

## **Horticulture Lighting - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029**

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### **Report description:**

The Horticulture Lighting Market size is estimated at USD 8.35 billion in 2024, and is expected to reach USD 18.62 billion by 2029, growing at a CAGR of 17.40% during the forecast period (2024-2029).

Effective spectral distribution of light is essential for the growth of plants. Increasing awareness about the same is expected to propel the demand for horticulture lights. The horticulture lighting industry is experiencing rapid growth as the future of scalable food production becomes an increasingly critical concern. Growers seek high-quality sunlight substitutions as crucial components in modern indoor agricultural environments. To address these needs, LED manufacturers fiercely compete to develop horticulture lighting solutions that can effectively improve plant cultivation.

#### **Key Highlights**

- Weather change is one of the most significant causes augmenting the demand for horticulture lights to maintain a controlled agricultural environment. Horticulture lights help save energy with new lighting solutions and crop yield. Such qualities of horticulture lights and their rising awareness among farmers will likely gain momentum for the market studied over the forecast period. An increase in food suppliers and farm start-ups is expected to increase the adoption of horticulture lights such as LED.
- The significance of LED lighting applications in the horticultural sector is growing with the rising trend of vertical and indoor farming applications. With controllable illuminance and spectrum, LED is widely used in cultivation for several crops, such as tomatoes, herbs, greens, and cucumbers. A South Korean agriculture cultivator, Farm8, utilizes the technology of LEDs for the plant's growth. With this unique technology, a plant can be grown in around 35 days compared to the time taken (i.e., 50 days) by a plant to grow outdoors.
- The growing population worldwide is generating additional demand for food, which is challenging and can be met through conventional farming. However, several advancements in horticulture lighting enable indoor agriculture to increase crop yield

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efficiently. Horticulture light is the primary source of indoor agriculture in the partial or absence of natural light sources. Major companies such as Signify (Philips Lighting) established GrowWise, a city farm facility focusing on cultivating various crops, such as leafy vegetables, strawberries, and many more. To increase crop production in its indoor farming facilities, the company has planned to utilize LED horticulture lights.

-Several companies are introducing new products for horticulture lighting. For instance, in January 2023, Polymatech unveiled the next-gen horticulture LED grow light. Launching new horticulture LED products includes monochromatic LEDs and Ravaye™ full-spectrum packages and modules. These new products are focused on providing enhanced vertical farming and greenhouse and lighting for horticulture applications. They set a standard with their broader light spectrum for healthier and faster plant growth, improved farming environments, and reduced lighting system costs.

-The coronavirus epidemic has had a relatively slighter impact on the industry due to oversupply in the past few years. Only the packaging companies suffered slightly from a lack of workforce during the lockdowns. Therefore, it is likely to see little changes in the LED industry's ecosystem and supply chain structure.

-UVC LED suppliers used to rely on increased efficiency and competitive prices to receive branding contrast. However, affected by the coronavirus epidemic, UVC LED with disinfecting function is becoming a standard component for home appliances, making its way to the mainstream market. Nevertheless, the COVID-19 pandemic does drive more application opportunities for the LED industry, including germicidal UVC LEDs, social distance-controlling infrared sensors, and horticulture lighting to back food supply.

## Horticulture Lighting Market Trends

### LEDs are Expected to Hold a Significant Market Share

- LED technology is gaining popularity in the horticultural sector, mainly due to NASA, which continues to conduct plant-growth experiments under LED lighting. It shows immense potential as a horticultural lighting fixture because of low energy consumption, better operation, and the capability to customize the spectral output to emit the specific wavelengths usable by plants.

- These lights are also more cost-efficient than other artificial light sources. LEDs do not burn out like traditional light bulbs but experience minimum lumen depreciation over time. Light bulbs are liable to fail on average after one year, but they can operate LEDs for more than 50,000 hours (depending on the type of application). The increased lifetime ensures high reliability.

- LEDs can emit light efficiently, producing much less heat than other lighting fixtures. In most indoor farming, heat is considered waste and is removed by an air conditioner or fan. Still, LEDs can reduce the energy consumption associated with removing excess heat by not producing it in the first place.

