

Compound Semiconductor Market by Type (GaN, GaAs, SiC, InP), Product (LED, Optoelectronics, RF Devices, Power Electronics), Application (Telecommunication, General Lighting, Automotive, Consumer Devices, Power Supply) & Region - Global Forecast to 2027

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Abstracts

The global compound semiconductor market size is estimated to be USD 40.5 billion in 2022 and is projected to reach 55.8 billion by 2027, at a CAGR of 6.6% during the forecast period. The market has a promising growth potential due to several factors, such as rise in demand and implementation of GaN and SiC in semiconductor industry.

A compound semiconductor is a semiconductor made from two or more elements from two or more different periodic table groups. For example, one element from column III and one from column V of the periodic table are called compound III-V semiconductors, such as Gallium Arsenide (GaAs), Indium Phosphide (InP), and Gallium Nitride (GaN). Electrons in compound semiconductors move faster than electrons in silicon, which enables high-speed processing and operations at lower voltages.

“SiC: The fastest-growing segment of the compound semiconductor market, by type“

SiC has been experiencing significant growth owing to its wide use in power discrete components and devices, such as MOSFETs, junction field effect transistor (JFETs), and Schottky barrier diode (SBDs). Compared with other compound semiconductors, SiC has a wider bandgap and can operate at higher temperatures and voltages (up to 1,200 V). Therefore, SiC is expected to be used in high-power applications. SiC is used in electric vehicles, wireless charging, and power supplies.

“Telecommunications: The largest segment of the compound semiconductor market, by application“

Telecommunication is a leading application segment of the compound semiconductor market owing to the increased use of compound semiconductors such as GaAs, GaN, InP, and SiGe. The market for telecommunication application is expected to cater to the largest share during the forecast period. 5G is providing a huge opportunity for compound semiconductors for telecom applications. The growth of telecommunication application is driven by increasing demand for RF devices.

The compound semiconductor market is dominated by a few globally established players such as Nichia Corporation (Japan), Samsung Electronics Co., Ltd. (South Korea), ams OSRAM AG (Austria), Qorvo, Inc. (US), Skyworks Solutions, Inc. (US), Wolfspeed, Inc. (US), GaN Systems (Japan), Canon Inc. (Canada), Infineon Technologies AG (Germany), Mitsubishi Electric Corporation (Japan).

The study includes an in-depth competitive analysis of these key players in the compound semiconductor market, with their company profiles, recent developments, and key market strategies.

Research Coverage:

The report segments the compound semiconductor market and forecasts its size, by volume and value, based on region (Asia Pacific, Europe, North America, and Rest of the World), type (Gallium Nitride (GaN), Gallium Arsenide (GaAs), Silicon Carbide (SiC), Indium Phosphide (InP), Silicon Germanium (SiGe), and Gallium Phosphide (GaP)), product (Light-Emitting Diode (LED), Optoelectronics, Radio Frequency (RF) Devices (RF Power, RF Switching, Other RF Devices), and Power Electronics), application (General Lighting, Consumer Displays, Consumer Devices, Commercial, Telecommunications, Automotive, Power Supply, Datacom, and Others).

The report also provides a comprehensive review of market drivers, restraints, opportunities, and challenges in the compound semiconductor market. The report also covers qualitative aspects in addition to the quantitative aspects of these markets.

Key Benefits of Buying the Report:

The report will help the leaders/new entrants in this market with information on the

closest approximations of the revenue numbers for the overall market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the compound semiconductor market and provides them information on key market drivers, restraints, challenges, and opportunities.

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*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

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