trend and increased use of memory ICs are expected in the automotive sector mainly due to the trends such as electric vehicles and autonomous vehicles, among others.

Asia Pacific is expected to account for the highest CAGR during the forecast period

The semiconductor manufacturing equipment market in Asia Pacific is projected to witness significant growth in the next few years owing to the increased adoption of this technology in Japan, China, and South Korea. China and Japan are the economic powerhouses of the region. Moreover, digitalization is rapidly gaining traction in developing countries like India. The use of smartphones and tablets is very high in the country. For instance, according to the India Brand Equity Foundation (IBEF), smartphone shipments in India in 2021 were valued at USD 173 million, which was a 14% increase from 2020.

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

-□By Company Type: Tier 1 - 25%, Tier 2 - 35%, Tier 3 - 40%

-□By Designation Type: C-level - 35%, Director Level - 25% , Others - 40%

-□By Region Type: Americas - 29%, Europe, Middle East & Africa - 46%, Asia Pacific - 25%

The major players of semiconductor manufacturing equipment market are Applied Materials, Inc. (US), ASML (Netherlands), Tokyo Electron Limited (Japan), Lam Research Corporation (US), and KLA Corporation (US), among others.

Research Coverage

The report segments the semiconductor manufacturing equipment market and forecast its size based on front-end equipment, back-end equipment, fab facility equipment, product type, dimension, supply chain participant, 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 semiconductor manufacturing 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 demand for semiconductor fabrication facilities, growing semiconductor industry, rising demand for semiconductor parts in electric and hybrid vehicles, surging demand for AI chips driven by future AI-driven workloads and applications, implementation of 5G technology, adoption of 5G technology and IoT increases demand for advanced semiconductors in US, and rising demand for electric vehicles in US), restraints (high cost of ownership and complexity of patterns and functional defects restrains semiconductor manufacturing process), opportunities (shortage of semiconductors leading to development of new manufacturing facilities, government initiatives to boost domestic semiconductor industry, and CHIPS Act to strengthen semiconductor supply chain in US), and challenges (lack of skilled workforce worldwide, environmental factors causing disruptions, possibility of water shortage at semiconductor fab facilities, longer construction timelines for new fabs in US, and shortage of lithography equipment) influencing the growth of the semiconductor manufacturing equipment market.

-□Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the semiconductor manufacturing equipment market

-□Market Development: Comprehensive information about lucrative markets - the report analyses the semiconductor manufacturing equipment market across varied regions

-□Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the semiconductor manufacturing equipment market

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-Competitive Assessment: In-depth assessment of market shares, growth strategies and product offerings of leading players like Applied Materials, Inc. (US), ASML (Netherlands), Tokyo Electron Limited (Japan), Lam Research Corporation (US), and KLA Corporation (US).

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