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Global Silicon Carbide Components for Semiconductor Equipment Market 2026 by Company, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Silicon Carbide Components for Semiconductor Equipment market size was valued at US$ 1305 million in 2025 and is forecast to a readjusted size of US$ 2529 million by 2032 with a CAGR of 9.2% during review period.

Silicon carbide (SiC) components/parts for semiconductor equipment refer to high-purity SiC, CVD-SiC, SiC-coated graphite, sintered SiC, reaction-bonded SiC and related precision ceramic components manufactured through chemical vapor deposition, SiC coating, solid CVD-SiC growth, precision machining, surface finishing, ultra-cleaning and metrology processes. These components are used in high-temperature, corrosive, plasma-intensive and contamination-sensitive environments inside front-end semiconductor processing equipment. Typical products include focus rings, edge rings, gas distribution plates, chamber liners and shower plates for plasma etch tools; SiC-coated graphite susceptors, trays and wafer carriers for epitaxy and MOCVD equipment; and wafer boats, tubes, dummy wafers, support parts and high-temperature fixtures for diffusion, annealing, RTP and CVD systems. Their key functions are to improve plasma erosion resistance, thermal stability, process uniformity, particle control, contamination performance and lifetime of consumable process-chamber parts.

Silicon carbide (SiC) parts for semiconductor equipment should be treated as a specialized front-end equipment parts and advanced ceramic consumables segment, rather than being mixed with SiC wafers, SiC power devices, SiC modules or general industrial silicon carbide ceramics. The core demand comes from process environments involving plasma, high temperature, corrosive gases and strict contamination control, especially dry etch, epitaxy, diffusion, RTP and MOCVD tools. CVD-SiC focus rings,

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edge rings, shower plates and chamber-related consumables represent the most demanding part of the market, while SiC-coated graphite susceptors, trays and carriers have already formed a mature installed base in silicon, SiC and GaN epitaxy. As advanced logic, high-layer-count 3D NAND, compound semiconductor capacity and AI-driven fab investments continue to expand, the industry?s value proposition is shifting from simple consumable replacement to chamber lifetime extension, process stability, yield protection and cost-of-ownership improvement.

From a supply perspective, Japan, Korea, the United States and Europe still dominate the global high-end market. Tokai Carbon/TCK, Ferrotec, CoorsTek, Entegris, Morgan Advanced Materials, SGL Carbon, Toyo Tanso, Schunk Xycarb, AGC and Mersen have accumulated long-standing capabilities in CVD-SiC, SiC-coated graphite, high-temperature furnace SiC components, epitaxy susceptors and precision ceramic structures. Korea has developed a strong cluster around etch consumables, with TCK, Hana Materials, Worldex and DS Techno serving memory and advanced-node customers. China is still in the transition from qualification to volume adoption, but suppliers such as Chongqing Genori, Hunan Dezhi, JSM Semiconductor, Shenzhen Zhicheng, Chengdu UPAM, KemaTek/Kaixin and Zhejiang Liufang are accelerating domestic substitution in CVD-SiC, SiC coating and solid SiC etch components.

From a product-route perspective, the market is not a single-technology race. CVD-SiC, SiC-coated graphite, recrystallized SiC, sintered SiC and reaction-bonded SiC each have distinct positioning. In etch tools, high-purity and plasma-resistant CVD-SiC is increasingly used to replace selected silicon, quartz and oxide ceramic parts. In epitaxy and MOCVD, SiC-coated graphite remains mainstream due to thermal uniformity, cost and manufacturability for large-size carriers. In diffusion, RTP, furnace and optomechanical structures, recrystallized SiC, sintered SiC and SiSiC are used according to thermal, mechanical and dimensional requirements. The next stage of competition will be driven by large-size CVD growth, coating uniformity, complex-shape machining, batch consistency, wafer-level contamination control and co-design with equipment OEM chambers.

In past few years, the global market for SiC parts for semiconductor equipment is fast growing, driven by increasing etch intensity in advanced logic and 3D NAND, higher demand for Si/SiC/GaN epitaxy consumables, continued 300mm fab investment, localization programs in China and multi-sourcing strategies among major fabs and equipment OEMs. Pricing will remain resilient for high-end CVD-SiC components, while more standardized SiC rings, SiC-coated graphite components and lower-complexity machined parts may face ASP pressure as Korean second-tier suppliers and Chinese

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entrants expand capacity.

