

## **Automotive Smart Glass - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029**

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### **Report description:**

The Automotive Smart Glass Market size is estimated at USD 2.75 billion in 2024, and is expected to reach USD 7.42 billion by 2029, growing at a CAGR of 22.03% during the forecast period (2024-2029).

#### Key Highlights

- The COVID-19 pandemic had a negative impact on the market as vehicle production declined, and the shutdown of manufacturing units resulted in a slowdown in the market. However, as restrictions were relieved and automobile production started gaining traction, the market was anticipated to have positive growth during the forecast period.
- Innovations in automotive smart glass and rising applications of smart glass in premium and luxury vehicles are expected to drive demand in the market. Further, the growing participation of key automotive players like Tesla, Tata, Mercedes, BMW, etc., in the market through active launches and collaborations with automotive smart glass manufacturers is anticipated to further support the growth of the market during the forecast period.
- Expansion of the automotive industry across the globe, along with increasing sales of sports utility vehicles (SUVs) and premium cars, is expected to drive sales of automotive smart glass. Mercedes-Benz uses smart glass technology for the "Magic Sky Control" roof on some of its vehicles, and McLaren offers it as an option in the McLaren 720S. Some car brands, including Jaguar and Land Rover, have recently released new car models with heated front windshields. A heated front windshield is ideal for Pennsylvania winters because it's able to defog and defrost faster than standard types.
- Regions like Asia-Pacific and Europe are forecasted to be the fastest-growing automotive smart glass market. In Asia-Pacific, China is expected to continue to be the driver of the market, with Japan being the hub of technology in the automotive sector.

Automotive Smart Glass Market Trends

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## Rise in penetration of suspended particle devices (SPD) in vehicles

- Worldwide car sales grew to around 67.2 million automobiles in 2022, up from around 66.7 million units in 2021. In 2020 and 2021, a faltering global economy caused the industry to experience a downward trend. In 2022, COVID-19 and the Russian war in Ukraine contributed to shortages in the automotive semiconductor market and additional supply chain disruptions. Despite these challenges, 2023 sales growth is anticipated.
- Suspended particle devices (SPD) can improve users driving experience. SPD-smart sunroofs, roof systems, windows, and visors turn car glass or plastic into a dynamically adjustable and responsive light-management system. Depending on the post-processing operations, SPD glasses provide a minimum haze of 2.5%.
- SPD glasses are more efficient than other smart glasses, with an average consumption of 1.5 watts per sq. m compared to the 3 watts per sq. m of the energy requirement of PDLC smart glass. According to Continental, SPD smart glass results in a 4 g per km carbon dioxide reduction, improving the driving range by 5.5%. Using SPD smart glass, Mercedes reduced the heat by up to 10 Celsius (18 Fahrenheit).
- A suspended particle device, a film that converts the transparency of car sunroofs and other glass to opaque, prevents the infrared and ultraviolet radiation that overheats interiors and prematurely ages leather and other materials. For instance, SPD glass is now available on a few high-end Mercedes models, notably the S-class sedan and SL roadster.
- Several countries implemented limitations on the distribution and transit of raw materials due to the impact of COVID-19, disrupting the supply chain of smart films. The limits had a significant influence on smart glass pricing. Shutdowns of manufacturing plants, particularly in the automobile sector, resulted in a massive decline in market income.
- Lack of consumer awareness of long-term advantages and a rising number of complications, such as high cost, would most likely operate as a market restraint for the expansion of SPD for smart windows in the projected period. The high cost of items and their ease of availability will be the most significant and immediate barrier to the market's growth. However, increased vehicle sales across the Globe are anticipated to fuel the market for smart glass.

## Europe is Expected to Grow at the Fastest Rate in the Market

- The demand for luxury cars has increased across the region over the past few years. Additionally, there has been a huge shift from traditional features toward advanced convenience features, such as a sunroof and automatic tinted glass, owing to the increasing demand for advanced convenience features and luxury cars over the forecast period post-pandemic.
- Some of the major factors driving the growth of the market are a rise in sales of passenger cars in the major markets of Europe, increasing sales of luxury cars, and the increasing demand and preference for a sunroof in the vehicles.
- 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 when it comes to the production and innovation of 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 that the strong innovation hub plays a pivotal role in the demand for automotive smart glass.
- In May 2022, Microsoft and Volkswagen collaborated to put augmented reality glasses in motion. The future of mobility by researchers at German automaker Volkswagen, who see augmented reality as one of the key elements of the future mobility concept. To get a little closer to this vision, Volkswagen has worked with Microsoft to make the mixed-reality glasses HoloLens 2 available for the first time in mobile vehicles.
- The automotive industry in the United Kingdom witnessed a downturn due to various factors, including COVID-19 and Brexit, which impacted vehicle sales from 2017 onward. The production figures, especially for passenger cars, have also been decreasing.
- France has witnessed some improved investments in new technology like artificial intelligence (AI) and smart glass in automotive

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fleets from foreign automakers. For instance, in February 2022, Israeli smart glass technology provider Gauzy announced that it would acquire a French company to expand its offerings and become the world's leading solution company for lighting control and shading system technology.

- Terms and conditions for the acquisition of Vision Systems, based in France, a Tieronesupplier developing shading solutions for the aerospace, land transportation, and marine industries. Gauzy has worked with many automakers around the world, including Daimler, to integrate its optical control glass technology into automobiles. We partner with BMW, LG, and auto parts suppliers Brose, Vision Systems, Texas Instruments, and others to offer a variety of lighting and shading products.

- Several new car launches with smart glass are likely to encourage manufacturers to operate in this segment. Hence, many car manufacturers, like Audi, BMW, Nissan, and Range Rover, are offering sunroof options in their popular models, like Q-series, X-series, Qashqai, and Evoque, respectively.

## Automotive Smart Glass Industry Overview

The automotive smart glass market is moderately consolidated, with a few major players such as Saint Gobin, AGC Inc., Nippon Sheet Glass Co. Ltd., Gentex Corporation, and Corning Inc. having significant shares in the market due to their well-established and developed products among various automakers. The companies are focusing on innovative technologies and following strategies, like acquisition, licensing the technology, and partnership, to expand, sustain, and capture the potential demand for rapid adoption of technological trends in the automotive industry.

For instance, in April 2022, AGP Group partnered with OMERS Capital Markets and BMO Financial Group and entered into a debt financing agreement of USD 250 million to accelerate the company's global expansion plan.

### Additional Benefits:

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

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