

# **Microdisplay Market by Product (HMDs, HUDs, Cameras/EVFs, Projectors), Technology (OLED, LCoS, LCD), Vertical (Consumer, Industrial & Enterprise, Automotive, Retail & Hospitality, Medical), Resolution and Brightness, and Region - Global Forecast to 2028**

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## **Abstracts**

The global microdisplay market was valued at USD 1.1 billion in 2023 and is projected to reach USD 3.2 billion by 2028; it is expected to register a CAGR of 23.7% during the forecast period. During the anticipated period, the microdisplay market's OLED segment is expected to experience significant growth. The rapid rate of adoption of these displays with advanced capabilities and their use in HMDs can be attributed for the segment's expansion. As OLED technology delivers better power, quicker response times, and more color options, OLED microdisplays are being employed in AR HMDs more frequently. OLED displays for HMDs have been introduced by a number of microdisplay manufacturers, including Kopin Corporation (US), Samsung Electronics (South Korea), and Yunnan OLiGHTeK Opto-Electronic Technology Co., Ltd. (China).

Higher FHD segment is projected to grow at higher CAGR during forecast period

The market for higher FHD is projected to grow at a higher CAGR during the forecast period. A standard FHD resolution is characterized by 1,920 pixels horizontally and 1,080 pixels vertically on displays. Fraunhofer FEP demonstrated a curved OLED microdisplay panel at the Society for Information Display (SID) held in the US in 2018. This curved OLED microdisplay is of 1-inch diagonally and has a resolution of 1200x1920. The panel was developed under the LOMID project funded by the European Union.

NTE Devices to register growth at higher CAGR

NTE Devices is expected to experience the higher CAGR during the forecast period. OLED technology-based microdisplays are increasingly used in NTE devices as OLED technology offers improved power efficiency, fast response, and increased colors. The SVGA+ Rev3 OLED?XL microdisplay is a power-efficient OLED display solution provided by eMagin Corporation for near?eye personal viewer applications. Asia Pacific is expected to continue witnessing the highest demand for microdisplays to be deployed in NTE devices during the forecast period owing to the presence of key EVF vendors in Japan.

Automotive segment is likely to grow at higher CAGR

Automotive segment is likely to experience the highest CAGR during the forecast period. The rising adoption of AR technology has made it possible for automakers to provide consumers an extensive lineup of AR HUD models with their specifications. HUDs directly project important information into drivers' lines of sight. They are popular vehicle gadgets because they enable drivers to access directions, answer calls and texts, and manage music without taking their eyes off the road. HOLOEYE Photonics AG, WiseChip Semiconductor, and Himax Technologies, Inc are a few players who offer microdisplays for automotive applications.

North America to register growth at highest CAGR

North America is expected to witness the second highest CAGR during the forecast period. The growth of the microdisplay market in North America can be attributed to the increasing availability of advanced devices, such as head-mounted displays (HMD). This has led to their use in several AR and VR applications in consumer-centric, healthcare, aerospace & defense, and industrial sectors for simulation, training, and maintenance purposes. The projectors in the North American region have witnessed high penetration in the education sector for teaching purposes and the consumer sector for entertainment. In addition, these microdisplay-based projectors are witnessing increasing adoption in the commercial and business sectors for promotions and presentation purposes, respectively. Some of the manufacturers of microdisplays in North America include Kopin Corporation (US), eMagin Corporation (US), Liteye (US), OMNIVISION (US), and MicroVision (US).

Breakdown of primaries

The study contains insights from various industry experts, ranging from component

suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type - Tier 1 – 25%, Tier 2 – 40%, Tier 3 – 35%

By Designation— C-level Executives - 75%, Managers - 25%

By Region—North America - 40%, Europe - 23%, Asia Pacific - 26%, RoW - 11%

The microdisplay market is dominated by a few globally established players such as Sony Group Corporation; Seiko Epson Corporation; eMagin Corporation; Kopin Corporation; Himax Technologies, Inc. The study includes an in-depth competitive analysis of these key players in the microdisplay market, with their company profiles, recent developments, and key market strategies.

#### Research Coverage:

The report segments the microdisplay market and forecasts its product, by resolution and brightness, by vertical, by technology, and region. The report also discusses the drivers, restraints, opportunities, and challenges pertaining to the market. It gives a detailed view of the market across four main regions—North America, Europe, Asia Pacific, and RoW. Supply chain analysis has been included in the report, along with the key players and their competitive analysis in the microdisplay ecosystem

#### Key Benefits to Buy the Report:

Analysis Of key drivers (Increasing demand for microdisplays in wearable devices, Evolving microdisplays in terms of size and technologies, Increasing demand for AR devices in healthcare applications, Rising adoption of HMDs in different industries, Growing demand for OLED microdisplays). Restraint (Saturation of markets for digital cameras and projectors, High manufacturing costs of microdisplays). Opportunity (Adoption of microdisplays in aerospace and defense sector, Increase in demand for medical displays, Presence of key players in Asia Pacific). Challenges (Development of power-efficient microdisplays with high-resolution and brightness, Reduction in display latency).

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the microdisplay market

**Market Development:** Comprehensive information about lucrative markets – the report analyses the microdisplay market across varied regions

**Market Diversification:** Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the microdisplay market

**Competitive Assessment:** In-depth assessment of market shares, growth strategies and service offerings of leading players like Sony Group Corporation; Seiko Epson Corporation; eMagin Corporation; Kopin Corporation; Himax Technologies, Inc. among others in the microdisplay market.

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