

LED Chips Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Application (Backlighting, Illumination, Automotive, Signs & Signals, Others), By Type (Chip-on-Board (COB), Dual In-Line Package (DIP), Surface Mounted Device (SMD), MicroLED, Others), By End User (Residential, Commercial, Industrial, Automotive, Others) By Region & Competition, 2019-2029F

<https://marketpublishers.com/r/LECA615BA94CEN.html>

Date: August 2024

Pages: 189

Price: US\$ 4,900.00 (Single User License)

ID: LECA615BA94CEN

Abstracts

Global LED Chips Market was valued at USD 21.67 billion in 2023 and is expected to reach USD 51.16 billion in 2029 with a CAGR of 15.22% during the forecast period.

The LED chips market involves the production, distribution, and application of semiconductor devices that emit light when an electric current passes through them. LED chips, the core components of LED lighting systems, convert electrical energy directly into light energy, offering significant advantages over traditional lighting solutions. These chips are widely used across various industries, including residential, commercial, automotive, and industrial sectors, due to their energy efficiency, long lifespan, and environmental benefits.

The market is characterized by rapid technological advancements, driving innovation in chip design, manufacturing processes, and materials used. This has led to improved performance, reduced costs, and expanded application areas. Key market drivers include increasing demand for energy-efficient lighting solutions, stringent government regulations on energy consumption, and the growing adoption of LEDs in displays and

signage.

Key Market Drivers

Energy Efficiency and Environmental Benefits

One of the primary drivers of the global LED chips market is the energy efficiency and environmental benefits that LED technology offers. LED chips are known for their ability to convert a higher percentage of electrical energy into light compared to traditional incandescent and fluorescent lighting solutions. This high efficiency results in significant energy savings, which is a critical factor for both consumers and businesses looking to reduce energy costs and improve sustainability.

The global push towards reducing carbon footprints and minimizing energy consumption has led to stringent energy regulations and standards. Governments around the world are implementing policies to phase out inefficient lighting technologies and promote the adoption of energy-efficient solutions like LEDs. For instance, the European Union's EcoDesign Directive and the United States' Energy Star program set performance criteria that LED lighting products must meet, thus driving the demand for LED chips.

LED chips have a longer lifespan compared to traditional lighting solutions, which reduces the need for frequent replacements. This longevity not only translates to cost savings but also contributes to waste reduction, aligning with the global emphasis on environmental conservation. The lower heat emission of LED chips further enhances their appeal, as it reduces the cooling requirements in buildings, leading to additional energy savings.

The increasing awareness among consumers and businesses about the environmental impact of their choices is also fueling the demand for LED chips. As the global population becomes more eco-conscious, there is a growing preference for sustainable products. LED lighting, with its lower carbon footprint and minimal environmental impact, fits well into this trend, driving market growth.

Technological Advancements and Innovation

The global LED chips market is significantly driven by continuous technological advancements and innovation. The rapid pace of development in semiconductor technology has led to the creation of more efficient, durable, and versatile LED chips.

Innovations in materials, chip design, and manufacturing processes have enabled the production of LED chips with higher luminous efficacy, improved color rendering, and reduced power consumption.

One notable technological advancement is the development of gallium nitride (GaN) on silicon substrates, which has revolutionized the LED industry. GaN-based LEDs offer superior performance in terms of brightness and efficiency compared to traditional silicon-based LEDs. Additionally, GaN technology has paved the way for the production of smaller, more compact LED chips, which are crucial for applications in devices like smartphones, tablets, and other compact electronic gadgets.

Another area of innovation is the enhancement of chip packaging techniques. Advances in chip-scale packaging (CSP) and flip-chip technology have improved thermal management and reduced the overall size of LED packages. These packaging innovations are critical for the development of high-power LEDs used in automotive lighting, outdoor displays, and other high-intensity applications.

Ongoing research and development efforts are focused on improving the quality of light emitted by LED chips. Innovations in phosphor materials and quantum dot technology have led to better color rendering and tunable white light, enhancing the application of LEDs in residential, commercial, and professional lighting.

Growing Adoption in Diverse Applications

The expanding range of applications for LED chips is another key driver of the market. LEDs are no longer confined to traditional lighting applications; their unique properties have made them suitable for a wide array of uses across different industries. This diversification in applications is propelling the demand for LED chips and contributing to market growth.

