

Grow Lights Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The grow lights market was estimated at USD 3,082.5 million for the last year and is expected to register a CAGR of 17.4%, reaching a value of USD 7,835.0 million by the end of the forecast period. An increasing number of plant factories need sustainable development, and a rise in urban agriculture are current catalysts for the grow lights market. Fresh and nutritious vegetables, beautiful floral arrangements, fragrant herbs, etc., are in demand all year round. It has become easier to buy at the touch of a button with the pervasiveness of e-commerce.

Key Highlights

The market for grow lights was evaluated by analyzing separate market sizes for different types of light sources; that includes study's scope includes light sources such as high-intensity discharge (HID) lights, light-emitting diodes, and fluorescent lights for various installation types, including new and retrofit installations across different applications that include indoor farming, vertical farming, and commercial greenhouse in multiple regions.

A grow light is an electric lamp that functions as an artificial light source to stimulate plant growth. Grow lights execute this via emitting electromagnetic radiation in the visible light spectrum, which simulates sunlight for photosynthesis.

Indoor farms support growing the total crop yield per unit area by using stacked layers of potted seeds, propelling the market. Indoor farming is growing plants or crops indoors on a large and small scale. Hence, indoor farming executes processes such as hydroponics and aquaponics and utilizes artificial lighting for adequate light levels and nutrients. However, the high initial investment in building indoor farms and limitations on the growing variety of crops is anticipated to hinder the market growth. The light spectrum affects plant growth differently, depending on environmental conditions, crop species, etc. Chlorophyll, responsible for photosynthesis to convert light energy to chemical energy, absorbs most light in red and blue spectrums for photosynthesis. Both blue and red light is seen in the PAR range's peaks.

The COVID-19 pandemic led to lockdowns worldwide with a pause in business operations and production, resulting in an enormous impact globally. As one of the most affected fields, the technology industry had to tackle the challenges of the COVID-19 outbreak and reconsider its strategies and operating plans for the post-pandemic world.

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Grow Lights Market Trends

Legalization of Cannabis in Different Countries is Expected to Drive the Market

The legalization of cannabis cultivation has also resulted in an increased requirement for vertical farms and greenhouses, further boosting the demand for LED-based grow lights. Cannabis grown under a sunless medium needs to have various factors considered.

For instance, the heat emitted from HPS lights can damage the product. Hence, LEDs, which run at much lower temperatures, can solve the excessive heat emitted.

Companies growing cannabis through vertical farming have observed significant results in terms of productivity. For instance, MedMen Cannabis Vertical Farm (US) deployed LED systems offered by Fluence Bioengineering (US), a horticulture lighting company owned by OSRAM, which resulted in reduced production time, lower cost per pound of the finished product, decreased energy consumption, and reduced heating, ventilation, and air conditioning (HVAC) load.

According to Cannabis Business Times, around 46% of cannabis cultivators in the United States registered their growing sites/facilities in the West. 15% reported locations in the Northeast, and only 9% reported cannabis growing operations in Canada.

Further, Federal United States law prohibits the cultivation, sale, and use of cannabis. But 18 states, including California and the national capital Washington DC, have all legalized cannabis for recreational use in a big-bang legislative shift over the past decade. In October 2022, President Joe Biden pardoned thousands of Americans convicted of cannabis possession. These legalization and government support further drive the studied market.

Europe is Expected to Witness Significant Growth

The European region is expected to drive the demand for these lighting solutions during the forecast period. The region has used grow light systems for the past decade in multiple controlled environment agriculture (CEA) needs, such as greenhouses, vertical farming, and indoor farming.

The usage of LED grow lights for horticulture purposes is also increasing, especially in metropolitan areas. For instance, during the pandemic, Osram GmbH, a prominent high-tech company, unveiled its new generation of LED lighting for the horticulture sector. The OsloSquare Hyper Red, which the company also describes as the most efficient LED for horticulture lighting, is currently available in the market and offers a wavelength of 660 nm.

Moreover, the market is also witnessing multiple infrastructural schemes by vendors. This is expected to increase the demand for grow lights during the forecast period. For instance, Bayer opened a new, automated greenhouse facility in Marana, Arizona. The USD 100 million worth of facility will primarily serve as a global product design center for corn, and the only crop is grown in that facility. The number of technological advancements in an advanced greenhouse facility is numerous, but one facet that remains a core area of innovation for indoor growing systems is lighting.

Furthermore, Signify launched its latest GreenPowerLED top lighting compact production module. The module is designed for a vertical growth system and can be used as a new solution or in existing installations. The company also established that the new GreenPowerLED module is optimized for closed, climate-controlled cultivation facilities, such as urban vertical farms, and propagation and research centers that primarily use multilayer growth systems to grow crops, such as lettuce and other leafy greens, soft fruits, herbs, and young plants.

Grow Lights Market Competitor Analysis

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With smart and connected systems advancements, the grow lights market is witnessing technological innovations by major players like Signify and Everlight. With more investments toward large-scale deployment of grow lights, companies seek to merge, partner, or acquire technical capabilities. Some of the key market players are OSRAM Licht AG, Heliospectra AB, Savant Systems Inc., Signify, and Lemnis Oreon BV.

In November 2022, Signify announced the expansion of its Smart Wi-Fi lighting field in India with the launch of two unique portable smart lamps, Philips Smart LED Squire and Philips Smart LED Hero. The Philips Smart LED Squire and Philips Smart LED Hero have a round-shaped design and plug-and-play operation, which makes them easy to use and carry anywhere in the home.

Additional Benefits:

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

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