

Global Cannabis Grow Lights Market Size study, by System (Hardware, Software, Services), by Light Source (HID, LED, Fluorescent, Plasma), by Product (Under 300 Watts, Over 300 Watts), by Spectrum (Limited, Full) and Regional Forecasts 2022-2032

<https://marketpublishers.com/r/G45DF83CFDDDEN.html>

Date: May 2025

Pages: 285

Price: US\$ 3,218.00 (Single User License)

ID: G45DF83CFDDDEN

Abstracts

The Global Cannabis Grow Lights Market is valued at approximately USD 5.68 billion in 2023 and is projected to grow with an impressive CAGR of 15.90% over the forecast period 2024-2032. The cannabis cultivation industry has evolved into a high-tech, precision-driven agricultural domain, with grow lights playing a pivotal role in maximizing yield quality and potency. Cannabis grow lights mimic the natural light spectrum to foster photosynthesis and plant growth indoors, especially in tightly controlled greenhouse environments or vertical farms. As the regulatory climate continues to favor cannabis legalization across North America and parts of Europe and Latin America, cultivators are investing heavily in sophisticated lighting systems that offer customizability, energy efficiency, and scalability. These lighting systems, especially full-spectrum LEDs and plasma grow lights, are reshaping how producers control the flowering cycles and cannabinoid profiles of plants.

A key growth catalyst for the market is the escalating demand for medical and recreational cannabis products, which has pushed growers to adopt commercial-scale, year-round cultivation. Regulatory approvals, alongside favorable government reforms, are encouraging both startup and legacy agricultural firms to enter this lucrative space. High-Intensity Discharge (HID) lights are still used in many traditional setups due to their deep penetration and affordability, but they are increasingly being phased out in favor of LED technologies. LEDs, though initially expensive, offer significantly better energy efficiency, lower heat emissions, and customizable spectral outputs—all of which contribute to optimized crop yields and long-term cost savings. However, the high

upfront capital expenditure and energy requirements associated with advanced grow lighting solutions remain a challenge for small-scale growers and new entrants.

Technological advances are making cannabis grow lights smarter, greener, and more integrated. Cloud-based software now allows real-time control over light intensity, spectrum shifts, and on-off cycles, providing growers with precision tools to micro-manage plant growth stages. These digital systems can integrate seamlessly with broader grow room technologies such as HVAC, irrigation, and nutrient delivery setups. Furthermore, hardware improvements like thermal management systems, adaptive dimming controls, and modular light panels are helping growers fine-tune their energy consumption and environmental footprint. Additionally, sensor-driven services now offer predictive analytics and AI-based plant monitoring, further pushing the sector toward intelligent cultivation ecosystems.

Investor sentiment is increasingly bullish toward infrastructure investments in cannabis cultivation, with lighting systems at the forefront. Many multinational corporations and venture capital firms are pouring capital into R&D and strategic collaborations to engineer lighting solutions tailored specifically to the needs of cannabis strains. Large-scale cannabis production facilities are opting for hybrid systems that combine the benefits of various light sources to optimize vegetative and flowering phases. This hybridization trend reflects the market's shift from conventional agricultural practices to a technology-first cultivation philosophy. In the process, demand for both under- and over-300-watt systems is diversifying, allowing vendors to cater to boutique farms as well as commercial-scale operations.

Regionally, North America dominates the cannabis grow lights market due to early legalization waves, well-established cultivation infrastructure, and widespread adoption of energy-efficient horticultural practices. The U.S. leads in innovation, with Canada not far behind, owing to its federally legalized cannabis industry. In Europe, countries like Germany and the Netherlands are progressively liberalizing cannabis laws, creating a fertile ground for cultivation technology. Meanwhile, Asia Pacific, led by nations such as Thailand and Australia, is emerging as a growth hotspot due to rising medical cannabis exports and experimental legislative reforms. Latin America and the Middle East & Africa are also opening up gradually, with governments realizing the economic and medicinal potential of the cannabis sector.

Major market player included in this report are:

Gavita International B.V.

Signify N.V.

Heliospectra AB

Black Dog Grow Technologies Inc.

Kind LED Grow Lights

Illumitex Inc.

California LightWorks

Fluence Bioengineering, Inc.