In the automotive industry, LED chips are increasingly being used for headlights, taillights, interior lighting, and even in advanced driver-assistance systems (ADAS). The superior brightness, energy efficiency, and longer lifespan of LEDs make them ideal for automotive applications, where reliability and performance are critical. Additionally, the trend towards electric and hybrid vehicles is further boosting the adoption of LED lighting to improve overall energy efficiency.

The proliferation of digital displays and signage in advertising and retail sectors has also significantly contributed to the LED chips market. LED displays offer high

brightness, vibrant colors, and the ability to create dynamic content, making them a preferred choice for outdoor and indoor signage. The growing trend of smart cities and digital advertising is expected to further drive the demand for LED chips in this sector.

Healthcare is another emerging application area for LED technology. LEDs are used in medical devices and equipment for surgical lighting, phototherapy, and diagnostic imaging due to their precise control over light output and minimal heat emission. The increasing adoption of LEDs in healthcare settings is expected to be a significant growth driver for the LED chips market.

Key Market Challenges

High Initial Costs and Price Sensitivity

One of the significant challenges facing the global LED chips market is the high initial costs associated with LED technology. Although LED lighting solutions offer long-term cost savings through lower energy consumption and reduced maintenance, the upfront investment required for purchasing LED products can be a deterrent for many consumers and businesses. This price sensitivity is particularly pronounced in developing countries and regions with lower disposable incomes, where cost considerations heavily influence purchasing decisions.

The manufacturing process of LED chips involves advanced materials and sophisticated technology, which contribute to the higher production costs. Gallium nitride (GaN) substrates, which are commonly used in high-performance LED chips, are more expensive than traditional silicon substrates. Additionally, the precision and complexity required in the manufacturing and packaging of LED chips further add to the overall cost. As a result, the final product price tends to be higher compared to conventional lighting solutions such as incandescent or fluorescent bulbs.

For many consumers and businesses, the high initial cost can outweigh the perceived long-term benefits of LED lighting. This is particularly true in price-sensitive markets where immediate cost savings are prioritized over future savings. The challenge is further compounded by the availability of cheaper alternatives, which may not offer the same energy efficiency or longevity but are more affordable upfront.

To address this challenge, manufacturers and industry stakeholders need to focus on cost reduction strategies and value proposition enhancement. Advances

in manufacturing technology, economies of scale, and the development of cost-effective materials can help lower the production costs of LED chips. Additionally, educating consumers about the long-term financial and environmental benefits of LED lighting can shift the focus from initial costs to overall value.

Intense Market Competition and Price Erosion

The global LED chips market is highly competitive, with numerous players striving to capture market share. This intense competition presents a significant challenge, leading to price erosion and squeezing profit margins for manufacturers. As more companies enter the market and technological advancements drive production efficiencies, the prices of LED chips are continually driven down, making it difficult for manufacturers to maintain profitability.

The LED chips market includes a mix of established companies, new entrants, and regional players, each vying for a competitive edge through product differentiation, innovation, and cost leadership. While competition fosters innovation and can lead to better products for consumers, it also results in aggressive pricing strategies. Manufacturers are often compelled to reduce prices to remain competitive, which can erode profit margins and impact the financial health of companies.

The commoditization of LED chips exacerbates the issue. As LED technology becomes more widespread and mature, LED chips are increasingly seen as interchangeable commodities rather than differentiated products. This perception further intensifies price competition, as buyers tend to prioritize cost over unique features or performance attributes.

To navigate this competitive landscape, companies need to invest in research and development to continuously innovate and offer superior products that can command premium prices. Differentiation through technological advancements, enhanced performance, and added functionalities can help mitigate the impact of price erosion. Additionally, focusing on niche markets or specialized applications where performance and quality are critical can provide opportunities for higher margins.

Strategic partnerships and mergers and acquisitions can also be effective in consolidating market presence and enhancing competitive positioning. By leveraging synergies and expanding their technological capabilities, companies can better compete in the dynamic and challenging LED chips market.

While intense competition drives innovation and benefits consumers, it poses a challenge for manufacturers in terms of price erosion and profitability. Companies must adopt strategies that balance cost efficiency with innovation to sustain their competitive advantage in the global LED chips market.

