

Asia Pacific Optical Sensors Market Size & Share Analysis - Growth Trends & Forecasts (2025 - 2030)
Industry: Technology, Media & Telecom (TMT)
URL: <https://www.mordorintelligence.com/industry-reports/asia-pacific-optical-sensors-market-industry>

Asia Pacific Optical Sensors Market Size and Share Study Period | 2019 - 2030 |
Forecast Data Period | 2025 - 2030 |
Historical Data Period | 2019 - 2023 |
CAGR | 12.60% |
Market Concentration | Medium |
Major Players*Disclaimer: Major Players sorted in no particular order

|
Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0. View Global Report Select Another Geography Europe [<https://www.mordorintelligence.com/industry-reports/europe-optical-sensors-market>] North America [<https://www.mordorintelligence.com/industry-reports/north-america-optical-sensors-market>] United States [<https://www.mordorintelligence.com/industry-reports/united-states-optical-sensors-market-industry>]

Asia Pacific Optical Sensors Market Analysis by Mordor Intelligence The Asia Pacific Optical Sensors Market is expected to register a CAGR of 12.6% during the forecast period.

* Optical sensors are important electronic components that convert optical signals into electronic signals. Optical sensors have very few commercial applications as stand-alone components. However, when integrated as a system with several measuring devices and electrical components, optical sensors gain a high market value due to the wide range of applications that exist across numerous end-user industries.

* Advancements in self-driving cars and Advanced Driver Assistance Systems have increased demand for these sensors in recent years. Because optical sensing solutions are considered a superior technology for measuring distances, positions, and displacements, they are increasingly used in self-driving automotive applications. Continuous development of light sources for optical sensors is also expected to play a crucial role on the road to automated, self-driving vehicles.

* Optical sensors developed based on molecularly imprinted nanomaterials (MIP) at the nanoscale outperform their conventional-sized counterparts. They are distinguished by their faster response time and ease of integration with other functionalities. In addition, the use of fiber-optic current and voltage sensors in electricity transmission, which offers significant advantages over traditional current and voltage measurement technologies, is expected to drive the market under consideration.

* Japan and India are the other two countries with a large number of electronics and semiconductor manufacturers as well as end-users. These two countries also reported more COVID-19 infected cases and are still fighting the virus's spread. Though the countries have relaxed the lockdown rules and allowed manufacturing plants to operate, the decrease in demand and supply has significantly impacted the optical sensors market players in both countries.

* However, several kinds of research are being conducted to utilize optical sensors for detecting the COVID-19 virus. In line with this, in April 2022, a nanotechnology research group from the University of Georgia announced the development of nanotechnology-based optical sensors for rapid coronavirus detection. Such developments in optical sensors and their increasing applications in the medical industry are expected to bolster market growth.

Asia Pacific Optical Sensors Market Trends and Insights Growing consumer electronics

ics demand will boost the market growth* The growing number of optical sensor applications in consumer electronics and medical devices is expected to drive demand for medical-grade and miniaturized optical sensors.

* Consumer electronics devices, such as laptops, tablets, and smartphones, are increasingly being outfitted with optical sensors for a variety of applications, including gesture recognition, device security, and advanced biometrics. Furthermore, the growing demand for on-screen facial recognition systems in smartphones will drive optical sensor adoption in the Asia Pacific region.

* Companies are increasingly focusing on technology and innovation in pixel resolution, count, and size to improve image and data quality. It is expected that the combination of better fabrication techniques and new physical effects will open up new opportunities in micro-engineered and nano-engineered optical sensors.

* Customers in Asia-Pacific are increasingly interested in health and fitness, which has resulted in the use of optical sensors for wearable applications such as tracking physical activity, health, and wellness. In wearable form factors, these sensors enable continuous heart rate detection and oxygen saturation measurements.

* In June 2021, Samsung and Google announced the testing of a wearable platform ahead of the release of the next Galaxy Watch. The collaboration was initially announced as a "unified platform," allowing developers to create a single app for both Google's Wear OS and Tizen, Samsung's open-source operating system for its own smartwatches.

* Smartphones have taken the world by storm. The boom in Asia Pacific markets has been enormous and is a huge market for every company that makes smartphones. The growth of this industry in countries like India and China is huge, with intense competition from companies like Apple, Samsung, and HTC and between home-grown companies in the two countries like Xiaomi, Oppo, Micromax, Karbonn, etc. There is a huge demand in both the low-cost smartphone segment and the high-end segment.

