

Epitaxial Wafer Market Report by Type (Heteroepitaxy, Homoepitaxy), Wafer Size (2-4 Inch, 5-8 Inch, 9-12 Inch, and Others), Application (LED, Power Semiconductor, MEMS-Based Devices, and Others), Industry Vertical (Consumer Electronics, Automotive, Healthcare, Industrial, and Others), and Region 2024-2032

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Abstracts

The global epitaxial wafer market size reached US\$ 3.5 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 8.4 Billion by 2032, exhibiting a growth rate (CAGR) of 9.9% during 2024-2032.

The epitaxial wafer, also known as epi wafer, is a layer of epitaxial silicon single crystal deposited on a single crystal silicon wafer. It assists in controlling doping profiles that are not achievable through traditional methods like diffusion and ion implantation. It is used in diode and transistor elements and integrated circuit (IC) substrates, such as bipolar and metal-oxide-semiconductor (MOS). It is also utilized in power devices and energy-saving of various power-sourced items. Apart from this, it finds extensive applications in smartphones, light-emitting diodes (LEDs), gyroscopes, laptops, tablets and gaming consoles across the globe.

Epitaxial Wafer Market Trends:

At present, there is a considerable rise in the demand for epitaxial wafers in consumer electronics, which enable higher electron mobility and micro-electromechanical systems (MEMS) devices. This represents one of the key factors strengthening the growth of the market. Moreover, there is an increase in the employment of epitaxial wafers in the automotive industry to track and control temperature, pressure, flow, and level through

robots. This, coupled with the rising sales of autonomous and electric vehicles (EVs) and self-driving trucks and the burgeoning automotive sector around the world, is propelling the growth of the market. In addition, the increasing adoption of the internet of things (IoT) in epitaxial wafers due to their advanced applications is positively influencing the market. Besides this, the rising focus on reducing the consumption of electricity and the growing awareness about green technology among individuals are catalyzing the demand for epitaxial wafers. Additionally, governments of several countries are undertaking initiatives to promote the usage of light-emitting diodes (LEDs), which is projected to offer lucrative growth opportunities to industry investors and end users.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global epitaxial wafer market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on type, wafer size, application and industry vertical.

Breakup by Type:

- Heteroepitaxy
- Homoepitaxy

Breakup by Wafer Size:

- 2-4 Inch
- 5-8 Inch
- 9-12 Inch
- Others

Breakup by Application:

- LED
- Power Semiconductor
- MEMS-Based Devices
- Others

Breakup by Industry Vertical:

- Consumer Electronics

Automotive
Healthcare
Industrial
Others

Breakup by Region:

North America
United States
Canada
Asia-Pacific
China
Japan
India
South Korea
Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Electronics And Materials Corporation Limited, Epistar Corporation, GlobalWafers (Sino-American Silicon), II-VI Incorporated, IntelliEPI, IQE PLC, Jenoptic AG, Nichia Corporation, Showa Denko K. K., Silicon Valley Microelectronics Inc., Siltronic AG (Wacker Chemie AG) and Sumco Corporation.

Key Questions Answered in This Report

1. What was the size of the global epitaxial wafer market in 2023?
2. What is the expected growth rate of the global epitaxial wafer market during 2024-2032?
3. What are the key factors driving the global epitaxial wafer market?
4. What has been the impact of COVID-19 on the global epitaxial wafer market?
5. What is the breakup of the global epitaxial wafer market based on the type?
6. What is the breakup of the global epitaxial wafer market based on the wafer size?
7. What is the breakup of the global epitaxial wafer market based on the industry vertical?
8. What are the key regions in the global epitaxial wafer market?
9. Who are the key players/companies in the global epitaxial wafer market?

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