Key Market Trends

Increasing Adoption of Smart Lighting Solutions

The global LED chips market is witnessing a significant trend towards the adoption of smart lighting solutions. Smart lighting systems, which are integrated with advanced technologies such as the Internet of Things (IoT), sensors, and wireless communication, offer enhanced control, automation, and energy efficiency. These systems allow users to remotely control lighting settings, adjust brightness, and change colors through smartphone apps or voice assistants like Amazon Alexa and Google Assistant.

The growing demand for smart homes and smart cities is driving this trend. As urbanization increases and cities become more congested, there is a rising need for intelligent infrastructure that can efficiently manage resources. Smart lighting systems play a crucial role in this context by optimizing energy consumption, reducing operational costs, and enhancing the quality of life for residents. For instance, streetlights equipped with smart LED chips can adjust their brightness based on ambient light levels or human presence, thereby conserving energy.

The commercial sector is increasingly adopting smart lighting solutions to improve energy efficiency and reduce costs. Offices, retail stores, and industrial facilities are implementing smart LED lighting systems to create more comfortable and productive environments. The integration of smart lighting with building management systems (BMS) allows for seamless control and monitoring of lighting, contributing to overall operational efficiency.

The advancements in wireless communication technologies, such as Zigbee, Bluetooth Low Energy (BLE), and Wi-Fi, are further accelerating the adoption of smart lighting solutions. These technologies enable easy installation and integration of smart lighting systems, making them more accessible to a broader range of consumers. As the technology matures and prices continue to decline, the adoption of smart lighting solutions is expected to expand, driving the demand for advanced LED chips.

Growth in Automotive LED Lighting

The automotive industry is emerging as a significant growth driver for the global LED chips market. LED lighting is increasingly being used in various automotive applications, including headlights, taillights, daytime running lights, interior lighting, and display panels. The superior performance characteristics of LEDs, such as high brightness, energy efficiency, longer lifespan, and design flexibility, make them ideal for automotive use.

One of the prominent trends in this sector is the adoption of LED headlights. LED headlights offer several advantages over traditional halogen and xenon headlights, including better illumination, lower energy consumption, and enhanced safety. They provide a brighter and more focused beam of light, improving visibility and reducing the risk of accidents. Additionally, the compact size of LED chips allows for more innovative and aesthetically pleasing headlight designs.

The shift towards electric and hybrid vehicles is also contributing to the growth of automotive LED lighting. These vehicles require energy-efficient lighting solutions that maximize battery life and overall energy efficiency. LED lighting fits perfectly into this requirement, making it the preferred choice for electric vehicle manufacturers. As the global push towards sustainable and environmentally friendly transportation continues, the demand for LED chips in the automotive sector is expected to rise.

The trend of connected and autonomous vehicles is driving the adoption of advanced lighting technologies. LED chips are being integrated into automotive systems to support features such as adaptive lighting, which adjusts the beam pattern based on driving conditions, and communication lighting, which signals the vehicle's intentions to pedestrians and other drivers. These advanced functionalities enhance safety and contribute to the overall adoption of LED lighting in the automotive industry.

Expansion of LED in Horticulture Lighting

The use of LED chips in horticulture lighting is another emerging trend in the global LED chips market. Horticulture lighting refers to the artificial illumination used to support plant growth in controlled environments such as greenhouses, vertical farms, and indoor gardens. LED chips are increasingly being adopted in this sector due to their energy efficiency, customizable light spectra, and ability to enhance plant growth and yield.

LED horticulture lighting systems offer several advantages over traditional lighting solutions like high-pressure sodium (HPS) and fluorescent lights. One of the key benefits is the ability to tailor the light spectrum to the specific needs of different plant species and growth stages. LED chips can be designed to emit light in specific wavelengths that promote photosynthesis, flowering, and fruiting, resulting in healthier plants and higher yields.

The growing trend of urban farming and the need for sustainable agriculture solutions are driving the adoption of LED horticulture lighting. As urban populations increase, there is a rising demand for locally grown, fresh produce. Vertical farming and indoor gardening using LED lighting allow for year-round cultivation in urban areas, reducing the reliance on long-distance transportation and minimizing the carbon footprint.

The legalization of cannabis cultivation in several regions has significantly boosted the demand for LED horticulture lighting. Cannabis plants have specific light requirements, and LED lighting systems provide the flexibility to create optimal lighting conditions for different growth phases. This has led to the widespread adoption of LED chips in the rapidly growing cannabis industry.

