

# **Semiconductor Manufacturing Equipment Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F Segmented By Equipment Type (Front-end Equipment ((Lithography Equipment, Etching Equipment, Deposition Equipment, Metrology/Inspection Equipment, Material Removal/Cleaning Equipment, Photoresist Processing Equipment) and Back-end Equipment (Wafer Manufacturing Equipment, Assembly & Packaging Equipment, Test Equipment)), By Dimension (2D, 2.5D and 3D), By Supply Chain Process (Outsourced Semiconductor Assembly and Test (OSAT), Integrated Device Manufacturer (IDM), Foundry), By Region, Competition**

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## **Abstracts**

Global Semiconductor manufacturing equipment market is predicted to grow at a rapid pace throughout the forecast period. A semiconductor is a critical component of electronic equipment that enables advancements in telecommunication, computers, biotechnology, military technology, aviation, renewable energy, and other sectors. Semiconductor manufacturing equipment is used to create IC chips, memory chips, circuits, and a variety of other products. Initially, manufacturing equipment is utilized to produce silicon wafers, including wafer processing tools such as photolithography tools, etching machines, chemical vapor deposition machines, measurement devices, and

process/quality control equipment. The market is divided into supply chain processes, which include IDM, OSAT, and foundry.

One of the primary drivers of the semiconductor manufacturing equipment market is the increasing demand for consumer electronics, such as smartphones and laptops, which is driving the need for smaller, faster, and more efficient semiconductors. The development of the Internet of Things (IoT) has also fueled the demand for semiconductors, which can help connect devices and enable them to communicate with each other. Furthermore, the trend of miniaturization is driving the demand for smaller and more precise semiconductors, leading to the development of advanced semiconductor manufacturing technologies, such as 3D ICs, which require specialized equipment. Despite intense competition in the market, the industry is still dominated by a few large players who have the resources to invest in research and development and offer innovative products.

#### Technological advancements

The semiconductor manufacturing equipment market is driven by technological advancements in the semiconductor industry. With the increasing demand for smaller, faster, and more efficient semiconductors, the need for advanced manufacturing technologies has also increased. This has led to the development of innovative semiconductor manufacturing technologies such as 3D ICs, FinFETs, and others, which require specialized equipment.

**Increasing demand for electronic devices:** The demand for electronic devices such as smartphones, laptops, and tablets has been increasing rapidly. The semiconductor industry is a crucial component of the electronics industry, and as the demand for electronic devices increases, the demand for semiconductors also increases. This, in turn, drives the demand for semiconductor equipment, which is used in the manufacturing of semiconductors. Hence, the growing adoption of semiconductor manufacturing equipment in semiconductor market is expected to boost market growth. Emerging markets, such as Asia-Pacific, are experiencing rapid industrialization and urbanization, which has led to an increase in demand for electronic devices. Moreover, the countries in this region have a large population that is increasingly adopting technology, thereby increasing the demand for semiconductor devices. This, in turn, drives the demand for global semiconductor manufacturing equipment market.

Growing demand for third-party IC packaging to support OSAT vendor expansion

The outsourced semiconductor assembly and test (OSAT) supply chain process sector is predicted to develop during the forecast period, owing to the use of assembly, packaging, and testing services by consumer electronics and automotive manufacturers.

OSAT enterprises are looking for automated machinery and technology to integrate into their manufacturing facilities, allowing clients to outsource semiconductor and electronic devices. The increased requirement to maximize semiconductor fab time and capacity is encouraging OSAT participation to assure a speedier and consistent supply of semiconductors.

### Challenges faced by the Market

The high cost of equipment is one of the major challenges that the semiconductor manufacturing equipment sector faces. Manufacturing semiconductor manufacturing equipment is a sophisticated and capital-intensive process that necessitates substantial investment in research and development. As a result, the cost of equipment is considerable, making it difficult for small and medium-sized businesses to enter the market.

Furthermore, the semiconductor manufacturing equipment industry is very competitive, with multiple manufacturers selling identical goods. This has resulted in increased rivalry, which has resulted in a drop in prices and margins. Yet, the industry is still controlled by a few major businesses with the ability to spend in R&D and create novel goods.

### Market Segmentation

On the basis of Equipment Type, the market is segmented into Front-end Equipment and Back-end Equipment. On the basis of Dimension, the market is segmented into 2D, 2.5D and 3D. On the basis of Supply Chain Process, the market is further split into Outsourced Semiconductor Assembly and Test (OSAT), Integrated Device Manufacturer (IDM) and Foundry.

### Company Profiles

Applied Materials Inc, ASML Holding Semiconductor Company, Tokyo Electron Limited, Lam Research Corporation, KLA Corporation, Veeco Instruments Inc, Screen Holdings Co. Ltd, Teradyne Inc, Hitachi High -Technologies Corporation, Ferrotec Holdings

Corporation, are among the major players that are driving the growth of the global semiconductor manufacturing equipment market.

Report Scope:

In this report, the global semiconductor manufacturing equipment market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

#### Semiconductor manufacturing equipment Market, By Equipment Type:

##### Front-end Equipment

Lithography Equipment

Etching Equipment

Deposition Equipment

Metrology/Inspection Equipment

Material Removal/Cleaning Equipment

Photoresist Processing Equipment

##### Back-end Equipment

Wafer Manufacturing Equipment

Assembly & Packaging Equipment

Test Equipment

#### Semiconductor manufacturing equipment Market, By Dimension:

2D

2.5D

3D

Semiconductor manufacturing equipment Market, By Supply Chain Process:

Outsourced Semiconductor Assembly and Test (OSAT)

Integrated Device Manufacturer (IDM)

Foundry

Semiconductor manufacturing equipment Market, By Region:

Asia-Pacific

China

Japan

India

Australia

South Korea

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Spain

Italy

Middle East & Africa

Israel

Turkey

Saudi Arabia

UAE

South America

Brazil

Argentina

Colombia

## Competitive Landscape

**Company Profiles:** Detailed analysis of the major companies present in the global semiconductor manufacturing equipment market.

## Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed an analysis and profiling of additional market players (up to five).

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