* For instance, Xiaomi sub-brand Redmi announced the launch of its first smartwatch in India in May 2021. Also during the same time, the company introduced the Redmi Note 10S in a virtual event. Redmi currently sells the fitness band Redmi Smart Band Black in India for Rs 1,399. Xiaomi, on the other hand, sells the Mi Watch Revolve Chrome smartwatch in silver for Rs 8,999, alongside various Mi fitness smart bands.

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Automotive segment to hold a significant share* Automobile manufacturers strive to meet the demand for high-profile vehicles and electric vehicles (EVs) and low fuel consumption by building lighter-weight cars and favoring aluminum over iron. As the use of mixed production lines containing aluminum and iron grows, so is the demand for the same sensing distance proximity sensors with sufficiently long sensing ranges.

* In 2021, China produced not only the most passenger cars in the Asia-Pacific region but also the most passenger cars worldwide. It is also expected that Chinese manufacturers such as BYD Auto Co. Ltd. will overtake American manufacturers such as Tesla in the electric car segment.

* Furthermore, Rockwell released the new Allen-Bradley 856T Control Tower Stack Light system as part of smart devices in April 2021. These innovations in industrial automation and smart devices reflect the company's desire for innovation and leverage of its products under sensors, including proximity sensors required for intelligent and smart devices.

* However, many self-driving vehicle manufacturers in Asia, such as Cruise, use over 20 optical sensor-based modules to enable hands-free driving in their vehicles. However, most cars are still in the early stages of development and may require several years of R&D and regulatory approvals before reaching the consumer market. As these manufacturers move toward commercial production of these self-driving vehicles, demand for optical sensor modules from the automotive industry is expected to rise significantly in Asia.

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Competitive LandscapeThe Asia Pacific Optical Sensors Market is fragmented, with several major players. These major players, including Rockwell Automation Inc., Atmel Corporation, STMicroelectronics NV, SICK AG, and many others, are focusing on expanding their customer base in foreign countries. These companies leverage strategic collaborative initiatives to increase their market share and profitability. Companies in the market are also acquiring start-ups working on optical sensor market technologies to strengthen their product capabilities.

* June 2022 - Metalenz, the first company to commercialize meta-optics, and STMicroelectronics, a global semiconductor leader serving customers across the spectrum of electronics applications, announced that ST's recently released VL53L8 direct Time-of-Flight (dToF) sensor would be the highly anticipated market debut of the meta-optics devices developed through their collaboration, which was announced in June 2021.

Asia Pacific Optical Sensors Industry Leaders* Honeywell International Inc.

* Rockwell Automation Inc.

* Atmel Corporation

* Robert Bosch GmbH

* STMicroelectronics NV

* *Disclaimer: Major Players sorted in no particular order

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Recent Industry Developments* September 2022 - The Northeast Frontier Railway (NFR) announced rolling out an optical sensor technology to alert locomotive drivers about the presence of animals in the vicinity of trains. The development took place after the amplifying system imitating the buzz of a swarm of honey bees to keep wild jumbos away from rail tracks failed to give an ultimate solution to curb elephant deaths.

Table of Contents for Asia Pacific Optical Sensors Industry Report1. INTRODUCTION

* 1.1 Study Assumptions and Market Definition

* 1.2 Scope of the Study

2. RESEARCH METHODOLOGY

3. EXECUTIVE SUMMARY

4. MARKET INSIGHTS

* 4.1 Market Overview

* 4.2 Industry Attractiveness - Porters Five Forces Analysis* 4.2.1 Bargaining Power of Suppliers

* 4.2.2 Bargaining Power of Buyers

* 4.2.3 Threat of New Entrants

* 4.2.4 Threat of Substitutes

* 4.2.5 Intensity of Competitive Rivalry

- * 4.3 Industry Value Chain Analysis
- * 4.4 Assessment of Impact of COVID-19 on the Market

5. MARKET DYNAMICS

- * 5.1 Market Drivers* 5.1.1 Increasing demand from consumer electronics
- * 5.1.2 Rising adoption of IoT
- * 5.2 Market Challenges* 5.2.1 Lack of awareness of newer technology