Technological advancements in LED horticulture lighting, such as the development of tunable LED systems and advanced control technologies, are further propelling market growth. These innovations allow growers to precisely control the lighting environment, optimize energy usage, and improve crop quality. As the benefits of LED horticulture lighting become more widely recognized, the demand for LED chips in this application is expected to expand.

Segmental Insights

Type Insights

The Surface Mounted Device (SMD) segment held the largest Market share in 2023. SMD LEDs are known for their high luminous efficiency, which allows them to produce more light per unit of electricity consumed compared to other types. This efficiency translates to brighter illumination with lower energy consumption, making them ideal for applications requiring high brightness, such as commercial and industrial lighting, street lighting, and automotive lighting.

The compact size of SMD LEDs enables their use in a variety of applications where space is a constraint. Their small footprint allows for greater design flexibility, making

them suitable for use in slim and sleek lighting fixtures, backlighting for displays, and portable electronic devices. This adaptability is particularly valuable in the consumer electronics and automotive sectors, where space efficiency is crucial.

SMD LEDs are highly versatile and can be used in numerous applications, ranging from residential and commercial lighting to display technologies and automotive lighting. Their ability to be mounted on flexible circuit boards makes them an excellent choice for creating innovative lighting solutions, such as flexible and curved displays, which are increasingly popular in the market.

SMD LEDs have better thermal management capabilities compared to other types like Dual In-Line Package (DIP) LEDs. Effective heat dissipation is crucial for maintaining the longevity and performance of LED chips. SMD technology incorporates advanced designs that enhance heat dissipation, ensuring that the LEDs operate efficiently and have a longer lifespan.

Advancements in manufacturing processes have made SMD LEDs more cost-effective to produce. The ability to produce these chips at scale, combined with their high efficiency and longer lifespan, results in lower overall costs for end-users. This cost-effectiveness has driven their widespread adoption across various sectors, further solidifying their market dominance.

Regional Insights

Asia Pacific region held the largest market share in 2023. Asia-Pacific, particularly China, South Korea, and Japan, is home to some of the world's largest LED chip manufacturers. China's extensive industrial infrastructure, low production costs, and well-established supply chain make it a leading hub for LED chip production. The region's strong emphasis on technological advancements and research and development has led to innovations in LED technology, contributing to its market dominance.

The region experiences high demand for LED chips across various sectors including automotive, consumer electronics, and general lighting. The rapid urbanization and infrastructure development in countries like China and India have driven the need for energy-efficient lighting solutions. The booming automotive industry in Asia-Pacific also fuels the demand for advanced LED lighting systems in vehicles. Furthermore, the rise of smart cities and increased adoption of LED technology in commercial and residential buildings amplify the market demand.

Governments in Asia-Pacific are actively promoting the adoption of LED technology through various initiatives and policies. For example, China's 'Made in China 2025' plan and its substantial investments in green technology support the development and deployment of LED solutions. Additionally, subsidies, tax incentives, and regulations aimed at reducing energy consumption and environmental impact encourage the use of LED technology, further driving market growth.

The competitive landscape in Asia-Pacific leads to continuous innovation and cost reductions in LED chip technology. Local manufacturers strive to improve performance while reducing costs, making LED chips more affordable and accessible. This dynamic environment fosters rapid technological advancements and enhances market growth.

Key Market Players

Samsung Electronics Co., Ltd.

ams OSRAM Group (OSRAM GmbH)

Nichia Corporation

Wolfspeed, Inc.,

Lumileds Holding B.V.

Signify N.V.

LG Innotek Co., Ltd.

Epistar Corporation

ROHM Co., Ltd.

Everlight Electronics Co., Ltd

Bridgelux, Inc.

Report Scope:

In this report, the Global LED Chips Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

LED Chips Market, By Type:

Chip-on-Board (COB)

Dual In-Line Package (DIP)

Surface Mounted Device (SMD)

MicroLED

Others

LED Chips Market, By Application:

Backlighting

Illumination

Automotive

Signs & Signals

Others

LED Chips Market, By End User:

Residential

Commercial

Industrial

Automotive

Others

LED Chips Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Kuwait

Turkey

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global LED Chips Market.

