

LA LED Packaging - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The LA LED Packaging Market is expected to register a CAGR of 5.3% during the forecast period.

Key Highlights

- LED packaging has witnessed significant growth in Latin America. The packaging process is more labor-intensive, and the benefits of reduced labor cost structures in Latin America have made it a competitive marketplace for packaging. Specifically, due to economies of scale, existing infrastructure benefits, low labor costs, and the presence of many major players, Latin America has become an important center of LED packaging processes for many LED manufacturers.
- General lighting applications will drive growth in the LED packaging market as residential consumers continue to use the LED types in energy efficiency initiatives. The major focus of governments in Latin America (e.g., In Brazil) for developing and implementing efficient energy technology and various subsidies given for LED lighting will boost the market for LED packaging in these countries.
- Packaging technology's quality determines the package's reliability and the device's service life. To meet the increasing demand for lighting, the technology of larger output LEDs has been extensively developed, and the packaging technology of LEDs has evolved from single-chip packaging to multi-chip packaging.
- With the development of chip design, packaging, and high current characteristics, high-power LED packaging has become an urgent need. The increase in the power of the package affects the heat dissipation performance of the device, which also influences the life of the LED and its luminous performance. Therefore, the heat dissipation of LED packaging is currently an important factor to be considered. Additionally, increasing initiatives and regulations to promote LEDs for environmental benefits and energy-efficient solutions fuels the market's growth.
- Chip-on-board (COB), and chip-scale package (CSP) are multi-chip packages. COB assigns chips directly to the board and coats them with a phosphorescent glue at a higher packing density. COB and CSP are more popular LED packages on the market. With

the development of devices toward miniaturization and thinning, the heat dissipation structure and technology of LED packages have also been developed accordingly.

- The manufacturing companies were grappling with the effect of the COVID-19 pandemic, as the manufacturing and supply chain operations were disrupted, and their customer operations faced similar threats. Further, COVID-19 has impacted the market growth, mainly due to stoppage in discrete manufacturing industry operations. Due to restrictions in lockdowns, delays in project construction activities exponentially affected the whole supply and distribution network, hitting the manufacturing companies with a lag.

Latin America LED Packaging Market Trends

Chip Scale Packaging Technology to Hold Significant Market Share

- With the growing industrial investments in Latin America, the demand for smart lighting solutions is increasing, which in turn is propelling the LED packaging market. As LED packages are made smaller and slimmer, there is an endeavor to save costs of process and investment by upgrading existing WL (Wafer Level) to CS (Chip Scale). A chip-scale package (CSP) denotes a package for the light-emitting device mounted on the semiconductor light-emitting device structure in a wafer-scale process.
- CSP (Chip Scale Packaging) technology drastically scales down the size of a conventional LED package by integrating sophisticated flip-chip technology with phosphor coating technology. This removes metal wires and plastic molds for more versatile and compact designs and lowers costs. CSP products allow flexibility in changing the size of the light-emitting surface and luminance level to address a broader base of lighting application requirements.
- Different packaging structures and materials can improve LED's light extraction efficiency and heat dissipation performance, reduce light decay and improve its service life. In short, the key technology of LED packaging is to extract as much light as possible from the chip within a limited cost range while reducing the thermal resistance of packaging and improving reliability.
- LED packaging technology is developed and evolved based on semiconductor discrete device packaging. The function of packaging is to provide adequate protection for the chip, and prevent the chip from long-term exposure to the air or mechanical damage and failure, to improve the stability of the chip. Packaging materials and processes account for 30% to 60% of the total cost of LED lamps.

Residential Sector to Witness Significant Growth

- With the rapid industrialization in Latin America, the growing adoption of COB LED in smart lighting has been instrumental in driving the market's growth. Most notably, COB technology allows for a much higher packing density of the LED array, or what light engineers refer to as improved lumen density. Alternatively, using COB LED technology can greatly reduce the footprint and energy consumption of the LED array in the residential sector while keeping light output constant.
- Certain standards are followed by the countries in Latin America regarding LED Packaging. In the residential sector, it is essential to use high-precision crystal solid machines to package, no matter Lamp-LED or Surface Mount Device LED (SMD-LED). If LED chips are not placed into the package precisely, the luminescence efficiency of the overall packaging device will be influenced directly.
- LEDs applied on different occasions, with different sizes, heat-dissipation methods, and luminescence efficiency will have different types of LED packages. Soon, manufacturers should focus on developing high-power, high-brightness LED. As Packaging links the preceding and the following parts in the LED industry chain, attention should be paid to it.
- In countries like Brazil and Mexico, electricity consumption in the residential sector has been increasing, resulting in increased LED penetration. LED packages to provide mechanical support, allow good electrical connections (for example, with the aid of

"vias" through the package or bonding wires), help with heat dissipation, and improve the light emission efficiency from the LED chip. The package form of the LED varies according to the application scenario, the appearance, the size, the heat dissipation solution, and the light-emitting effect.

Latin America LED Packaging Industry Overview

Latin America LED Packaging Market is competitive and consists of several partakers like Samsung Electronics Co.Ltd, Lumileds Holding B.V, Osram GmbH, LG Innotek, Mouser Electronics, Inc., TT Electronics, Everlight Electronics Co., Ltd, and many more. The companies are increasing their market share by forming multiple partnerships, investing in projects, and launching new products in the market.

- May 2021 - Everlight has officially become a member of the ISELED Alliance. The company employed ISELED to release EL SMART LED (EL3534-RGBISE0391L-AM) with an embedded IC. The new EL3534 smart LED has installed a driver IC from Inova Semiconductors in the newly designed package structure in addition to the three color chips (red, blue, and green). The driver IC automatically enables the direct calibration of LED in the memory and compensates the thermal drop for the red color. It is mounted on the bottom side of the lead frame. Integrating controller IC and LEDs in one package saves space and interconnections in compact interior space.

Additional Benefits:

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

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