

## **Transparent Display - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029**

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### **Report description:**

The Transparent Display Market size is estimated at USD 3.31 billion in 2024, and is expected to reach USD 15.90 billion by 2029, growing at a CAGR of 36.86% during the forecast period (2024-2029).

The increasing demand for products such as smart glasses, and HMDs, along with the growing adoption of transparent displays in the advertising industry, are expected to drive the demand for transparent displays.

#### Key Highlights

-Displays and display technologies have evolved over the years, aided by technological advancements, to deliver higher resolution and lower power consumption. The advances in nanoparticles and transparent sensors in the electronic circuit have enabled the progression of the transparent display market. Currently, development is progressing on replacing hard, square panels with flexible displays that are more interactive to the consumer. This has provided a substantial opportunity for the transparent display market to grow.

-In recent years, OLEDs have become the largest used display panels for transparent display technology. The actual OLED materials are transparent, and it is possible to fabricate transparent OLEDs. This has enabled several display manufacturers to adopt OLEDs to develop and manufacture OLED displays. Considering the benefits, many vendors have started investing heavily in R&D related to OLED. OLED transparent displays are penetrating the market due to increasing demand for these transparent displays from head-mounted display (HMD) vendors.

-According to a study by Intel Corporation, the revenue opportunity of the AR/VR market remains strong, and it exceeded USD 45 billion in headset hardware sales in 2021. Further, hardware exceeded 80 billion units in 2021, up significantly from 9.4 billion units estimated to be sold in the intervening period. As display plays an important role in the AR/VR industry, the continuation of such trends is expected to create more growth opportunities for transparent display vendors.

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-Furthermore, transparent displays in HUDs are also gaining strong traction from the defense sector. Defense contractors and armed forces are planning to modernize their current HUD systems with innovative solutions. The integration of night vision in HUDs provides a realistic and holistic training experience, which is expected to be one of the major factors likely to impact the market growth positively.

-However, the high initial cost involved, along with low consumer penetration, has a high impact on the studied market. As a majority of customers across some of the biggest markets, such as India, China, Brazil, etc., are price sensitive, the high-cost tag associated with the transparent displays may hinder the market's growth during the forecast period.

-With the outbreak of the COVID-19 pandemic, the market for transparent displays had witnessed disturbances in the production and research and development activities, owing to the disruption in the supply of the raw materials required to manufacture.

However, with the condition returning back to normal with activities across various sectors resuming to pre-pandemic levels, the market is expected to offer growth opportunities to the vendors.

## Transparent Display Market Trends

### Automotive Sector to hold a Significant Market Share

- The global automotive industry is primarily believed to be on the cusp of tremendous change in manufacturing, sales, and the overall business model, owing to the rapid advances in new-age technologies, such as autonomous driving, augmented reality, and big data. Consequently, the automotive industry's ancillary verticals are fundamentally transforming due to these technological enhancements.

- While designing vehicles, manufacturers must ensure drivers receive essential information without unnecessarily distracting them from the road ahead. With a flexible OLED display, it has become possible through a revolutionary automotive heads-up display (HUD). Built on a thin plastic substrate, the transparent display can be integrated into the vehicle's windshield to add driver-friendly functionality without adding additional weight. It can also be customized with any color and shape segment during manufacturing.

- Transparent displays have become increasingly popular for automotive HUDs, speedometers, tachometers, and navigation system displays. The future applications of these displays in the transportation industry are also anticipated to be seen in smart windows and windscreens. For instance, Shenzhen NSE Electronics Co. Ltd offers a transparent car back window LED display is an in-vehicle Portable LED Sign. The transparent LED screen is more creative in displaying content than traditional LED screens. As the vehicle moves on the road, the advertising will be appreciated potentially. It will not block out light or the view on both sides, allowing the driver to see through the glass.

- Considering the benefits associated, leading display providers are increasing their investment in developing innovative solutions. For instance, in September 2021, LG Display, the world's leading innovator of display technologies, showcased its latest state-of-the-art Transparent OLED technology at the International Motor Show (IAA) 2021 held in Munich, Germany, in collaboration with world-leading material science and smart glass technology company.

- With the sales of automobiles set to increase across various parts of the world, and the production of the vehicles increasing after the set back created by the pandemic, the automotive sector is expected to drive the demand for transparent displays. According to OICA, the global production of automobiles had increased from 78 million in 2020 to 80 million in 2021, while the sales of passenger cars increased from 53.9 million in 2020 to 56.4 million in 2021.

### Asia-Pacific to Account for a Significant Growth Rate

- Asia-Pacific is expected to witness an increase in demand for transparent displays in various end users, such as automotive,

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where these displays are used as a windshield, retail shops, where these eye-catching displays are used for better advertisements, etc.

- The growth of the automotive sector, especially the electric vehicle, is expected to create a favorable market scenario for the transparent display market as automotive manufacturers are increasingly incorporating advanced features into automobiles. China, the largest EV maker, is expected to remain a major demand driver for transparent displays.
- According to the China Association of Automobile Manufacturers, in 2021, China was the leading electric vehicle manufacturer, with about 2.9 million vehicles. Additionally, China also produced 601,000 plug-in hybrid electric vehicles.
- Furthermore, the growth of the transportation sector, especially in the countries such as China, Taiwan, and India, wherein transparent displays are increasingly being adopted as digital signage, and advertising boards are expected to continue to be the major demand drivers for transparent displays. For instance, in May 2021, the Chengdu metro, a fully automated metro, adopted an open cockpit and LUMINEQ in-glass display in its line 9.
- The regional companies are exploring opportunities across various applications to expand their reach. The major efforts are being made in research and development activities to facilitate the development of new use cases of the transparent display, establishing partnerships with distributors and display manufacturers. The increasing penetration of digital solutions across various end-user industries is further expected to support the growth of the studied market in the coming years.

## Transparent Display Industry Overview

The Transparent Display market is competitive owing to the presence of limited players, most of whom operates globally and has a strong market presence. To gain a competitive advantage, the vendors are increasingly focusing on developing innovative solutions and establishing a robust supply chain. Some of the major players in the transparent display market are LG Electronics, Panasonic Corporation, Samsung Electronics, Planar Systems Inc., and TDK Corporation, among others.

- June 2022 - LG Display announced that it has collaborated with Korea-based bakery Paris Baguette to install 38 transparent OLED displays for use as digital signage. According to the company, this was the largest number of transparent displays deployed at a single site.
- June 2022 - SBS, a leading broadcast service provider, unveiled OLED's new aspects that have not been seen in a conventional display on two recent broadcasts. The broadcaster showcased various content such as the Cheongwadae(Blue House) opening inauguration ceremony, presidential office introduction, and stock market through a Transparent OLED display.

### Additional Benefits:

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

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