

Solar PV Module Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

<https://marketpublishers.com/r/S3CE270F5342EN.html>

Date: October 2025

Pages: 180

Price: US\$ 4,850.00 (Single User License)

ID: S3CE270F5342EN

Abstracts

The Global Solar PV Module Market was valued at USD 346.6 billion in 2024 and is estimated to grow at a CAGR of 7.2% to reach USD 673.2 billion by 2034.

These systems harness sunlight and transform it into electricity using photovoltaic cells made of semiconducting materials like silicon. Solar modules are designed to generate direct current (DC) electricity and can be interconnected in arrays to meet diverse energy requirements. Technological improvements, coupled with mass manufacturing efficiencies and simplified installation techniques, are driving down costs, making solar PV more accessible and competitive. Simultaneously, favorable regulatory environments, including incentive programs and financial support policies, are pushing solar adoption among commercial, residential, and utility-scale users. Growing environmental consciousness and the need to cut down carbon emissions continue to strengthen interest in solar energy. With corporations, governments, and individual users aligning their sustainability efforts with clean energy usage, the demand for PV modules continues to rise across global markets.

The on-grid segment will reach USD 657 billion by 2034, owing to breakthroughs in module efficiency and advanced panel designs such as monocrystalline and bifacial technologies. These developments significantly boost energy output, making grid-connected systems more efficient. Supportive financial policies such as tax incentives and rebate schemes offered across different regions further encourage solar energy adoption.

The ground-mounted solar installations segment will grow at a CAGR of 7% through 2034, driven by its suitability for large-scale deployments. Technological innovation, particularly in high-efficiency panels and flexible thin-film modules, is making these

installations increasingly cost-effective and attractive for utility projects. Their ability to deliver more energy per square meter enhances their commercial appeal.

Europe Solar PV Module Market is projected to grow at 5% CAGR through 2034. Regional growth is supported by rising quality standards, sustainability demands, and initiatives aimed at diversifying supply chains. Countries like Germany, the Netherlands, and Spain are spearheading adoption, aided by policy instruments such as net metering and corporate power procurement strategies. Though manufacturing in Europe lags Asian markets, its strength lies in advanced applications and integration capabilities that ensure a competitive edge.

Key players in the Global Solar PV Module Market include LONGi, VIKRAM SOLAR, Trina Solar, CSUN SolarTech, JA SOLAR Technology, REC Solar Holdings, Jinko Solar, Indosolar, First Solar, The Solaria Corporation, RENESOLA, Su-vastika Systems Private Limited, GCL-SI, Shenzhen Shine Solar Co.Ltd, SOLAR FRONTIER, SunPower Corporation, Canadian Solar, EMMVEE SOLAR, RISEN ENERGY, Yingli Solar, and Hanwha Group. To strengthen their presence, solar PV module companies are actively expanding manufacturing facilities, investing in advanced cell technologies, and forming strategic partnerships. Many are focusing on developing ultra-high-efficiency modules and integrating smart features to cater to evolving consumer preferences. Companies are also diversifying geographically, establishing production units in regions with strong demand and supportive policy frameworks.

Contents

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Research design
 - 1.1.1 Research approach
 - 1.1.2 Data collection methods
 - 1.1.3 Base estimates and calculations
 - 1.1.4 Base year calculation
 - 1.1.5 Key trends for market estimates
- 1.2 Forecast model
- 1.3 Primary research & validation
 - 1.3.1 Primary sources
- 1.4 Data mining sources
- 1.5 Market definitions

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis, 2021 – 2034
- 2.2 Business trends
- 2.3 Technology trends
- 2.4 Product trends
- 2.5 Mounting trends
- 2.6 Connectivity trends
- 2.7 End Use trends
- 2.8 Regional trends

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem
- 3.2 Regulatory landscape
- 3.3 Industry impact forces
 - 3.3.1 Growth drivers
 - 3.3.2 Industry pitfalls & challenges
- 3.4 Growth potential analysis
- 3.5 Price trend analysis, 2021-2034 (USD/MW)
 - 3.5.1 By mounting
 - 3.5.2 By region
- 3.6 Porter's analysis