This report is a detailed and comprehensive analysis for global Silicon Carbide Components for Semiconductor Equipment market. Both quantitative and qualitative analyses are presented by company, by region & country, By Product Form and By Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Silicon Carbide Components for Semiconductor Equipment market size and forecasts, in consumption value ($ Million), 2021-2032

Global Silicon Carbide Components for Semiconductor Equipment market size and forecasts by region and country, in consumption value ($ Million), 2021-2032

Global Silicon Carbide Components for Semiconductor Equipment market size and forecasts, By Product Form and By Application, in consumption value ($ Million), 2021-2032

Global Silicon Carbide Components for Semiconductor Equipment market shares of main players, in revenue ($ Million), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Silicon Carbide Components for Semiconductor Equipment

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Silicon Carbide Components for

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Semiconductor Equipment market based on the following parameters - company overview, revenue, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Tokai Carbon, Morgan Advanced Materials, Ferrotec, Kyocera, CoorsTek, AGC, Saint-Gobain, Mersen, CeramTec, Japan Fine Ceramics Co., Ltd. (JFC), etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market segmentation

Silicon Carbide Components for Semiconductor Equipment market is split By Product Form and By Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for Consumption Value By Product Form and By Application. This analysis can help you expand your business by targeting qualified niche markets.

Market segment By Product Form

Solid CVD-SiC Components

SiC-Coated Graphite Components

Sintered / Reaction-Bonded SiC Components

Recrystallized SiC Components

Other SiC-Based Components

Market segment By Component Form

SiC Rings

SiC Showerheads / Gas Distribution Plates

SiC Susceptors / Trays / Wafer Carriers

SiC Boats / Tubes / Dummy Wafers

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SiC Chamber Liners / Plates / Shields

SiC Chucks / Handling Components

Other SiC Components

Market segment By Component Function

Plasma-Facing Consumables

Wafer Support and Carrier Parts

Thermal Management and High-Temperature Parts

Chamber Structural Components

Precision Motion / Handling Parts

Other Functional Parts

Market segment By Application

Etch Equipment

Epitaxy/MOCVD Equipment

Diffusion/Furnace Equipment

RTP/Annealing Equipment

Deposition Equipment

Other Semiconductor Equipment

Market segment by players, this report covers

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Tokai Carbon

Morgan Advanced Materials

Ferrotec

Kyocera

CoorsTek

AGC

Saint-Gobain

Mersen

CeramTec

Japan Fine Ceramics Co., Ltd. (JFC)

TOTO Advanced Ceramics

Schunk Xycarb Technology

SGL Carbon

Toyo Tanso

Bay Carbon

ASUZAC Fine Ceramics

Pacific Rundum

Bullen Ultrasonics

TKG Solmics

Hana Materials Inc.

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Worldex Industry & Trading Co., Ltd.

DS Techno

AETS CO., LTD

Entegris

Suzhou KemaTek, Inc.

Hunan Dezhi New Materials

Shenzhen Zhicheng Semiconductor Materials

Chengdu Ultra Pure Applied Materials

Sanzer (Shanghai) New Materials Technology

Beijing YESEMi

Chongqing Xinhui Material Technology

Wuhu Jingchun Technology

Anhui Sixiang Semiconductor Materials Technology

Zhejiang Liufang Semiconductor Technology

JSM

Kallex Company,Ltd

Shaanxi UDC Materials Technology

Shandong Jinhong New Materials

NINGBO FLK TECHNOLOGY

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Market segment by regions, regional analysis covers

North America (United States, Canada and Mexico)

Europe (Germany, France, UK, Russia, Italy and Rest of Europe)

Asia-Pacific (China, Japan, South Korea, India, Southeast Asia and Rest of Asia-Pacific)

South America (Brazil, Rest of South America)

Middle East & Africa (Turkey, Saudi Arabia, UAE, Rest of Middle East & Africa)

The content of the study subjects, includes a total of 13 chapters:

Chapter 1, to describe Silicon Carbide Components for Semiconductor Equipment product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top players of Silicon Carbide Components for Semiconductor Equipment, with revenue, gross margin, and global market share of Silicon Carbide Components for Semiconductor Equipment from 2021 to 2026.

Chapter 3, the Silicon Carbide Components for Semiconductor Equipment competitive situation, revenue, and global market share of top players are analyzed emphatically by landscape contrast.

Chapter 4 and 5, to segment the market size By Product Form and By Application, with consumption value and growth rate By Product Form, By Application, from 2021 to 2032.

Chapter 6, 7, 8, 9, and 10, to break the market size data at the country level, with revenue and market share for key countries in the world, from 2021 to 2026.and Silicon Carbide Components for Semiconductor Equipment market forecast, by regions, By Product Form and By Application, with consumption value, from 2027 to 2032.

Chapter 11, market dynamics, drivers, restraints, trends, Porters Five Forces

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analysis.

Chapter 12, the key raw materials and key suppliers, and industry chain of Silicon Carbide Components for Semiconductor Equipment.

Chapter 13, to describe Silicon Carbide Components for Semiconductor Equipment research findings and conclusion.

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