

**North America Silicon EPI Wafer Market Forecast to 2028 - COVID-19 Impact and Regional Analysis - Wafer Size (6 Inch, 8 Inch, 12 Inch, and Others), Application (LED, Power Semiconductor, and MEMS-Based Device), End User (Consumer Electronics, Automotive, Healthcare, Aerospace and Defense, and Others), and Type (Heteroepitaxy and Homoepitaxy)**

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**AVAILABLE LICENSES:**

- Single User Price \$3000.00
- Site Price \$4000.00
- Enterprise Price \$5000.00

**Report description:**

The North America silicon EPI wafer market is expected to grow from US\$ 718.31 million in 2022 to US\$ 1,173.68 million by 2028; it is estimated to grow at a CAGR of 8.5% from 2022 to 2028.

An epitaxial wafer, also known as an EPI wafer, is created by placing a layer of epitaxial silicon single crystal on a single crystal silicon wafer. This wafer helps regulate doping profiles that are difficult to manage using conventional techniques such as diffusion and ion implantation. Silicon epitaxial wafers are also the main component used in the production of various semiconductor devices that have applications in consumer, industrial, military, and space electronics. The wafers are used in bipolar and metal-oxide-semiconductor (MOS) integrated circuit (IC) substrates. They are also being used in diode and transistor elements. Silicon epitaxial wafers are used in energy-saving power gadgets and other devices with power sources. They are also used in LEDs, computers, tablets, cellphones, gyroscopes, and gaming consoles. Epitel, a specialized silicon epitaxial wafer manufacturer, provides epitaxial services for the semiconductor industry. The company offers a variety of custom silicon epitaxial wafers in sizes ranging from 3" (76 mm) to 8" (200 mm) for important microelectronics applications, including discrete power devices, integrated circuits, and sensors. In 2020, Qromis, a US-based start-up, signed a licensing arrangement with Japan's Shin-Etsu Chemical to produce substrates and epitaxial wafers for GaN power/RF electronics, LED devices, and other devices. The company has already made available 6-inch and 8-inch GaN-ready QST substrates and 6-inch and 8-inch "templates" with 5-inch and 10-inch micron GaN layers. It is developing 900V and 1200V GaN HEMT EPI wafers along with 200V and 650V GaN HEMT EPI wafers based on

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6-inch and 8-inch QST substrates for electronic instruments. The business also intends to set up a second production facility for QST substrates and GaN-on-QST epitaxy wafers, considering the positive projections of GaN adoption due to growth of the silicon EPI wafer market.

Vendors in the North America silicon EPI wafer market can attract new customers and expand their footprints in emerging markets by providing innovative products enabled by new technologies. This is likely to drive the North America silicon EPI wafer market at a notable CAGR during the forecast period.

North America Silicon EPI Wafer Market Revenue and Forecast to 2028 (US\$ Million)

North America Silicon EPI Wafer Market Segmentation

The North America silicon EPI wafer market is segmented on the basis of wafer size, application, end user, type, and country. Based on wafer size, the market is segmented into 6 inch, 8 inch, 12 inch, and others. Based on application, the market is divided into led, power semiconductor, and MEMS-based devices. By end user, the North America silicon EPI wafer market is segmented into consumer electronics, automotive, healthcare, aerospace and defense, and others. Based on type, the market is bifurcated into heteroepitaxy and homoepitaxy. Based on country, the North America silicon EPI wafer market is segmented into the US, Mexico, and Canada.

North America Silicon EPI Wafer Market - Companies Mentioned

Applied Materials, Inc.; II-VI Incorporated; Shin-Etsu Chemical Co., Ltd.; SUMCO CORPORATION; Wafer World Inc.; Siltronic AG; NICHIA CORPORATION; EpiGaN nv (Soitec Belgium N.V.); and SK Siltron Co., Ltd. are among the major companies operating in the North America silicon EPI wafer market.

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