OLED Display Forecasts 2016-2026: The Rise of Plastic and Flexible Displays

Description: OLED technology has recently gained significant market share in the display market. OLED displays are now mass produced for mobile phones, tablets, TVs, and wearables. The author forecasts the market for all types of OLED displays will reach nearly $16bn this year and will grow to $57bn in 2026.

The latest evolution is plastic and flexible displays. Compared to conventional glass-based displays, plastic AMOLED panels are much thinner and lighter, enabling either slimmer devices or bigger batteries. Future flexible displays will also make foldable mobile devices a reality. The two main segments are currently smart phones and wearable devices such as smart watches. However, as the technology matures it will be possible to use those displays in other applications, such as automotive displays.

Both Samsung Display and LG Display have recently announced significant investment to expand their production capacity. The author has upgraded the forecast and now expects plastic and flexible displays to grow rapidly from a $2bn market this year to $18bn by 2020.

The rise of plastic and flexible displays will be accompanied by a shift from glass substrates to plastic substrates such as polyimide. However, glass-based displays will remain an important technology, especially in the TV segment where scale-up and cost reduction are still the main challenges.

New 4K OLED TVs were recently launched by LG and Panasonic to critical acclaim. However, some TV manufacturers are hedging their bets by investing in LCD panels enhanced with quantum dots. These so-called "quantum dot LCD" TVs will be positioned as a cheaper upgrade from existing sets. The author expects that new production technologies will make OLED more competitive, allowing the market for OLED TV panels to grow at 26% CAGR over the next decade.

New applications in wearable devices such as augmented reality (AR) and virtual reality (VR) are also coming to market and provide new opportunities for suppliers of OLED displays. Sony, Oculus, and HTC have already announced new VR headsets based on AMOLED technologies. For AR glasses, OLED microdisplays are a major contender against existing LCoS (liquid crystal on silicon) technology.

Based on a deep understanding of the technology roadmap and the existing bottlenecks, the author has forecasted the OLED display market in eight segments:

- Mobile phone displays
- Tablet and notebook displays
- TV panels
- Automotive and aerospace
- Wearable electronics
- Industrial and professional displays
- Microdisplays
- Other applications

The author has been tracking printed, organic, and flexible electronics since 2001. This report gives a unique perspective on the OLED display market, leveraging the full expertise of our analysts and the direct interviews with companies in the value chain.

The report will be useful to:

- Players in the OLED value chain who need detailed market forecasts
- End-users who wish to incorporate plastic and flexible displays in their products
- Investors who want a complete overview of the OLED display market

Key features of this report:

- Executive Summary available as a separate 36 slide presentation (PDF format)
- Detailed 10-year forecasts by market segment
- Detailed 10-year forecasts by display type (AMOLED rigid glass, AMOLED rigid plastic, AMOLED flexible,
PMOLED, segmented, and microdisplays
- The current status on printed OLED displays
- Technologies and players in the OLED value chain (substrate, backplane, transparent conductor, barrier film)
- Company profiles based on direct interviews

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