Available Customizations:

Global LED Chips Market report with the given Market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional Market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
- 1.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Formulation of the Scope
- 2.4. Assumptions and Limitations
- 2.5. Sources of Research
 - 2.5.1. Secondary Research
 - 2.5.2. Primary Research
- 2.6. Approach for the Market Study
 - 2.6.1. The Bottom-Up Approach
 - 2.6.2. The Top-Down Approach
- 2.7. Methodology Followed for Calculation of Market Size & Market Shares
- 2.8. Forecasting Methodology
 - 2.8.1. Data Triangulation & Validation

3. EXECUTIVE SUMMARY

4. VOICE OF CUSTOMER

5. GLOBAL LED CHIPS MARKET OUTLOOK

- 5.1. Market Size & Forecast
 - 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Type (Chip-on-Board (COB), Dual In-Line Package (DIP), Surface Mounted Device (SMD), MicroLED, Others)
 - 5.2.2. By Application (Backlighting, Illumination, Automotive, Signs & Signals, Others)
 - 5.2.3. By End User (Residential, Commercial, Industrial, Automotive, Others)

5.2.4. By Region (Asia Pacific, North America, South America, Middle East & Africa, Europe)

5.2.5. By Company (2023)

5.3. Market Map

6. NORTH AMERICA LED CHIPS MARKET OUTLOOK

6.1. Market Size & Forecast

6.1.1. By Value

6.2. Market Share & Forecast

6.2.1. By Type

6.2.2. By Application

6.2.3. By End User

6.2.4. By Country

6.3. North America: Country Analysis

6.3.1. United States LED Chips Market Outlook

6.3.1.1. Market Size & Forecast

6.3.1.1.1. By Value

6.3.1.2. Market Share & Forecast

6.3.1.2.1. By Type

6.3.1.2.2. By Application

6.3.1.2.3. By End User

6.3.2. Canada LED Chips Market Outlook

6.3.2.1. Market Size & Forecast

6.3.2.1.1. By Value

6.3.2.2. Market Share & Forecast

6.3.2.2.1. By Type

6.3.2.2.2. By Application

6.3.2.2.3. By End User

6.3.3. Mexico LED Chips Market Outlook

6.3.3.1. Market Size & Forecast

6.3.3.1.1. By Value

6.3.3.2. Market Share & Forecast

6.3.3.2.1. By Type

6.3.3.2.2. By Application

6.3.3.2.3. By End User

7. EUROPE LED CHIPS MARKET OUTLOOK

- 7.1. Market Size & Forecast
 - 7.1.1. By Value
- 7.2. Market Share & Forecast
 - 7.2.1. By Type
 - 7.2.2. By Application
 - 7.2.3. By End User
 - 7.2.4. By Country
- 7.3. Europe: Country Analysis
 - 7.3.1. Germany LED Chips Market Outlook
 - 7.3.1.1. Market Size & Forecast
 - 7.3.1.1.1. By Value
 - 7.3.1.2. Market Share & Forecast
 - 7.3.1.2.1. By Type
 - 7.3.1.2.2. By Application
 - 7.3.1.2.3. By End User
 - 7.3.2. United Kingdom LED Chips Market Outlook
 - 7.3.2.1. Market Size & Forecast
 - 7.3.2.1.1. By Value
 - 7.3.2.2. Market Share & Forecast
 - 7.3.2.2.1. By Type
 - 7.3.2.2.2. By Application
 - 7.3.2.2.3. By End User
 - 7.3.3. Italy LED Chips Market Outlook
 - 7.3.3.1. Market Size & Forecast
 - 7.3.3.1.1. By Value
 - 7.3.3.2. Market Share & Forecast
 - 7.3.3.2.1. By Type
 - 7.3.3.2.2. By Application
 - 7.3.3.2.3. By End User
 - 7.3.4. France LED Chips Market Outlook
 - 7.3.4.1. Market Size & Forecast
 - 7.3.4.1.1. By Value
 - 7.3.4.2. Market Share & Forecast
 - 7.3.4.2.1. By Type
 - 7.3.4.2.2. By Application
 - 7.3.4.2.3. By End User
 - 7.3.5. Spain LED Chips Market Outlook
 - 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value

- 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Type
 - 7.3.5.2.2. By Application
 - 7.3.5.2.3. By End User