- Increasing awareness of benefits and rising demand for food owing to the rising population is expected to drive the adoption of vertical farms in the region. Researchers in the Netherlands are calculating the viability of vertical farming in urban areas. For instance, in April 2022, ams-OSRAM was also planning additional investment in a significant new 8in LED front-end capacity in Malaysia (at the Kulim Hi-Tech Park) to support advanced LED technologies and microLED manufacturing totaling EUR 800 million. Furthermore, ams Osram is also planning to be carbon neutral by 2030.

- For instance, in April 2022, Samsung introduced 'Plant-Centric Spectrum LEDs, LM301H EVO' for the Most Effective Indoor Farming. Using its spectrum engineering technology, Samsung has developed a trustworthy horticultural light source with a 437 nm spectral peak that delivers industry-leading PPE to improve plant growth and enhance crop quality. Samsung's innovative plant-centric spectrum LED dramatically boosts photosynthesis over existing horticulture lighting solutions, resulting in better, more holistic plant growth.

- IR LEDs with sensing functions can be applied for people flow monitoring in public areas, helping individuals to keep social distance when lockdowns are lifted. The COVID-19 pandemic has inspired a new application for IR sensing: social distance control. IR sensing technology enables anonymous and accurate tracking. It analyzes the flow of people, supporting malls, public buildings, banks, airports, and other venues visited by large amounts of people to monitor people flow and maintain safe social distance between individuals.

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## Europe to Witness Significant Growth

- Europe accounted for a significant share of the horticulture lighting market and continues to grow with other European countries, promoting plant factories and providing subsidies to spur local demands. The European Union's initiatives to encourage the adoption of LED technology are expected to create more opportunities for the providers of LED lights for the horticulture sector.
- LEDs are now massively produced in many markets, and competition among manufacturers is driving further innovation, wider product choices, and lower prices. LED lighting for horticulture is a fast-growing market. In Europe, innovation in horticulture LED lighting is turning the local farm-to-fork future of agriculture on its head. The recipe for delicious food begins well before the kitchen. Farmers now dial up climate recipes using innovations in LED lighting to deliver fresher, more nutritious fruits and vegetables to consumers.
- LED lighting providers in the region are also developing a full range of horticultural products and are broadening collaboration with different partners. For instance, in March 2022, GE Current added a new category to its broad Arize range of horticultural LED solutions with the launch of the Arize Integral intra-canopy lighting (ICL) fixture. Offering best-in-class lighting output of up to 346  $\mu\text{mol/s}$  and efficiency of 3.5  $\mu\text{mol/J}$ , the Integral is designed to help growers maximize yields of high-wire crops such as tomatoes, cucumber, and peppers through the more strategic deployment of light deep within the plant canopy.
- The benefits of LED horticultural lighting are enablers for the growth in increasing plant production, driven by population growth, limited availability of agricultural land, and growing unreliability of weather conditions. Other factors are the demand for higher-quality products, European government subsidies, and the legalization of cannabis for medicinal and recreational use.

## Horticulture Lighting Industry Overview

The Horticulture Lighting Market is highly competitive, owing to the presence of multiple domestic and international companies. The market appears to be highly fragmented, with significant players adopting strategies like product innovation, partnerships, collaborations, and mergers and acquisitions. Some of the major players in the market are Heliospectra AB, OSRAM GmbH, Everlight Electronics Co. Ltd, Gavita International BV, Epistar Corp., LEDiL Oy, Koninklijke Philips NV, Samsung Electronics Co. Ltd, Hubbell Inc., Cree LED, Signify Holding, and many more.

In July 2022, GE Current Re-Brands its name and acquired Hubbell Lighting to increase the range of products and distribution capacity. The acquisition drove the Current name change. The Hubbell and Current products, including Arize horticultural lighting, will be sold under the Current brand name. The company Current is manufacturing most of the horticultural lighting fixtures in Hendersonville, N.C. The acquisition of Hubbell will help them to navigate the supply chain challenges. According to the Current, there has been an enormous increase in demand for lighting solutions globally. The company is actively running several new product introductions to keep pace with demand. In March 2022, Signify and Perfect Plants companies expand their collaboration on cannabis. Two new climate cells are equipped with dimmable Philips GreenPower LED toplighting compact grow lights and the Philips GrowWise Control System, providing a light system that can work effectively and efficiently in every growth phase. Perfect Plants is competing for a Dutch license for the legal cultivation of cannabis and recently invested in facilities for research and production. Signify supplies flexible GreenPower LED systems and specialist knowledge.

### Additional Benefits:

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

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