

Piezoelectric Devices Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global piezoelectric devices market size reached US\$ 26.4 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 35.8 Billion by 2028, exhibiting a growth rate (CAGR) of 5.2% during 2022-2028.

Piezoelectric devices refer to the equipment that utilizes the piezoelectric effect to measure acceleration, pressure, temperature and force by converting the surrounding mechanical energy into an electrical pulse. Some of the commonly used piezoelectric devices include generators, sensors, actuators and transducers. They are manufactured using piezoceramics, such as quartz, to transform physical force into alternating current (AC) on being subjected to mechanical stress or vibrations. In comparison to their traditionally used counterparts, these devices are not affected by electromagnetic fields and radiations and can be used in extreme conditions. As a result, piezoelectric devices find extensive applications across various industries, such as automotive, healthcare, information technology (IT) and telecommunication, consumer goods, aerospace & defense and manufacturing.

Significant growth in the electronics and automotive industries represents one of the key factors creating a positive outlook for the market. Furthermore, the easy availability of piezoceramics across the globe is also driving the market growth. Piezoceramics offer a faster response rate, higher output, frequency and sensitivity and can be easily used for low- and high-voltage drive circuits. They are also widely used in pressure sensors, sonar equipment, diesel fuel injectors, solenoids, optical instruments and ultrasonic cleaners, which, in turn, is contributing to the market growth further. Additionally, various technological advancements, such as the development of miniaturized nanogenerators, are anticipated to drive the market further. Piezoelectric nanogenerators are used in portable consumer devices, such as smartphones, smartwatches, laptops and tablets, to harvest vibration energy and cater to the energy requirements of the device. In line

with this, piezoelectric actuators are also used in the healthcare sector for precision and stability in microscopy for diagnostic applications.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global piezoelectric devices market report, along with forecasts at the global, regional and country levels from 2023-2028. Our report has categorized the market based on product type, material and application.

Breakup by Product Type:

- Sensors
- Actuators
- Transducers
- Motors
- Generators
- Others

Breakup by Material:

- Ceramics
- Crystals
- Polymers
- Composites
- Others

Breakup by Application:

- Automotive
- Healthcare
- Information Technology and Telecommunication
- Consumer Goods
- Aerospace and Defense
- Manufacturing
- Others

Breakup by Region:

- North America
 - United States
 - Canada
- Asia Pacific
 - China
 - Japan
 - India
 - South Korea
 - Australia
 - Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The report has also analysed the competitive landscape of the market with some of the key players being Aerotech Inc., APC International Ltd, CeramTec GmbH (BC Partners), CTS Corporation, Kistler Instruments India Pvt. Ltd. (Kistler Holding AG), L3harris Technologies Inc., Mad City Labs Inc., Morgan Advanced Materials Plc, Physik Instrumente (PI) GmbH & Co. KG, Piezomechanik Dr. Lutz Pickelmann GmbH and Piezosystem jena GmbH.

Key Questions Answered in This Report:

How has the global piezoelectric devices market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global piezoelectric devices market?

What are the key regional markets?

What is the breakup of the market based on the product type?

What is the breakup of the market based on the material?

What is the breakup of the market based on the application?

What are the various stages in the value chain of the industry?

What are the key driving factors and challenges in the industry?

What is the structure of the global piezoelectric devices market and who are the key players?

What is the degree of competition in the industry?

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