

## **Flexible Display Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

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### **Report description:**

The Flexible Display Market is anticipated to grow by registering a CAGR of 32.8% during the forecast period. The growing demand for smartphones and wearable devices, and the increasing demand for connected technologies and other smart home products, are major factors driving the demand for flexible display technology.

#### Key Highlights

Flexible displays offer various advantages over conventional display technologies. They are lightweight, bendable, ultra-thin, shatter-proof, unbreakable, portable, and have low energy consumption. Although curved displays offer notable improvements over flat displays regarding viewing angle and depth of picture quality, they differ from flexible and foldable ones.

The most significant advantage of flexible displays is their durability. Since this screen can be bent and manipulated, it tends to absorb fall and collision impact better than solid glass structures currently in application. Other potential applications of flexible displays in the future include the integration in clothing that changes color or pattern instantly as per the surroundings. The realization of this potential is expected to boost the demand for flexible displays significantly.

The smartphone market drives the global demand for flexible screens. As a result, various vendors are increasing their focus on the smartphone segment. Apart from this, vendors are also focusing on enhancing their presence in the TV and computer (Laptops and Desktop screens) segment and innovating their product offerings accordingly. For instance, in January 2021, TCL CSOT launched two innovative products, a 6.7-inch AMOLED Rollable Display and a 17-inch Printed OLED Scrolling Display, at CES 2021.

OLED display type has recently gained popularity due to its simplified design, better image quality, and limited flexibility. OLED screens do not involve backlighting and can be thinned and molded into specific shapes. OLED display types are currently expensive for large screens, such as televisions and computer monitors. However, they still gain benefits for economies of scale in this segment.

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Initial market demand is expected from emerging economies in the consumer electronics segment of APAC, North America and Europe, thereby driving the market due to the adoption of flexible OLED displays. As the flexible OLED is considered one of the best solutions for the next-generation smartphone market, this display technology is gaining shares even in a market with lesser demand.

However, higher cost and affordability issues in the initial stage of availability, complex manufacturing processes, seasonal demand patterns, and uncertain economic outlook might hinder the market growth during the forecast period.

COVID-19 had a detrimental influence on the market, especially during the initial phase of the pandemic as lockdown measures imposed across various countries disrupted the supply chain for phone and display production. However, with the consumer electronics market recovering quickly, driven by high demand for products such as smartphones, laptops, and so on, the flexible display market is expected to grow further during the forecast period.

## Flexible Display Market Trends

### Adoption of Flexible Display to Grow Significantly in Smartphones and Tablets

Although the adoption of flexible displays is still in the nascent stage, the technology is considered the next big thing for the smartphone industry, as the technology offers many benefits. For example, it lets the user quickly increase the size of the device when watching video content and makes it smaller to fit in their pocket when needed.

Additionally, it also provides more aesthetics and functionality to the device. For instance, flexible displays can give customers better multitasking capabilities on mobile devices. In the case of smartphones, foldable displays can eliminate the need for a tablet as a secondary device in some cases. The display is a visual output surface designed to withstand being folded, bent, and twisted in smartphones.

Various researchers have been working on making flexible displays reliable and cost-effective, leading to the development of new displays. For instance, in April 2021, TCL developed a Fold 'n' Roll concept that transforms a 6.87-inch phone into a 10-inch tablet, using a folding hinge and extendable mechanism to expand from phone to tablet. The company also showcased the Tri-Fold foldable concept smartphone device (up to 10-inch tablet) that relies on two hinges, which is a unique concept and targets an entirely different user group.

OLED is an emerging display technology that is increasingly being used in many mobile devices. OLEDs are the latest generation technology in the display industry and provide superior performance and enhanced optical characteristics compared to older LEDs and LCDs. Furthermore, smartphone manufacturers like Samsung, Motorola, and LG are increasingly using these flexible OLED displays.

With the number of smartphone users increasing, the industry is expected to create significant opportunities for flexible display providers. For instance, according to Ericsson, at the end of 2021, there were about 6.3 billion smartphone subscribers, accounting for about 77 % of all mobile phone subscriptions. This number is expected to reach 7.8 billion in 2027.

### Asia-Pacific is Expected to Hold a Significant Market Share

The Asia-Pacific is emerging as a leading region for developing flexible displays, particularly in the consumer electronics industry; countries in the region, particularly those in East Asia (China, Taiwan, Japan, South Korea, and Singapore), share a steady growth primarily related to flexible displays.

OLED displays are witnessing increased demand in the Asia Pacific region as end-users across various industry verticals emphasize the importance of high-quality displays. Advancements in material technologies are further driving the development of new applications of flexible displays and flexible electronics, which are expected to account for a significant share of the market

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demand and revenues over and beyond the forecast period.

The regional market is driven by the consolidation of market players, resulting in many advanced display technologies dominating the market. Moreover, Asian countries are the base for display manufacturing foundries, which positions this region in a dominating market position.

Emerging players in the Asia-Pacific's flexible display market are filing patents for their technology, which is likely to increase the competition in the market. The leading flexible display manufacturers of the Asia-Pacific region, such as Samsung, LG Display, and others, are investing considerably in enhancing their production facilities to introduce new products.

The emergence of wearables, such as smartwatches, and other devices, are also expected to provide the market with the impetus for demand generation. According to Cisco Systems, the number of connected wearable devices in Asia is expected to reach 311 million in 2022, from 258.2 million in 2021. Such trends are expected to support the market's growth during the forecast period.

## Flexible Display Market Competitor Analysis

The Flexible Display Market is moderately fragmented, with many regional and global players. Flexible screens in automotive applications, and the growing adoption of smartphones and televisions, provide lucrative opportunities in the flexible display market. To further consolidate their market presence, the vendors are increasing their R&D expenses to make the technology more reliable and cost-effective. Some of the key players in the market are LG Display Co., Samsung Electronics Co. Ltd, and BOE Technology Group Co.

In February 2022, BOE announced the development of OLED flexible "N" shaped foldable display technology support in a screen that can achieve internal and external folding. According to the company, the display prototype is equipped with the original size of 12.3 inches of flexible AMOLED display, which after an exterior fold can become 8.6 inches size, and then after an internal folding can become a portable form of 5.6 inches.

In January 2022, Royole Corporation, a flexible display firm, signed a strategic partnership with CIOT, a leading robotics company. As part of the agreement, CIOT will purchase sensors, flexible display screens, and software and hardware integration solutions from Royole Corporation.

### Additional Benefits:

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

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