8. ASIA-PACIFIC LED CHIPS MARKET OUTLOOK

- 8.1. Market Size & Forecast
 - 8.1.1. By Value
- 8.2. Market Share & Forecast
 - 8.2.1. By Type
 - 8.2.2. By Application
 - 8.2.3. By End User
 - 8.2.4. By Country
- 8.3. Asia-Pacific: Country Analysis
 - 8.3.1. China LED Chips Market Outlook
 - 8.3.1.1. Market Size & Forecast
 - 8.3.1.1.1. By Value
 - 8.3.1.2. Market Share & Forecast
 - 8.3.1.2.1. By Type
 - 8.3.1.2.2. By Application
 - 8.3.1.2.3. By End User
 - 8.3.2. India LED Chips Market Outlook
 - 8.3.2.1. Market Size & Forecast
 - 8.3.2.1.1. By Value
 - 8.3.2.2. Market Share & Forecast
 - 8.3.2.2.1. By Type
 - 8.3.2.2.2. By Application
 - 8.3.2.2.3. By End User
 - 8.3.3. Japan LED Chips Market Outlook
 - 8.3.3.1. Market Size & Forecast
 - 8.3.3.1.1. By Value
 - 8.3.3.2. Market Share & Forecast
 - 8.3.3.2.1. By Type
 - 8.3.3.2.2. By Application
 - 8.3.3.2.3. By End User
 - 8.3.4. South Korea LED Chips Market Outlook
 - 8.3.4.1. Market Size & Forecast
 - 8.3.4.1.1. By Value

- 8.3.4.2. Market Share & Forecast
 - 8.3.4.2.1. By Type
 - 8.3.4.2.2. By Application
 - 8.3.4.2.3. By End User
- 8.3.5. Australia LED Chips Market Outlook
 - 8.3.5.1. Market Size & Forecast
 - 8.3.5.1.1. By Value
 - 8.3.5.2. Market Share & Forecast
 - 8.3.5.2.1. By Type
 - 8.3.5.2.2. By Application
 - 8.3.5.2.3. By End User

9. SOUTH AMERICA LED CHIPS MARKET OUTLOOK

- 9.1. Market Size & Forecast
 - 9.1.1. By Value
- 9.2. Market Share & Forecast
 - 9.2.1. By Type
 - 9.2.2. By Application
 - 9.2.3. By End User
 - 9.2.4. By Country
- 9.3. South America: Country Analysis
 - 9.3.1. Brazil LED Chips Market Outlook
 - 9.3.1.1. Market Size & Forecast
 - 9.3.1.1.1. By Value
 - 9.3.1.2. Market Share & Forecast
 - 9.3.1.2.1. By Type
 - 9.3.1.2.2. By Application
 - 9.3.1.2.3. By End User
 - 9.3.2. Argentina LED Chips Market Outlook
 - 9.3.2.1. Market Size & Forecast
 - 9.3.2.1.1. By Value
 - 9.3.2.2. Market Share & Forecast
 - 9.3.2.2.1. By Type
 - 9.3.2.2.2. By Application
 - 9.3.2.2.3. By End User
 - 9.3.3. Colombia LED Chips Market Outlook
 - 9.3.3.1. Market Size & Forecast
 - 9.3.3.1.1. By Value

9.3.3.2. Market Share & Forecast

9.3.3.2.1. By Type

9.3.3.2.2. By Application

9.3.3.2.3. By End User

10. MIDDLE EAST AND AFRICA LED CHIPS MARKET OUTLOOK

10.1. Market Size & Forecast

10.1.1. By Value

10.2. Market Share & Forecast

10.2.1. By Type

10.2.2. By Application

10.2.3. By End User

10.2.4. By Country

10.3. Middle East and Africa: Country Analysis

10.3.1. South Africa LED Chips Market Outlook

10.3.1.1. Market Size & Forecast

10.3.1.1.1. By Value

10.3.1.2. Market Share & Forecast

10.3.1.2.1. By Type

10.3.1.2.2. By Application

10.3.1.2.3. By End User

10.3.2. Saudi Arabia LED Chips Market Outlook

10.3.2.1. Market Size & Forecast

10.3.2.1.1. By Value

10.3.2.2. Market Share & Forecast

10.3.2.2.1. By Type

10.3.2.2.2. By Application

10.3.2.2.3. By End User

10.3.3. UAE LED Chips Market Outlook

10.3.3.1. Market Size & Forecast

10.3.3.1.1. By Value

10.3.3.2. Market Share & Forecast

10.3.3.2.1. By Type

10.3.3.2.2. By Application

10.3.3.2.3. By End User

10.3.4. Kuwait LED Chips Market Outlook

10.3.4.1. Market Size & Forecast

10.3.4.1.1. By Value

- 10.3.4.2. Market Share & Forecast
 - 10.3.4.2.1. By Type
 - 10.3.4.2.2. By Application
 - 10.3.4.2.3. By End User
- 10.3.5. Turkey LED Chips Market Outlook
 - 10.3.5.1. Market Size & Forecast
 - 10.3.5.1.1. By Value
 - 10.3.5.2. Market Share & Forecast
 - 10.3.5.2.1. By Type
 - 10.3.5.2.2. By Application
 - 10.3.5.2.3. By End User

