Germany Automotive Adaptive Lighting System Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 70 pages | Mordor Intelligence

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Report description:

The Germany automotive adaptive lighting system market is valued at USD 2.78 billion and is expected to reach USD 5.17 billion while registering a CAGR above 5.73% during the forecast period.

Key Highlights
The adaptive lighting system is commonly used to provide a solution to the glaring effect in a vehicle. Implementing an adaptive lighting system helps to detect whether there is light coming from other vehicles. The Adaptive Front-lighting System (AFS) is a part of the adaptive lighting system commonly used in higher-end passenger and luxury vehicles.
During COVID-19, Germany's auto sector witnessed a steady slump in vehicle sales, including luxury cars. This negatively impacted the demand for adaptive lighting systems in vehicles. Moreover, post-2021, demand regained its recovery and exhibited strong growth potential.
Over the longer term, changing consumer stance is anticipated to provide significant momentum to drive key auto makers' demand for ambient lighting technology. The inception of the latest technology has created consumer-appealing ambient lighting features. It is expected to drive the market over the coming years, owing to key manufacturers offering features to expand their product portfolio with improved technologies.
Significant automotive norms and regulations drive the automotive market in Germany. These regulations by the EU have prompted OEMs to develop technologically advanced automotive lighting systems. There has been a significant advancement in the safety and driver assistance systems, which has driven the adoption of automotive adaptive lighting significantly in the country.

Germany Automotive Adaptive Lighting System Market Trends

Front Lightening will Lead the Market

The ALS optimizes light distribution from the headlights according to the driving and road circumstances. There is no need for manual operation to switch on/off the headlight or rear light. Depending on vehicle speed and steering input, the system projects the low-beam headlights in the direction the driver intends to travel. Thereby, it saves time and effort for the driver helping him to concentrate on driving. The system provides an optimized vision to the driver during the night and other poor-sight conditions of the road by adapting the headlight angle and the intensity of the light.
Improvement of nighttime visibility is a critical issue due to the frequency of fatal accidents during that time. Adaptive LED and laser headlights are some of the major advancements in automotive lighting. Adaptive or matrix LED systems use a grid of individual LEDs that automatically turns on and off based on where the car is headed and the presence of oncoming vehicles detected on the road.
The basic added advantage is the use of laser headlights which provides a focused, long-range beam that can double the reach of the standard automotive high beams. Some of these systems provide an added advantage by using selective lighting to highlight the different objects on the road, which can be traffic signs and road markings, warning or hazard signs, or objects that are hardly or not at all viewed by the driver, such as deer or dimly lit pedestrians.
The increasing demand for LED lighting solutions has become a prominent market trend since an LED light consumes 50% less energy to create the same amount of light as compact fluorescent lamps (CFLs) and cold cathode fluorescent lamps (CCFLs). The reduced electricity use can directly reduce yearly CO2 emissions by around 700 million metric tons. Halogen technology is also expected to pick up in the coming years, given this technology is cheap and easy to get, and it also makes the interior of the car look better. Furthermore, owing to their standard design, halogen lamps are simpler to use and install, and they also have a distinct feature, namely the "plug-and-play" function. For instance, the ambient lights on car interiors are probably atmosphere lights, Sound Mood lighting, HMI products ambient atmosphere lights, linear decorative atmosphere lights, color-changing RGB atmosphere lights, etc.
For example, in March 2021, Hyundai Motor revealed Hyundai BAYON, an all-new crossover SUV explicitly designed for Europe. As a B-segment SUV, BAYON will be the latest and smallest member of Hyundai's expanding SUV family. On the inside, the Bayon gets LED ambient lighting technology integrated into the front passenger foot areas, door wells, front door pull handle areas, and the storage area below the center console.
Considering these factors and developments, demand for the adaptive lighting system is anticipated to increase over the forecast period.

Luxury Cars will Drive the Market

The German automotive sector has been the backbone of the European automotive industry for the last decades. Germany has evolved into one of the largest countries in producing and innovating high-tech automotive products. In addition, a net of +60% growth has been observed in Europe's automotive sector for R&D on the back of Germany. This showcases the strong innovation hub's pivotal role in the demand for luxury vehicle sales.
Previously these technologies were a feature of luxury and high-end cars. Still, now significant manufacturers are implementing the advanced driver-assistance system (ADAS) and connected vehicle technology in low-priced cars. A consistent increase in the demand for compact and mid-sized automobiles equipped with advanced safety features will propel the growth of the German adaptive lighting market.
Key automakers are following constructive alliances to robust the luxury vehicle sales in the country. For instance:
In June 2022, Audi was expanding its urban fast charging hubs in Europe for luxury EV segments. The company opened the first semi-permanent site charging site, which features about six 320 kW fast chargers and a lounge in Nuremberg, Germany. In May

2022, Electric car maker Lucid group announced its plan to launch a luxury sedan in Europe at the end of this year. The company launched Lucid Air Dream Edition P and R sedans for limited numbers for consumers in Germany, Switzerland, Netherlands, and Norway in late 2022.
Considering these factors and developments, demand for the adaptive lighting system is anticipated to witness a high growth rate owing to luxury vehicle sales in Germany.

Germany Automotive Adaptive Lighting System Market Competitor Analysis

The German automotive adaptive lighting system market is consolidated and majorly dominated by a few players, such as HELLA KGaAHueck& Co., Stanley Electric., Philips, and Valeo Group. Factors like advanced technology, and more use of sensors highly drive the market. To provide the safest experience to the car owner, major automotive adaptive lighting system manufacturers are developing new technology for the future and doing partnerships with other players to stay ahead in the market. For instance,

In April 2021, Engineers at Ford research and advanced engineering Europe were testing predictive smart light system technology that uses real-time location data to show the car the way to go effectively. The prototype advanced lighting system uses GPS location data, advanced technologies, and highly accurate street geometry information to identify turns in the road ahead accurately.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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