

Global Outdoor LED Lighting - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Global Outdoor LED Lighting Market size is estimated at USD 31.16 billion in 2024, and is expected to reach USD 61.52 billion by 2029, growing at a CAGR of 14.57% during the forecast period (2024-2029).

LED technology offer small and efficient lighting solutions, to a diverse set of consumers, with power saving and enhanced efficiency.

The ongoing transformation and infrastructure expansion projects are expected to surge the demand for outdoor LED lighting, leading to market growth. For instance, initiatives such as Smart Cities are expected to support the development of the outdoor LED lighting market.

According to IBEF, in India, under the Union budget 2021-2022, for the smart cities mission, the government has allocated USD 868 million as compared to USD 457 million in FY21, and the total issued investments for the smart city mission stood at USD 27.60 billion as of March 2021.

The adoption of smart lighting systems has emerged as one of the key factors aiding the industry's recent expansion as the global LED lighting market continues to expand. In terms of energy usage, LED lights are more effective, and they also last longer than traditional incandescent bulbs and lamps. Because of its many advantages, LED lighting is now widely used in various applications. Over the next several years, a smart lighting system will be the main driver of market expansion worldwide.

The use of light-emitting diodes (LEDs) and lighting efficiency have increased over the period of time. Many countries started phasing out incandescent lighting more than a decade before, but now many countries are phasing out fluorescent lighting and

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starting to make LEDs the dominant lighting technology. More than 50% of his global lighting market uses LED technology.

Furthermore, the increasing government initiatives, growing awareness of the introduction of LED lighting in major cities, and increasing socio-economic growth have significantly increased the demand for the outdoor LED lighting market. The demand for street lighting and industrial lighting has made rural areas and even second-tier cities increasingly adapt to the use of LED lamps.

The maintenance cost of LED lighting is significantly lower than that of incandescent lights. Hence, in countries like China and India, governments are encouraging the adoption of LED technology for roadway and highway applications to save energy and maintenance costs.

Global LED penetration has been continuously increasing. According to the Joint Research Centre, IEA is expected to reach 87.4% by 2030. Additionally, the demand for smart controls in street lighting systems is boosting the growth of the outdoor LED lighting market. However, the high initial investment for adopting LED lighting is restricting the market growth.

The COVID-19 epidemic had a significant negative impact on nearly every area of the global economy. China was a major supplier of finished goods and raw materials, significantly impacting the electronic gadgets market. Pricing changes, supply interruptions, and output losses affect the industrial sector. The scarcity of essential raw materials like electronic chips was a significant barrier, even though these difficulties could spur regional producers to advance their enterprises and processes.

Due to the pandemic, localization became crucial for this industry. The industry now tries to create the items locally from scratch and look for other locations to acquire the components. Additionally, more money will be invested in the R&D industry.

Moreover, many states, and cities globally decided against implementing LED conversion or adaptive lighting because their utility does not provide an LED-related tariff for the fixture and controls or because the LED-related tariff actually costs more than more conventional options due to assumptions in the rate structure.

Outdoor LED Lighting Market Trends

The Roadway and Highway Segment to Show Significant Growth

The demand for better street and roadway illumination has grown due to the growing complexity of transportation infrastructure. This is necessary to preserve cost-effectiveness, a smooth flow of traffic, and public safety.

Roadway lighting is considered a crucial safety factor for busy highways and streets where visibility is crucial. According to CED Engineering, adequate illumination may minimize nighttime collisions by around 30%, enhancing the safety of drivers, passengers, and pedestrians.

The Department of Transportation (DOTS) and Municipalities are switching the roadway luminaires from HPS to LED for cost-saving energy efficiency, product longevity, reduced maintenance, and minimal light pollution. For instance, the Rhode Island Department of Transportation has installed LEDs, with color-changing light guides integrated into the roadway lighting poles on the Sakonnet River Bridge, connecting the towns of Tiverton and Portsmouth, RI. The California Department of Transportation also adopted LEDs.