ViparSpectra

LumiGrow Inc.

Advanced LED Lights

Valoya Oy

Agnetix

Grow Generation Corp.

Hortilux Schreder

The detailed segments and sub-segment of the market are explained below:

By System

Hardware

Software

Services

By Light Source

HID

LED

Fluorescent

Plasma

By Product

Under 300 Watts

Over 300 Watts

By Spectrum

Limited

Full

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with country-level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL CANNABIS GROW LIGHTS MARKET EXECUTIVE SUMMARY

- 1.1. Global Cannabis Grow Lights Market Size & Forecast (2022–2032)
- 1.2. Regional Summary
- 1.3. Segmental Summary
 - 1.3.1. By System
 - 1.3.2. By Light Source
 - 1.3.3. By Product
 - 1.3.4. By Spectrum
- 1.4. Key Trends
- 1.5. Recession Impact
- 1.6. Analyst Recommendation & Conclusion

CHAPTER 2. GLOBAL CANNABIS GROW LIGHTS MARKET DEFINITION AND RESEARCH ASSUMPTIONS

- 2.1. Research Objective
- 2.2. Market Definition
- 2.3. Research Assumptions
 - 2.3.1. Inclusion & Exclusion
 - 2.3.2. Limitations
 - 2.3.3. Supply Side Analysis
 - 2.3.3.1. Availability
 - 2.3.3.2. Infrastructure
 - 2.3.3.3. Regulatory Environment
 - 2.3.3.4. Market Competition
 - 2.3.3.5. Economic Viability (Consumer's Perspective)
 - 2.3.4. Demand Side Analysis
 - 2.3.4.1. Regulatory Frameworks
 - 2.3.4.2. Technological Advancements
 - 2.3.4.3. Environmental Considerations
 - 2.3.4.4. Consumer Awareness & Acceptance
- 2.4. Estimation Methodology
- 2.5. Years Considered for the Study
- 2.6. Currency Conversion Rates

CHAPTER 3. GLOBAL CANNABIS GROW LIGHTS MARKET DYNAMICS

3.1. Market Drivers

- 3.1.1. Surging legalization and regulatory support for cannabis cultivation
- 3.1.2. Rising demand for energy-efficient LED and smart lighting systems
- 3.1.3. Growing medical and recreational cannabis markets

3.2. Market Challenges

- 3.2.1. High upfront capital expenditure for advanced lighting solutions
- 3.2.2. Technical complexity and integration barriers for small growers
- 3.2.3. Volatility in energy costs and sustainability pressures

3.3. Market Opportunities

- 3.3.1. Development of cloud-based control and analytics services
- 3.3.2. Hybrid lighting systems combining multiple light sources
- 3.3.3. Expansion into emerging geographies with nascent regulatory frameworks

CHAPTER 4. GLOBAL CANNABIS GROW LIGHTS MARKET INDUSTRY ANALYSIS

4.1. Porter's Five Forces Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry
- 4.1.6. Futuristic Approach to Porter's Model
- 4.1.7. Impact Analysis

4.2. PESTEL Analysis

- 4.2.1. Political
- 4.2.2. Economic
- 4.2.3. Social
- 4.2.4. Technological
- 4.2.5. Environmental
- 4.2.6. Legal

4.3. Top Investment Opportunities

4.4. Top Winning Strategies

4.5. Disruptive Trends

4.6. Industry Expert Perspective

4.7. Analyst Recommendation & Conclusion

CHAPTER 5.?GLOBAL CANNABIS GROW LIGHTS MARKET SIZE & FORECASTS BY SYSTEM 2022–2032

5.1.?Segment Dashboard

5.2.?Cannabis Grow Lights Market: System Revenue Trend Analysis, 2022 & 2032 (USD Billion)

5.2.1.?Hardware

5.2.2.?Software

5.2.3.?Services

CHAPTER 6.?GLOBAL CANNABIS GROW LIGHTS MARKET SIZE & FORECASTS BY LIGHT SOURCE 2022–2032

6.1.?Segment Dashboard

6.2.?Cannabis Grow Lights Market: Light Source Revenue Trend Analysis, 2022 & 2032 (USD Billion)

