

Global Silicon Wafers Market: Size, Trends & Forecasts (2018-2022)

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Abstracts

Scope of the Report

The report titled “Global Silicon Wafers Market: Size, Trends & Forecasts (2018-2022)”, provides an in-depth analysis of the global silicon wafer market by value, by region, by segment, by shipment, by demand, by application, by production capacity, etc. The report also provides regional analysis of market by value for regions like APAC and North America.

The report also assesses the key opportunities in the market and outlines the factors that are and will be driving the growth of the industry. Growth of the overall global silicon wafers market has also been forecasted for the period 2018-2022, taking into consideration the previous growth patterns, the growth drivers and the current and future trends.

The silicon wafers market is dominated by few players, but there are other new players, private label players as well. However, the competition in the global silicon wafers market is dominated by Taiwan Semiconductor Manufacturing Company, Limited (TSMC), Ferrotec Holdings Corporation, SUMCO Corporation and Shin-Etsu Chemical Co., Ltd., who are also profiled with their financial information and respective business strategies.

Country Coverage

APAC

North America

Company Coverage

Taiwan Semiconductor Manufacturing Company, Limited (TSMC)

Ferrotec Holdings Corporation

SUMCO Corporation

Shin-Etsu Chemical Co., Ltd.

Executive Summary

A wafer is a thin slice of semiconductor material that is formed with highly pure single crystalline material that is almost defect free. The wafer undergoes many micro fabrication process steps during formation. Wafers are used in various devices like, in electronics and photovoltaic for the fabrication of integrated circuits and for the solar cells, etc.

Silicon wafers are the most popular type of wafer. Wafers are also made using other compound, like III-V or II-VI materials, Gallium arsenide (GaAs), III-V semiconductor etc. Silicon wafers are the most prevalent in the electronics industry and have various other applications like, manufacturing semiconductors, artificial intelligence, integrated circuits, home appliances, automobile etc.

Silicon wafers are majorly used as there is abundance of silicon in nature, and silicon is hard and highly efficient. Silicon wafers also conduct electricity well at high temperatures and are thermally stable. But, silicon wafers are also brittle, have short lifecycles and produce toxic substances in manufacturing process.

Silicon wafers are segmented on the basis of type, fabrication and size. Silicon wafers are of six types: Polished Wafers, Hydrogen Annealed Wafer, Hyper Hydrogen Annealed Wafer, Epitaxial Wafers, Diffused Wafers and Silicon-On-Insulator (SOI) Wafer. On the basis of fabrication, silicon wafers are segmented as: Undoped Silicon Wafer and Doped Silicon Wafer (P-type Silicon Wafer and N-type Silicon Wafer). Silicon wafers are of various sizes: Less than 200mm, 200mm, 300mm and 450mm.

The global silicon wafers market has increased at a significant CAGR over the years and projections are made that the market would rise in the next four years i.e. 2018-2022 tremendously. The silicon wafers market is expected to increase due to increasing demand from memory sectors, rising automotive production, rising demand for solar photovoltaic power etc. Yet the market faces some challenges such as high cost, high barriers to entry, environmental regulations, etc.

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