

Wearable Temperature Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Wearable Temperature Sensors Market size is estimated at USD 60.61 billion in 2025, and is expected to reach USD 109.75 billion by 2030, at a CAGR of 12.61% during the forecast period (2025-2030).

Wearable temperature sensors are portable sensors that are used independently to measure human temperature. These sensors are directly integrated into wearable devices or the human body to monitor heart rate, body temperature, and pulse rate. Wearable sensors have gained popularity in the healthcare and diagnosis industry, where several parameters are of vital importance, namely blood pressure, heart rate, and body temperature.

Key Highlights

- Spending on consumer electronic products is also stimulating the growth of wearable devices. The increasing urbanization and changing lifestyle of the growing population have increased health and safety awareness. This is a major factor stimulating the growth of wearable devices, such as fitness trackers, earwear, and smartwatches.
- The rapidly increasing trend of smart living and the growing number of connected devices are expected to enhance the wearable temperature sensors market. These wearable temperature sensors increase awareness regarding fitness and health in people of all age groups, driving the growth of wearable sensors.
- Also, wearable sensor devices have emerged as a significant part of the sports industry since they help athletes stick to their daily routines and provide important information about the parameters they are programmed to monitor. Moreover, the advent of advanced wearable devices that comprise smaller, smarter, and low-cost sensors, together with the growing adoption of AI and IoT, is further projected to ensure the growth of the wearable devices market, which is anticipated to create a positive impact on the wearable temperature sensors market.
- With the growing propensity of consumers toward smart wearables, the prices of devices are also soaring along with the growing

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cost of components, which limits adoption in the market. Smartwatches and fitness trackers have low-cost segments that drive significant attention from consumers. However, with the proliferation of technology, other devices such as footwear, eyewear, and body wear products are highly priced and have lower adoption rates.

Wearable Temperature Sensors Market Trends

Healthcare is Expected to Register the Fastest Growth Among All End-user Verticals

- Wearable temperature sensors are significantly used in the healthcare sector to monitor body temperature in real time. Examples include fever detection, continuous monitoring of patients, and tracking temperature variations for individuals with certain medical conditions.
- They enable the continuous monitoring of an individual's body temperature, aiding in the early detection of abnormal variations. This real-time data is crucial for timely intervention, especially in infections or chronic conditions. Wearable sensors also provide a non-invasive and convenient way to track health parameters, enhancing patient comfort and compliance with monitoring protocols.
- These sensors are emerging as a new technology for remote health monitoring to detect physiological and biochemical markers by estimating vital signs such as respiratory rate, blood oxygen level, and body temperature; wearable temperature sensors offer immense potential for the non-invasive and early diagnosis of multiple diseases, including COVID-19.
- The growing geriatric population and the increasing number of advantages of wearable devices in healthcare are projected to accelerate the expansion of the market during the forecast period. According to the Population Reference Bureau, about 25% of the population is under 15 years of age, and 10% is over 65 years of age.

Asia-Pacific is Expected to Register Significant Growth

- The major share of the Asia-Pacific region can be attributed to the growth in application areas of the healthcare sector. The escalating demand in the emerging economies of China, South Korea, and India is expected to greatly contribute to the regional demand for such wearable temperature sensors.
- The Asia-Pacific region is expected to witness significant growth during the forecast period. Major factors supporting growth are increasing investments in medical infrastructure, research and innovation centers, government programs, and policies favoring the healthcare equipment and devices markets.
- The Asia-Pacific region is anticipated to experience market share growth due to the increasing prevalence of chronic disorders and the rising awareness of medical sensors among individuals. The growth of the wearable temperature sensors market in these regions is attributed to the increased emphasis on the development of medical sensors in recent years, the enhancement of healthcare infrastructure, and the early detection of diseases.
- Given the region's aging population, there is always room for innovation in the field of medical devices and equipment, which provides opportunities for foreign companies to invest in the country. For instance, in July 2023, Boat announced the release of its smart ring with health and fitness tracking features. The ring has various health sensors, such as measuring the user's body temperature, heart rate tracking, sleep monitoring, female menstrual cycle mapping, etc.

Wearable Temperature Sensors Industry Overview

The wearable temperature sensors market is semi-consolidated. Some of the global key players in this market are Silicon

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Laboratories Inc., Maxim Integrated Products Inc., STMicroelectronics NV, Texas Instruments Inc., and AMS-OSRAM AG. These firms have been continuously expanding their operations by focusing on market expansions and acquisitions, product launches, and technological upgrades.

- February 2024: GreenTEG's collaboration with WITHINGS is expected to revolutionize health monitoring. The partnership involves integrating GreenTEG's cutting-edge CALERA sensor, designed for core body temperature monitoring, into the latest WITHINGS Scanwatch NOVA.
- February 2024: Sensirion, a leading sensor manufacturer, revealed plans to expand its production facility in Debrecen, Hungary, by an additional 5,000 sq. m. The expansion is set to be executed in two phases, with the first phase slated for completion in Q4 2024 and the second phase expected to be wrapped up by Q1 2025. This move is poised to bolster Sensirion's production capabilities, particularly in the realm of sensor modules.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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