6.2.1.?HID

6.2.2.?LED

6.2.3.?Fluorescent

6.2.4.?Plasma

CHAPTER 7.?GLOBAL CANNABIS GROW LIGHTS MARKET SIZE & FORECASTS BY PRODUCT & SPECTRUM 2022–2032

7.1.?Product Segment Dashboard

7.2.?Cannabis Grow Lights Market: Product Revenue Trend Analysis, 2022 & 2032 (USD Billion)

7.2.1.?Under 300 Watts

7.2.2.?Over 300 Watts

7.3.?Spectrum Segment Dashboard

7.4.?Cannabis Grow Lights Market: Spectrum Revenue Trend Analysis, 2022 & 2032 (USD Billion)

7.4.1.?Limited

7.4.2.?Full

CHAPTER 8.?GLOBAL CANNABIS GROW LIGHTS MARKET SIZE & FORECASTS BY REGION 2022–2032

8.1.?North America Market

- 8.1.1.?U.S. Market
 - 8.1.1.1.?System breakdown size & forecasts, 2022–2032
 - 8.1.1.2.?Light Source breakdown size & forecasts, 2022–2032
- 8.1.2.?Canada Market
- 8.2.?Europe Market
 - 8.2.1.?UK Market
 - 8.2.2.?Germany Market
 - 8.2.3.?France Market
 - 8.2.4.?Spain Market
 - 8.2.5.?Italy Market
 - 8.2.6.?Rest of Europe Market
- 8.3.?Asia-Pacific Market
 - 8.3.1.?China Market
 - 8.3.2.?India Market
 - 8.3.3.?Japan Market
 - 8.3.4.?Australia Market
 - 8.3.5.?South Korea Market
 - 8.3.6.?Rest of Asia Pacific Market
- 8.4.?Latin America Market
 - 8.4.1.?Brazil Market
 - 8.4.2.?Mexico Market
 - 8.4.3.?Rest of Latin America Market
- 8.5.?Middle East & Africa Market
 - 8.5.1.?Saudi Arabia Market
 - 8.5.2.?South Africa Market
 - 8.5.3.?Rest of Middle East & Africa Market

CHAPTER 9.?COMPETITIVE INTELLIGENCE

- 9.1.?Key Company SWOT Analysis
 - 9.1.1.?Gavita International B.V.
 - 9.1.2.?Signify N.V.
 - 9.1.3.?Heliospectra AB
- 9.2.?Top Market Strategies
- 9.3.?Company Profiles
 - 9.3.1.?Gavita International B.V.
 - 9.3.1.1.?Key Information
 - 9.3.1.2.?Overview
 - 9.3.1.3.?Financial (Subject to Data Availability)

- 9.3.1.4.?Product Summary
- 9.3.1.5.?Market Strategies
- 9.3.2.?Signify N.V.
- 9.3.3.?Heliospectra AB
- 9.3.4.?Black Dog Grow Technologies Inc.
- 9.3.5.?Kind LED Grow Lights
- 9.3.6.?Illumitex Inc.
- 9.3.7.?California LightWorks
- 9.3.8.?Fluence Bioengineering, Inc.
- 9.3.9.?ViparSpectra
- 9.3.10.?LumiGrow Inc.
- 9.3.11.?Advanced LED Lights
- 9.3.12.?Valoya Oy
- 9.3.13.?Agetix
- 9.3.14.?Grow Generation Corp.
- 9.3.15.?Hortilux Schreder

CHAPTER 10.?RESEARCH PROCESS

- 10.1.?Research Process
 - 10.1.1.?Data Mining
 - 10.1.2.?Analysis
 - 10.1.3.?Market Estimation
 - 10.1.4.?Validation
 - 10.1.5.?Publishing
- 10.2.?Research Attributes

I would like to order

Product name: Global Cannabis Grow Lights Market Size study, by System (Hardware, Software, Services), by Light Source (HID, LED, Fluorescent, Plasma), by Product (Under 300 Watts, Over 300 Watts), by Spectrum (Limited, Full) and Regional Forecasts 2022-2032

Product link: <https://marketpublishers.com/r/G45DF83CFDDDEN.html>

Price: US\$ 3,218.00 (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/G45DF83CFDDDEN.html>