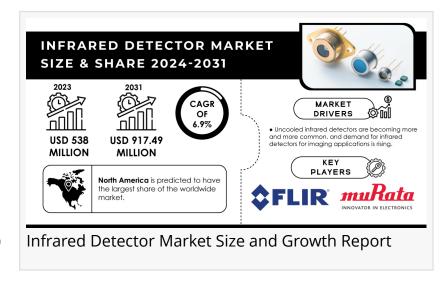


Infrared Detector Market to Reach USD 917.49 Million by 2031, Driven by Rising Security Demands

Infrared Detector Market Size, Share, Growth Drivers and Regional Analysis, Global Forecast 2024 - 2031

AUSTIN, TEXAS, UNITED STATES, May 31, 2024 /EINPresswire.com/ -- Market Size & Growth Analysis

According to a recent SNS Insider report, the Infrared Detector Market is anticipated to be valued at USD 917.49 million by 2031. In 2023, the market stood at USD 538 million and is



expected to experience a consistent compound annual growth rate (CAGR) of 6.9% throughout the forecast period of 2024-2031.

The demand for infrared detectors is experiencing rapid growth across various applications.

Non-contact temperature measurement is a prime example, where industries such as manufacturing and energy benefit from precise temperature readings without physical contact. This ensures efficient process control, quality assurance, and enhanced safety measures. Furthermore, in astronomy, these detectors enable the capture and analysis of celestial objects beyond the visible spectrum, providing valuable insights into star formation and planetary systems.

Infrared detectors also play a crucial role in early fire detection systems, facilitating swift response and effective risk mitigation. The continuous technological advancements in infrared detectors, leading to improved performance and cost-effectiveness, have further fueled their adoption across diverse applications.

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KEY PLAYERS:

- FLIR Systems
- Murata Manufacturing
- EXCELITAS Technologies
- Omron Corporation
- TE Connectivity
- Hamamatsu Photonics
- Texas Instruments
- Nippon Ceramic
- INFRATEC

Rising Demand in Developing Nations

The increasing demand for infrared detectors in developing nations is driven by rapid industrialization, infrastructure development, and rising disposable income. These factors have increased the need for advanced technologies in various sectors, leading to enhanced process efficiency, quality control, and safety.

Recent Developments

- In January 2023, Lynred launched project HEROIC, focusing on developing high-performance infrared devices to strengthen Europe's defense systems.
- In December 2022, General Atomics demonstrated multi-platform infrared sensing using MQ-20 Avenger aircraft and F-5 Advanced Tigers equipped with Lockheed's next-generation infrared sensors.

KEY MARKET SEGMENTS:

BY TYPE:

- Indium Gallium Arsenide
- Thermopile
- Mercury Cadmium Telluride
- Pyroelectric
- Microbolometer
- Others

BY WAVELENGTH:

- Medium Wavelength Infrared (MWIR)
- Long-wave infrared (LWIR)
- Near-infrared (NIR) & Short Wavelength Infrared (SWIR)

In Wavelength, the NIR & SWIR segment is expected to witness the highest CAGR from 2024-

2031. These detectors offer a broader spectral range, capturing more detailed information and finding applications in various industries like agriculture, pharmaceuticals, and automotive.

BY TECHNOLOGY:

- Cooled
- Uncooled

In Technology Segment, the cooled infrared detectors segment is projected to experience the highest CAGR due to their superior performance, improved sensitivity, and enhanced signal-to-noise ratio. These detectors are favored in applications demanding high accuracy and precision.

BY APPLICATION:

- Temperature Measurement
- Gas & Fire Detection
- Scientific Applications
- People and Motion Sensing
- Security and Surveillance
- · Spectroscopy and Bio-medical Imaging

BY VERTICAL:

- Industrial
- Nonindustrial

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The Asia Pacific region is poised to exhibit the highest CAGR from 2024 to 2031.

The region's rapid industrialization, infrastructure development, and increasing security concerns are driving the demand for infrared detectors across various sectors. Additionally, the growing adoption of advanced technologies in emerging economies within the region is contributing to the market's growth. For instance, the Chinese government's investments in smart city initiatives and the expansion of manufacturing industries are creating significant opportunities for infrared detector manufacturers.

Impact of the Global Disruption

The Russia-Ukraine war has caused disruptions in supply chains, increased raw material costs, and led to economic instability. These factors have impacted the infrared detector market, particularly in Europe, where the conflict is concentrated. However, the war has also heightened the demand for military and defense applications, which has partially offset the negative effects.

The economic slowdown has resulted in reduced spending across industries, affecting the

demand for infrared detectors. However, the demand from essential sectors like healthcare and security has remained relatively stable, mitigating the overall impact. For example, the need for thermal imaging cameras in hospitals for fever detection during the COVID-19 pandemic remained steady despite the economic slowdown.

Key Takeaways

- Technological advancements and expanding applications in developing nations are contributing to market growth.
- The NIR & SWIR segment and cooled infrared detectors segment are projected to experience the highest CAGR.
- In November 2022, Excelitas Technologies Corp. launched the medical-grade TPiS 1T1386 L5.5H Thermopile Sensor for remote skin-temperature measurement and temperature control in medical applications.

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