

# **Near-Eye Display Market Segmentation: By Device Type (AR Devices, VR Devices, Others [EVF and MR Devices]), By Components (Image Generators, Optical Combiners, Imaging Optics), By Technology (TFT LCD, AMOLED, LCoS, OLEDOS, MicroLED, DLP, Laser Beam Scanning), By Vertical (Consumer, Automotive, Aerospace & Defense, Medical, Others [Education and Construction]), And Region – Global Analysis of Market Size, Share & Trends For 2019–2021 And Forecasts To 2031**

<https://marketpublishers.com/r/N5BAEC0F13F5EN.html>

Date: June 2022

Pages: 275

Price: US\$ 4,950.00 (Single User License)

ID: N5BAEC0F13F5EN

## **Abstracts**

[ 170 + Pages Research Report ] Near-Eye Display Market to surpass USD 13 billion by 2031 from USD 1.4 billion in 2021 at a CAGR of 25.2% in the coming years, i.e., 2021-2031.

### **Product Overview**

NEDs, also known as head mounted displays (HMDs) or wearable displays, project a virtual image into one or both eyes' field of view. To the naked eye, the virtual image appears to be considerably larger than the comparatively small display panel and optics employed to make it. Near-eye displays are the headphones of the display industry, allowing users to create compact, portable, and personal viewing experiences. Near-eye displays provide several advantages over standard displays, including their small size, portability, light weight, low power consumption, and ability to be see-through.

### **Market Highlights**

Global Near-Eye Display Market is expected to project a notable CAGR of 25.2% in 2031.

Global Near-Eye Display Market to surpass USD 13 billion by 2031 from USD 1.4 billion in 2021 at a CAGR of 25.2% in the coming years, i.e., 2021-2031. Factors driving the growth of the near-eye display market include the increased use of OLEDoS micro displays in novel applications such as projection, imaging, smart glasses, and the rapid acceptance of AR devices in many verticals.

#### Global Near-Eye Display Market: Segments

VR segment is expected to lead with the highest CAGR during the forecast period 2021-31

By Device Type, the global Near-Eye Display Market is divided into AR Devices, VR Devices, Others (EVF and MR Devices). In past years, VR devices dominated the near-eye display industry. Near-eye display-based HMDs power these gadgets, which deliver a totally digital experience that simulates a three-dimensional environment in the real world. Near-eye displays are widely used in VR systems since they are inexpensive and can be mass-produced by Asian manufacturers. By allowing users to immerse themselves in a highly realistic environment, virtual reality gadgets have transformed consumer applications.

TFT LCD segment is expected to progress with the highest CAGR during 2021-31

On the basis of technology, the global Near-Eye Display Market is fragmented into TFT LCD, AMOLED, LCoS, OLEDOS, MicroLED, DLP, and Laser Beam Scanning. The market for near-eye displays was dominated by TFT LCD technology. This technology allows for lightweight, small displays with great resolution and low power consumption. These displays can also be mass-produced and widely used in virtual reality systems. These reasons are propelling the market for TFT LCD near-eye displays forward.

#### Market Dynamics

##### Drivers

Significant growth in the use of OLEDoS micro displays

The rise of the metaverse, the spike in the use of OLEDoS tiny screens, and the expanding use of AR and VR devices all contribute to the market's promising growth potential. The advent of the Metaverse, as well as increased investments and innovations from technology heavyweights, will play a crucial role in moving the near-

eye display market forward in the near future. Due to enhanced qualities such as greater contrast, faster response time, lower weight, more compact size, negligible image blurring, and a wider operational temperature range than LCDs, OLEDoS micro displays are gaining traction. Since they are widely employed in EVFs and HMDs, they have outperformed traditional LCD and LCoS micro display technologies.

Growing investments in R&D Activities for product improvements

Many scientists anticipate that OLEDoS will eventually replace current display technology. As a result, a growing number of companies are engaging in research and development efforts linked to OLEDoS technology. OLEDoS technology-based displays are offered by Kopin Corporation and SeeYA Technology Corporation, among others.

Restraint

Number of side-effects caused by AR-based Gaming Devices

Health difficulties among gamers are on the rise, thanks to the introduction of AR-based gaming devices. AR games are extremely engaging and keep users interested for extended periods of time, leading to difficulties including anxiety, eye strain, obesity, and a lack of concentration. Since AR technology is immersive, it can cause anxiety or worry when worn for extended periods of time. AR devices expose consumers to dangerous electromagnetic frequency radiation, which can cause disease, in addition to stress.

Global Near-Eye Display Market: Key Players

Sony Group Corporation

Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis

Himax Technologies, Inc.

Kopin Corporation

eMagin Corporation

MICROOLED Technologies

BOE Technology Group Co., Ltd.

Syndiant, Inc.

Plessey

JBD Xianyao Display Technology

TriLite Technologies GmbH

Other Prominent Players

Global Near-Eye Display Market: Regions

Global Near-Eye Display Market is segmented based on regional analysis into five major regions: North America, Latin America, Europe, Asia Pacific and the Middle East and Africa. Due to the growing adoption of AR and VR technologies by the consumer and medical verticals, the near-eye display market in Asia Pacific is predicted to grow at the fastest CAGR. China's market growth can be ascribed to the fact that it is one of Asia Pacific's major consumer electronics marketplaces. The widespread availability of lightweight, low-cost near-eye display-based HMDs in Asia Pacific will encourage more enterprises in the region to invest in AR and VR HMDs. These reasons are expected to boost the near-eye display market's growth in the near future.

Impact of COVID-19 on Near-Eye Display Market

With the breakout of COVID-19, most manufacturers are focusing their efforts on developing microdisplays for medical applications in order to boost profits. Furthermore, manufacturers are actively involved in developing microdisplays, particularly for application in the healthcare industry.

Global Near-Eye Display Market is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States, Mexico, and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, and Rest of Europe

Asia Pacific Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, and Rest of Asia Pacific

Middle East and Africa Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, South Africa, and Rest of Middle East and Africa

The global Near-Eye Display Market report also contains analysis on:

Near-Eye Display Market Segments:

By Device Type

AR Devices

VR Devices

Others (EVF and MR Devices)

By Components

Image Generators  
Optical Combiners  
Imaging Optics  
By Technology  
TFT LCD  
AMOLED  
LCoS  
OLEDOS  
MicroLED  
DLP  
Laser Beam Scanning  
By Vertical  
Consumer  
Automotive  
Aerospace & Defense  
Medical  
Others (Education and Construction)  
Near-Eye Display Market Dynamics  
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