By 2050, 86.6% of the world's population will reside in more developed urban regions, according to the UN. This consumes much of a city's scarce resources, and lightning-related energy costs can account for 30-50% of a typical city's energy bill. For instance, the European Commission says the cost of running their lamps is over EUR 10 billion annually. By installing smart street lighting, cities may save energy, reduce CO2 emissions, restrict light pollution, and save expenses associated with operations and

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maintenance.

LED lights consume 75% less energy and last 25 times longer than incandescent bulbs. They have the highest potential for saving energy and cost. Hence, replacing old lighting systems with LED lighting has been beneficial. Due to this, the demand for new installations in the outdoor LED lighting market is significantly increasing.

Government initiatives fuel market growth, as many governments worldwide are structuring regulations encouraging LED adoption. For instance, in March 2023, The government of Canada announced to invest USD 1.4 billion to improve highway and road transportation infrastructure over the next five construction seasons. Through this investment, the government aims to improve safety, reliability, and secure highway and road infrastructure to benefit residents, municipalities, and the commercial and tourism industries.

Similarly, in June 2022, The European government announced to grant EUR 5.4 billion for more than 135 transport infrastructure projects. The government aims to make transport more efficient and sustainable and increase safety and interoperability.

Asia-Pacific is Expected to Witness Highest Growth Rate

The Asia-Pacific region is currently undergoing a major change in lighting systems. Due to the increased energy efficiency of LED lighting systems, several organizations operating in the region are seeing increased interest in LED lighting in their manufacturing facilities compared to comparable lighting systems such as incandescent and CFL.

In developed economies, LED lighting is already a widely used technology and is also becoming more popular in many emerging and developing nations. Most LED lighting products are produced, used, and exported from China, and continuous regulatory actions drive their market toward 100% LED lighting.

Under Street Lighting National Programme (SLNP) in India, the government has installed over 1.14 billion smart LED streetlights. The SLNP intends to invest USD 1.10 billion by 2024 to support India's rural areas. Additionally, to promote investments in the market, the Indian government has only imposed a free tariff (basic tariff) on LED component imports, facilitating the LED products to enter the market as semi-finished products and developing the local market.

China, for instance, has been looking for a framework to replace the fluorescent bulb with an LED. In the country, the National Development and Reform Commission (NDRC) and the Ministry of Finance (MOF) have taken several measures to administer subsidies for outdoor LED lighting products.

Southeast Asia is also becoming a major export hub for Chinese LED lighting products. The policies of the Japanese government also emphasized fuel cells, solar energy, new green energy, and the adoption of energy-efficient lighting systems. More laws are anticipated to be put out to expand the market presence of LED lighting in the public, commercial, residential, and other application sectors, which will be advantageous for Japan's LED lighting industry. These trends signify the growth of the outdoor LED lighting market's growth.

Moreover, the growing construction of sports stadiums, parking lots, airport perimeters, and others will accelerate the demand for outdoor LED lighting in Asia. For instance, in March 2023, the government of India announced to build world's third-largest and India's second-largest cricket stadium in Jaipur, India. The government of Rajasthan has allocated 100 acres of land to build the stadium.

Similarly, in October 2022, the government of Shanghai is building two 21-story parking garages, each with 20 floors underground. There will be space to collectively park 304 cars, and each facility will have 19 floors of parking spots.

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Outdoor LED Lighting Industry Overview

As many companies are innovating advanced lighting, the market is moderately consolidated. Considering the increasing concerns about energy management, lighting companies are investing in the same by partnering with energy management providers. Given below is a recent development in the market:

In April 2023, Crescent Lighting announced the expansion of its product line to include a wider range of lighting solutions for commercial, outdoor, residential, industrial, architectural, and indoor spaces. The company offers products that last up to 50,000 hours as per LM80 certifications, have a long life, and are eco-friendly.

In June 2022, Hella GMBH introduced new energy-efficient work lamps and floodlights with S-Series. HELLA work lamps and floodlights are utilized wherever appropriate work area lighting is needed to promote workplace safety. All the products have a low power consumption compared to traditional light sources, which implies that light sources have a long-lasting impact on lowering CO2 emissions. The devices' lighting features ensure the workspace is perfectly lit, resulting in low-fatigue working. It also boosts productivity and reduces the chance of accidents.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
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