

VCSEL Market by Material (GaAs, InP, GaN), Type (Single Mode and Multimode), Application (Data Communication, Sensing, IR Illumination, Pumping, Industrial Heating, and Emerging Applications), End User, and Geography - Global Forecast to 2023

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Abstracts

Rising adoption of VCSELs in proximity sensing and medical applications acts as a major driving factor for VCSEL market

The VCSEL market is expected to reach USD 3.89 billion by 2023 from USD 1.78 billion in 2018, at a CAGR of 16.9% from 2018 to 2023. This growth can be attributed to the rising adoption of VCSELs in proximity sensing and medical applications, increasing use of VCSELs for data communication, growing usage of VCSELs in infrared illumination, and surge in demand for VCSELs with advancements in automotive electronics. However, limited data transmission range restricts the growth of the VCSEL market.

VCSEL market for emerging applications to grow at highest CAGR during forecast period

The market for emerging applications is expected to grow at the highest CAGR during the forecast period. VCSELs are being widely used in emerging applications such as LiDAR, night vision, atomic clock, GPS, magnetometer, and display. Presently, this market is in the nascent stage, but it is expected to witness high growth in the coming years owing to the use of VCSELs for high-quality vision and obstacle detection, among others.

Data center held largest share of VCSEL market in 2017

Data center accounted for the largest share of the VCSEL market, by end user, in 2017. Data centers largely use 850nm-emitting VCSELs, especially for applications wherein the size of the data transmitted over a network is extremely large. In data centers, high data transfer rates are extremely important as they allow fast transmission of data for processing and obtaining results. As the adoption of data analytics is increasing in businesses across the world to improve decision-making capabilities, demand for VCSELs in data centers is further expected to rise during the forecast period.

Americas was the largest shareholder in 2017, whereas APAC would register highest CAGR during forecast period

The Americas accounted for a major share of the overall VCSEL market in 2017. The Americas is the largest market for VCSELs due to the demand for these devices from technology giants such as Facebook (US), Google (US), Apple (US), and Amazon (US). Moreover, the growing emphasis of businesses on the use of cloud infrastructure has contributed to the increasing demand for VCSEL-based optical transceivers in the Americas.

The VCSEL market is expected to grow at the highest CAGR in APAC from 2018 to 2023. This growth can be attributed to the rising number of data centers and increasing demand for consumer electronic devices and premium automobiles. APAC countries such as China, India, Singapore, and Indonesia are emerging as hubs for data centers owing to advancements in basic telecom infrastructure and encouragement from respective governments.

The breakup of primaries conducted during the study is depicted below:

By Company Type: Tier 1 = 55%, Tier 2 = 20%, and Tier 3 = 25%

By Designation: C-Level Executives = 75% and Directors = 25%

By Region: Americas = 10%, Europe = 20%, APAC = 40%, and RoW = 30%

Some major players in the VCSEL market include Finisar (US), Lumentum (US), Broadcom (US), Philips Photonics (Germany), II-VI (US), IQE (UK), AMS Technologies (Germany), Vixar (US), Santec (Japan), VERTILAS (Germany), Agiltron (US), Alight Technologies (Denmark), Ultra Communications (US), Laser Components (Germany), Litrax Technology (Taiwan), Coherent (US), TT Electronics (UK), Newport (US),

NeoPhotonics (US), and Necsel Intellectual Property (PD-LD) (US).

Factors such as technological advancements in the consumer electronics sector and the evolution of laser-based hard disc drive technology are expected to generate opportunities for players in the VCSEL market.

Research Coverage

Illustrative segmentation, analysis, and forecast for the market based on material, type, application, end user, and geography have been conducted to offer an overall view of the VCSEL market.

Major drivers, restraints, opportunities, and challenges pertaining to the VCSEL market have been detailed in the report.

Opportunities in the market have been defined for stakeholders, along with the details of the competitive landscape for market leaders.

Strategic profiling of key players in the VCSEL market has been done; players have been ranked; and core competencies have been comprehensively analyzed.

Reasons to Buy This Report

The report would help leaders/new entrants in the VCSEL market in the following ways:

1. This report segments the VCSEL market comprehensively and provides the closest market size estimations for segments across regions.
2. The report would help stakeholders understand the pulse of the market and provide them information on key drivers, restraints, challenges, and opportunities governing market growth.
3. This report would help stakeholders understand their competitors better and gain insights to improve their position in the business. The competitive landscape section includes the competitor ecosystem, and growth strategies such as product launches, acquisitions, expansions, partnerships, and collaborations.

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