6. MARKET SEGMENTATION

- * 6.1 By Sensor Type* 6.1.1 Fiber Optic Sensors
- * 6.1.2 Image Sensors
- * 6.1.3 Position Sensors
- * 6.1.4 Ambient light
- * 6.1.5 Proximity Sensors
- * 6.1.6 Infrared Sensors
- * 6.2 By Application* 6.2.1 Industrial
- * 6.2.2 Medical
- * 6.2.3 Biometric
- * 6.2.4 Automotive
- * 6.2.5 Consumer Electronics
- * 6.2.6 Other Applications
- * 6.3 By Country* 6.3.1 China
- * 6.3.2 India
- * 6.3.3 South Korea
- * 6.3.4 Japan
- * 6.3.5 Rest of Asia Pacific

7. COMPETITIVE LANDSCAPE

- * 7.1 Company Profiles* 7.1.1 Honeywell International Inc.
- * 7.1.2 Rockwell Automation Inc.
- * 7.1.3 Atmel Corporation
- * 7.1.4 Robert Bosch GmbH
- * 7.1.5 STMicroelectronics NV
- * 7.1.6 Shinkoh Electronics Co. Ltd.
- * 7.1.7 OZ Optics Ltd.
- * 7.1.8 SICK AG
- * 7.1.9 Keyence Corporation
- * 7.1.10 Neubrex Co. Ltd.

- * *List Not Exhaustive

8. INVESTMENT ANALYSIS

9. FUTURE OF THE MARKET

Asia Pacific Optical Sensors Market Report ScopeOptical sensors are used in a variety of commercial and research applications, including quality and process control, medical devices, metrology, imaging, and remote sensing. The expectation that optical sensors will have significant advantages over conventional sensor types in terms of properties drives R&D in the field. Asia Pacific Optical Sensors Market is segmented by Sensor Type (Fiber Optic Sensors, Image Sensors, Position Sensors, Ambient light and Proximity Sensors, Infrared Sensors) by Application (Industrial, Medical, Biometric, Automotive, Consumer Electronics, Other Applications) and by Region.

By Sensor TypeFiber Optic Sensors |
Image Sensors |
Position Sensors |
Ambient light |
Proximity Sensors |
Infrared Sensors |
By ApplicationIndustrial |
Medical |
Biometric |
Automotive |
Consumer Electronics |
Other Applications |
By CountryChina |
India |
South Korea |
Japan |
Rest of Asia Pacific |
By Sensor Type | Fiber Optic Sensors |
| Image Sensors |
| Position Sensors |
| Ambient light |
| Proximity Sensors |
| Infrared Sensors |
By Application | Industrial |
| Medical |
| Biometric |
| Automotive |
| Consumer Electronics |
| Other Applications |
By Country | China |
| India |
| South Korea |
| Japan |
| Rest of Asia Pacific |

Key Questions Answered in the ReportWhat is the current Asia Pacific Optical Sensors Market size? The Asia Pacific Optical Sensors Market is projected to register a CAGR of 12.6% during the forecast period (2025-2030)

Who are the key players in Asia Pacific Optical Sensors Market? Honeywell International Inc., Rockwell Automation Inc., Atmel Corporation, Robert Bosch GmbH and STMicroelectronics NV are the major companies operating in the Asia Pacific Optical Sensors Market.

What years does this Asia Pacific Optical Sensors Market cover? The report covers the Asia Pacific Optical Sensors Market historical market size for years: 2019, 2020, 2021, 2022, 2023 and 2024. The report also forecasts the Asia Pacific Optical Sensors Market size for years: 2025, 2026, 2027, 2028, 2029 and 2030.

Related Reports Explore More ReportsASEAN Geospatial Analytics IndustryAsia Pacific Industrial Sensors Market ShareAPAC Wireless Sensors Market AnalysisOptical Chemical Sensor MarketOptical Pulse Sensor Market SizePhotonic Sensors MarketOptical Brighteners Market

Asia Pacific Optical Sensors Market ReportStatistics for the 2025 Asia Pacific Optical Sensors market share, size and revenue growth rate, created by Mordor Int

elligence™ Industry Reports. Asia Pacific Optical Sensors analysis includes a market forecast outlook for 2025 to 2030 and historical overview. Get a sample of this industry analysis as a free report PDF download.

Asia Pacific Optical Sensors Report Snapshots* Asia Pacific Optical Sensors Companies