11. MARKET DYNAMICS

- 11.1. Drivers
- 11.2. Challenges

12. MARKET TRENDS & DEVELOPMENTS

13. COMPANY PROFILES

- 13.1. Samsung Electronics Co., Ltd.
 - 13.1.1. Business Overview
 - 13.1.2. Key Revenue and Financials
 - 13.1.3. Recent Developments
 - 13.1.4. Key Personnel/Key Contact Person
 - 13.1.5. Key Product/Services Offered
- 13.2. ams OSRAM Group (OSRAM GmbH)
 - 13.2.1. Business Overview
 - 13.2.2. Key Revenue and Financials
 - 13.2.3. Recent Developments
 - 13.2.4. Key Personnel/Key Contact Person
 - 13.2.5. Key Product/Services Offered
- 13.3. Nichia Corporation
 - 13.3.1. Business Overview
 - 13.3.2. Key Revenue and Financials
 - 13.3.3. Recent Developments
 - 13.3.4. Key Personnel/Key Contact Person
 - 13.3.5. Key Product/Services Offered

- 13.4. Wolfspeed, Inc.,
 - 13.4.1. Business Overview
 - 13.4.2. Key Revenue and Financials
 - 13.4.3. Recent Developments
 - 13.4.4. Key Personnel/Key Contact Person
 - 13.4.5. Key Product/Services Offered
- 13.5. Lumileds Holding B.V.
 - 13.5.1. Business Overview
 - 13.5.2. Key Revenue and Financials
 - 13.5.3. Recent Developments
 - 13.5.4. Key Personnel/Key Contact Person
 - 13.5.5. Key Product/Services Offered
- 13.6. Signify N.V.
 - 13.6.1. Business Overview
 - 13.6.2. Key Revenue and Financials
 - 13.6.3. Recent Developments
 - 13.6.4. Key Personnel/Key Contact Person
 - 13.6.5. Key Product/Services Offered
- 13.7. LG Innotek Co., Ltd.
 - 13.7.1. Business Overview
 - 13.7.2. Key Revenue and Financials
 - 13.7.3. Recent Developments
 - 13.7.4. Key Personnel/Key Contact Person
 - 13.7.5. Key Product/Services Offered
- 13.8. Epistar Corporation
 - 13.8.1. Business Overview
 - 13.8.2. Key Revenue and Financials
 - 13.8.3. Recent Developments
 - 13.8.4. Key Personnel/Key Contact Person
 - 13.8.5. Key Product/Services Offered
- 13.9. ROHM Co., Ltd.
 - 13.9.1. Business Overview
 - 13.9.2. Key Revenue and Financials
 - 13.9.3. Recent Developments
 - 13.9.4. Key Personnel/Key Contact Person
 - 13.9.5. Key Product/Services Offered
- 13.10. Everlight Electronics Co., Ltd
 - 13.10.1. Business Overview
 - 13.10.2. Key Revenue and Financials

13.10.3. Recent Developments

13.10.4. Key Personnel/Key Contact Person

13.10.5. Key Product/Services Offered

13.11. Bridgelux, Inc.

13.11.1. Business Overview

13.11.2. Key Revenue and Financials

13.11.3. Recent Developments

13.11.4. Key Personnel/Key Contact Person

13.11.5. Key Product/Services Offered

14. STRATEGIC RECOMMENDATIONS

15. ABOUT US & DISCLAIMER

I would like to order

Product name: LED Chips Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Application (Backlighting, Illumination, Automotive, Signs & Signals, Others), By Type (Chip-on-Board (COB), Dual In-Line Package (DIP), Surface Mounted Device (SMD), MicroLED, Others), By End User (Residential, Commercial, Industrial, Automotive, Others) By Region & Competition, 2019-2029F

Product link: <https://marketpublishers.com/r/LECA615BA94CEN.html>

Price: US\$ 4,900.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/LECA615BA94CEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970