

Power and Utilities MLCC - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The Power and Utilities MLCC Market size is estimated at 0.68 billion USD in 2024, and is expected to reach 1.84 billion USD by 2029, growing at a CAGR of 21.87% during the forecast period (2024-2029).

Transformative trends in the power and utilities MLCC market with different case size dynamics are reshaping the energy landscape

The power and utilities MLCC market, segmented by case size, offers a comprehensive view of how these critical electronic components contribute to the evolving energy landscape. As of 2023, the market witnessed substantial growth, paralleling the increasing reliance on electronic systems in power generation, distribution, and utility management.

The adoption of specific case sizes reflects the strategic importance of MLCCs in addressing the unique challenges and opportunities in this sector. The market demonstrated remarkable resilience in the 1210 case size segment, achieving significant revenue of USD 132.06 million in 2022. Projections indicate robust growth potential, with an estimated revenue of USD 402.25 million by 2028, driven by a substantial CAGR of 20.65% from 2023 to 2028.

Meanwhile, the 1812 case size segment stands at the forefront of the power and utilities MLCC Market, reflecting the growing demand for clean energy solutions in Asia and Oceania. The segment is poised to experience a surge in demand as this region

pursues ambitious renewable energy goals. In Europe, the 2 220 case size segment plays a pivotal role in supporting the continent's transition toward cleaner and more sustainable electricity generation. With clean power sources contributing to approximately 55% of Europe's electricity production, the region is actively reducing its reliance on coal.

Lastly, the 3640 and 4540 case size segments are witnessing notable shifts in North America and Asia, respectively, as these regions grapple with their energy landscapes. In North America, the adoption of 3 640 MLCCs reflects the changing dynamics of power generation, with a significant decline in coal-based electricity and an expansion in wind and solar sources.

The shifting landscape of the power and utilities MLCC market across regions

The power and utilities MLCC market, segmented by region, exhibits distinct trends and opportunities in Asia-Pacific, Europe, North America, and the Rest of the World. Asia-Pacific, home to thriving economies like China and India, is witnessing robust growth in power consumption and utility demand.

The Indian government's ambitious goal of installing 250 million smart meters by 2026 is driving significant demand for MLCCs, particularly in smart meter production. With its proactive efforts in modernizing its energy infrastructure, India presents a substantial growth opportunity for MLCC manufacturers.

The United States has made significant progress in the installation of smart electric meters, with over 100 million units already in use. MLCCs are integral in ensuring efficient energy management and are poised for further growth in this market. Canada's transition to energy-efficient street lighting systems also boosts MLCC demand, supporting energy conservation efforts.

Saudi Arabia's groundbreaking commitment to renewable energy, aiming to generate 50% of its electricity from renewables by 2030, presents a substantial opportunity for the Industrial MLCC Market. This move aligns with their target to reduce carbon emissions by 15% or 44 million tonnes by 2035. MLCCs, particularly high-capacity ones, are expected to play a pivotal role in supporting renewable energy projects and automation systems, further reinforcing the region's significance in the MLCC market.

Global Power and Utilities MLCC Market Trends

Stringent emission standards are expected to increase demand

Inverter shipments increased from 62296.3 million units in 2021 to 93412.9 million units in 2022. MLCCs use a temperature-compensating ceramic with minimal capacitance variation, making them ideal for use as components in snubber circuits used in inverters that handle large voltages during switching and where compactness and heat tolerance are required.

With growing stringent emission standards globally, automakers are gradually shifting their production from conventional engine vehicles to hybrid and electric vehicles. Inverters of various varieties, including traction inverters and soft-switching inverters, are used in electric vehicles for a variety of applications. Governments in various countries are spending heavily on electric mobility projects and encouraging customers to adopt electric vehicles, which will provide an opportunity for electric vehicle power inverter manufacturers. The rise in the demand for electric vehicles is also expected to increase the sales of the components used in electric vehicles, such as power inverters. Power generation from solar PV increased by a record 179 TWh in 2021, marking 22% growth in 2020. Solar PV accounted for 3.6% of global electricity generation, and it remains the third largest renewable electricity technology behind hydropower and wind. With the rising concerns over pollution worldwide due to industrialization, governments are introducing policies to drive solar PV deployment. For instance, in August 2022, the federal government of the United States introduced the Inflation Reduction Act, a law significantly expanding support for renewable energy in the next 10 years through tax credits and other measures.

Increasing utilization of smart lighting in various applications

LED shipments increased from 1.3 million units in 2021 to 2.65 million units in 2022. MLCCs are used in LEDs to suppress electromagnetic interference (EMI) and provide DC supply smoothing and acoustic noise reduction. MLCCs used in LEDs typically need to meet specific electrical and environmental requirements, such as high capacitance values, low equivalent series resistance (ESR), high voltage ratings, and appropriate temperature stability.

LED lighting can be used in various applications, including commercial and residential,

automotive, decorative, and outdoor lighting. The rising population leading to rising residential and commercial construction is one of the major factors that has increased the demand for various basic amenities, especially power. The COVID-19 pandemic harmed the global economy. The demand for LED lighting was lowered due to construction site suspensions and lockdowns. However, the second half of 2021 witnessed a surge in construction due to the launch of new and upgraded projects, contributing to the industry's steady recovery for LED lighting.

In 2021, electricity consumption by lighting in the residential and services sectors grew by around 5%, which drove the increase in emissions. Although several countries began to phase out incandescent bulbs more than 10 years ago, many are now beginning to phase out fluorescent lighting to make LEDs the leading lighting technology while saving significant CO2 emissions.

Power and Utilities MLCC Industry Overview

The Power and Utilities MLCC Market is moderately consolidated, with the top five companies occupying 59.90%. The major players in this market are Kyocera AVX Components Corporation (Kyocera Corporation), Murata Manufacturing Co., Ltd, Samsung Electro-Mechanics, Taiyo Yuden Co., Ltd and Yageo Corporation (sorted alphabetically).

Additional Benefits:

The market estimate (ME) sheet in Excel format

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