

Piezoceramic Plates Market Will See Strong Expansion Through 2032

Piezoceramic Plates Market Expected to Reach \$3.9 Billion by 2032 — Allied Market Research

WILMINGTON, DELAWARE, UNITED STATES, June 5, 2024 /EINPresswire.com/ -- The <u>piezoceramic plates market</u> is expected to grow during the forecast period, owing to high piezoelectric activity high permittivity, and ease of fabricating piezoceramic plates of various sizes, shapes, and requirements. In addition,



during the forecast period, the piezoceramic plates market is anticipated to benefit from a rise in demand for piezoelectric devices in developing applications, and consumer electronics adopting piezoceramic plates for various applications.

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The piezoceramic plates market is set to grow due to increasing demand for precision actuators, sensors, and transducers in the electronics, healthcare, and automotive industries." *Allied Market Research* Allied Market Research, titled, "Piezoceramic Plates Market by Thickness, Application, and Region". The piezoceramic plates market was valued at \$2 billion in 2022 and is estimated to reach \$3.9 billion by 2032, growing at a CAGR of 6.8% from 2023 to 2032.

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Piezoceramic plates are a category of intelligent materials

recognized for their piezoelectric characteristics. Constructed from ceramics, these plates demonstrate the piezoelectric effect, allowing them to produce an electric charge when subjected to mechanical stress and conversely. Lead zirconate titanate (PZT) stands out as the prevailing piezoceramic material, renowned for its elevated piezoelectric coefficients.

Piezoceramic plates find widespread application in various technological fields, including

sensors, actuators, and transducers. In sensors, they can convert mechanical signals, such as vibrations or pressure changes, into electrical signals for measurement and control purposes. In actuators, these plates can undergo controlled deformation in response to an applied electric field, enabling precise motion control.

The unique ability of piezoceramic sensors is to convert between electrical and mechanical energy makes them essential in ultrasonic devices, medical imaging equipment, and precision positioning systems. Their durability, high sensitivity, and rapid response time contribute to their popularity in diverse industries, highlighting the significance of piezoceramic plates in modern technology.

The market for piezoceramic plates is witnessing strong growth, driven by a combination of factors highlighting their versatile applications and distinctive characteristics. A key catalyst is the rising demand for piezoelectric materials in the advancement of sensors and actuators across a range of industries. Piezoceramic plates, especially those crafted from lead zirconate titanate (PZT), demonstrate outstanding piezoelectric properties, establishing them as essential elements in sensors converting mechanical stimuli into electrical signals. Enhanced sensitivity and swift responsiveness play a crucial role in various fields such as industrial automation, healthcare equipment, and consumer electronics.

In addition, the growing prevalence of the Internet of Things (IoT) and the rising embrace of intelligent technologies are major factors driving the market's growth. Piezoceramic plates play a crucial role in facilitating precise motion control and sensing capabilities in IoT devices. Their capacity to transform mechanical vibrations and pressure variations into electrical signals seamlessly aligns with the evolving needs of emerging technologies, fostering their integration into wearables, home automation systems, and other IoT applications. Moreover, the demand for piezoceramic plates is driven by their utilization in ultrasonic devices and medical imaging equipment.

These plates play a key role in generating high-frequency sound waves essential for medical imaging procedures like ultrasound. The non-invasive nature and accuracy of piezoelectric technology in medical applications further stimulate market growth. In summary, the piezoceramic plates market is thriving due to its indispensable role in advancing modern technology and addressing the escalating requirements of diverse industries and applications.

The Piezoceramic Plates industry's key market players adopt various strategies such as product launch, product development, collaboration, partnership, and agreements to influence the market. It includes details about the key players in the market's strengths, product portfolio,

market size and share analysis, operational results, and market positioning.

Harbin Core Tomorrow Science and Technology Co., Ltd. Sparkler Ceramics Pvt. Ltd. APC International, Ltd. Annon Piezo Technology Co., Ltd. Fuji Ceramics Corporation Steminc TDK Corporation Kyocera Corporation. Physik Instrumente (PI) GmbH & Co. KG. CTS Corporation

The piezoceramic plates market analysis is expected to expand significantly during the forecast period owing to high piezoelectric activity high permittivity, and ease of fabricating piezoceramic plates of various sizes, shapes, and requirements. In addition, during the forecast period, the piezoceramic plates market is anticipated to benefit from a rise in demand for piezoelectric devices in developing applications, and consumer electronics adopting piezoceramic plates for various applications. On the contrary, piezoelectric ceramics have low Curie temperatures restraining piezoceramic plate market growth during the forecast period.

The piezoceramic plates market is analyzed by thickness (mm), application, and region. Based on thickness (in mm), the piezoceramic plates market share is bifurcated into below 5, 5 to 10, and above 10. In 2022, the above 10 segments dominated the market and are expected to acquire a major market share by 2032. Based on application, the market is categorized into sensors and actuators, energy harvesting, medical devices, industrial applications, and consumer electronics. The sensor and actuators segment acquired the largest share in 2022. Consumer electronics segment is expected to grow at a significant CAGR from 2023 to 2032.

Based on region, the Piezoceramic Plates Market trends are analyzed across North America (the U.S., Canada, and Mexico), Europe (the UK, Germany, France, and the rest of Europe), Asia-Pacific (China, Japan, India, South Korea, and rest of Asia-Pacific), and LAMEA (Latin America, Middle East, and Africa).

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The global piezoceramic plates market size was valued at \$2,015.2 million in 2022 and is projected to reach \$3,865.8 million by 2032, registering a CAGR of 6.8% from 2023 to 2032.
The above 10 segment was the highest revenue contributor to the market, with \$1,110.5 million

in 2022, and is estimated to reach \$2,171.5 million by 2032, with a CAGR of 7.0%.

- The sensor and actuators segment was the highest revenue contributor to the market, with \$835.7 million in 2022, and is estimated to reach \$1,444.5 million by 2032, with a CAGR of 5.6% in piezoceramic plates industry.

- Asia-Pacific was the highest revenue contributor, accounting for \$1,001.5 million in 2022, and is estimated to reach \$2,003.6 million by 2032, with a CAGR of 7.2%.

- North America is estimated to reach \$876.8 million by 2032, at a significant CAGR of 6.2%.

- The energy harvesting segment is estimated to reach \$869.4 million by 2032, at a significant CAGR of 6.3% during the forecast period.

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