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Connected (Smart) Street Light Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Component (Hardware, Software & Services), By Networking Technology (Narrowband, Medium Band and Broadband), By Region & Competition, 2021-2031F

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Abstracts

The Global Connected (Smart) Street Light Market is anticipated to expand from USD 7.83 billion in 2025 to USD 22.13 billion by 2031, reflecting a compound annual growth rate of 18.91%. This market encompasses networked lighting frameworks outfitted with control units, communication modules, and sensors that facilitate remote oversight, real-time dynamic brightness modifications, and data gathering to optimize urban environments. Primary catalysts for this growth are the urgent global need for improved energy efficiency and substantial decreases in operational expenses, given that smart lighting dramatically lowers power usage. Additionally, the rapid global rollout of smart city projects, designed to unify various urban services and upgrade public infrastructure via IoT integration, significantly fuels market growth. The rising need for better public safety and security, supported by responsive lighting and sensor-based surveillance for quick incident management, acts as another major driver.

Conversely, a major hurdle restricting market growth is the ongoing fragmentation of communication standards and the difficulty of ensuring flawless compatibility across different vendor platforms. Such fragmentation makes integration more difficult and creates the risk of vendor lock-in for city governments. Emphasizing the massive global potential for energy conservation through connected street lighting, a March 2025 report by The Climate Group noted that public street and area illumination represents up to 40 percent of the total electricity used by municipalities.

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Market Driver

Worldwide urbanization and smart city programs act as leading drivers for the Global Connected (Smart) Street Light Market. With the continued growth of urban populations, city planners are dedicating more resources to smart infrastructure to boost sustainability, efficiency, and overall quality of life. Functioning as a core element of smart city frameworks, interconnected street lights provide features well beyond basic lighting by embedding sensors for public safety, traffic coordination, and environmental tracking. Municipalities utilize these networks to improve urban administration, whether by streamlining traffic movement or identifying abnormal events. Supporting this push for smart development, Ubicquia reported that the Safe Streets for All grant program allocated nearly USD 1 billion in Fiscal Year 2025 for cities to implement safety improvements across their urban infrastructure.

Alongside these smart city ambitions, breakthroughs in communication networks, artificial intelligence, and IoT are radically reshaping the adoption and functionality of connected street lights. Advanced IoT sensors allow for accurate environmental monitoring, whereas AI systems support predictive upkeep and responsive lighting shifts based on pedestrian or vehicular presence, thereby minimizing energy use. Strong communication frameworks, such as LoRaWAN and 5G, guarantee dependable, rapid data transfer throughout vast street light grids, allowing for smooth remote control and connection with alternative smart city tools. Highlighting the massive financial support for these underlying technologies, Qubit Capital noted that more than USD 1.45 billion was invested in IoT connectivity platforms and associated services between 2024 and 2025. This technical progress broadens the appeal of smart street lighting, as demonstrated by Plenary Group in 2025 regarding the USD 309 million Washington D.C. Smart Street Lighting Project, which aims to upgrade over 75,000 street and alley fixtures to energy-saving LEDs equipped with remote management features.

Market Challenge

A major obstacle hindering the expansion of the Global Connected (Smart) Street Light Market is the ongoing fragmentation of communication standards and the difficulty of establishing smooth interoperability across different vendor platforms. This technological barrier makes system integration more demanding for city governments, resulting in longer rollout schedules and elevated running costs because mismatched systems cannot easily exchange data. The lack of universally embraced standards frequently leads to vendor lock-in, restricting competitive choices and obstructing the

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smooth expansion of smart lighting networks throughout diverse cityscapes.

By raising the perceived risks of integration and making implementation more complicated, this obstacle discourages fresh capital and actively slows market growth. The problem is further magnified by the expanding scope of interconnected smart city technologies, in which smart street lights play a vital role. In its 2025 End of Year Report, the LoRa Alliance highlighted that global LoRaWAN installations, which are essential for broad smart city networks, hit 125 million devices. Such a massive deployment scale emphasizes the urgent necessity for unified communication structures; without them, achieving the ultimate goal of highly coordinated and streamlined urban management via smart lighting is difficult. Ultimately, the fundamental differences between open and proprietary protocols hold back broad implementation and limit the market from reaching its maximum potential.

Market Trends

Smart street lights are progressively transforming into advanced, multi-purpose systems, moving beyond their conventional lighting functions to support a wide range of smart city applications. This shift establishes street lights as essential nodes for gathering urban data and providing services, allowing municipalities to install communication gear and sensors without building vast new frameworks. These modernized poles now incorporate features like public Wi-Fi, traffic control, security surveillance, and environmental tracking. By utilizing existing electrical and network foundations, this integration expedites smart city rollouts and drastically cuts expenses. Reflecting this massive embedding of connectivity and sensors into urban assets like street lights, StateTech Magazine reported in December 2025 that over 2 billion smart devices were projected to be deployed in cities globally by 2025.

Another crucial movement within the Global Connected (Smart) Street Light Market is the growing emphasis on the interoperability and standardization of these technologies. To overcome the ongoing issue of disjointed communication protocols, the industry is transitioning toward cohesive architectures that guarantee smooth integration and expansion regardless of the vendor. This evolution is vital to help city officials deploy smart lighting setups that avoid vendor lock-in and readily welcome upcoming technological breakthroughs. Initiatives from industry alliances play a key role in driving this progress. For instance, the Talq Consortium officially launched version 2.7.0 of its Smart City Protocol in February 2026, marking a significant milestone in achieving standardized compatibility for urban infrastructure and outdoor smart lighting. This continuous push for standardization ultimately cultivates a more open and competitive

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marketplace.

Key Market Players

Acuity Brands, Inc.

Cree Lighting USA LLC

Eaton Corporation plc

OSRAM GmbH

Itron, Inc.

Telensa Limited

DimOnOff S.A.

GridComm, Inc.

Quantela, Inc

Schnell Energy Equipment P Ltd

Report Scope

In this report, the Global Connected (Smart) Street Light Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Connected (Smart) Street Light Market, By Component

Hardware

Software & Services

Connected (Smart) Street Light Market, By Networking Technology

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Narrowband

Medium Band

Broadband

Connected (Smart) Street Light Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

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South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Connected (Smart) Street Light Market.

Available Customizations:

Global Connected (Smart) Street Light Market report with the given market data, TechSci 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).

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