- 3.6.1 Bargaining power of suppliers
- 3.6.2 Bargaining power of buyers
- 3.6.3 Threat of new entrants
- 3.6.4 Threat of substitutes
- 3.7 PESTEL analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2025

- 4.1 Introduction
- 4.2 Company market share analysis, by region, 2024
 - 4.2.1 North America
 - 4.2.2 Europe
 - 4.2.3 Asia Pacific
 - 4.2.4 Middle East
 - 4.2.5 Africa
 - 4.2.6 Latin America
- 4.3 Strategic dashboard
- 4.4 Strategic initiatives
- 4.5 Company benchmarking
- 4.6 Innovation & technology landscape

CHAPTER 5 MARKET SIZE AND FORECAST, BY TECHNOLOGY, 2021 – 2034 (USD BILLION & MW)

- 5.1 Key trends
- 5.2 Thin Film
- 5.3 Crystalline Silicon

CHAPTER 6 MARKET SIZE AND FORECAST, BY PRODUCT, 2021 – 2034 (USD BILLION & MW)

- 6.1 Key trends
- 6.2 Monocrystalline
- 6.3 Polycrystalline
- 6.4 Cadmium Telluride
- 6.5 Amorphous Silicon
- 6.6 Copper Indium Gallium Diselenide

CHAPTER 7 MARKET SIZE AND FORECAST, BY CONNECTIVITY, 2021 – 2034

(USD BILLION & MW)

7.1 Key trends

7.2 On Grid

7.3 Off Grid

CHAPTER 8 MARKET SIZE AND FORECAST, BY MOUNTING, 2021 – 2034 (USD BILLION & MW)

8.1 Key trends

8.2 Ground Mounted

8.3 Roof Top

CHAPTER 9 MARKET SIZE AND FORECAST, BY END USE, 2021 – 2034 (USD BILLION & MW)

9.1 Key trends

9.2 Residential

9.3 Commercial & Industrial

9.4 Utility

CHAPTER 10 MARKET SIZE AND FORECAST, BY REGION, 2021 – 2034 (USD BILLION & MW)

10.1 Key trends

10.2 North America

10.2.1 U.S.

10.2.2 Canada

10.2.3 Mexico

10.3 Europe

10.3.1 Austria

10.3.2 Norway

10.3.3 Denmark

10.3.4 Finland

10.3.5 France

10.3.6 Germany

10.3.7 Italy

10.3.8 Switzerland

10.3.9 Spain

- 10.3.10 Sweden
- 10.3.11 UK
- 10.3.12 Netherlands
- 10.3.13 Poland
- 10.3.14 Belgium
- 10.3.15 Ireland
- 10.3.16 Baltics
- 10.3.17 Portugal
- 10.4 Asia Pacific
 - 10.4.1 China
 - 10.4.2 Australia
 - 10.4.3 India
 - 10.4.4 Japan
 - 10.4.5 South Korea
 - 10.4.6 Thailand
 - 10.4.7 Philippines
 - 10.4.8 Vietnam
 - 10.4.9 Malaysia
 - 10.4.10 Singapore
- 10.5 Middle East
 - 10.5.1 Israel
 - 10.5.2 Saudi Arabia
 - 10.5.3 UAE
 - 10.5.4 Jordan
 - 10.5.5 Oman
 - 10.5.6 Kuwait
 - 10.5.7 Turkey
- 10.6 Africa
 - 10.6.1 South Africa
 - 10.6.2 Egypt
 - 10.6.3 Algeria
 - 10.6.4 Nigeria
 - 10.6.5 Morocco
- 10.7 Latin America
 - 10.7.1 Brazil
 - 10.7.2 Chile
 - 10.7.3 Argentina
 - 10.7.4 Peru

CHAPTER 11 COMPANY PROFILES

- 11.1 CsunSolarTech
- 11.2 Canadian Solar
- 11.3 EMMVEE SOLAR
- 11.4 First Solar
- 11.5 GCL-SI
- 11.6 Hanwha Group
- 11.7 Indosolar
- 11.8 Jinko Solar
- 11.9 JA SOLAR Technology Co.Ltd.
- 11.10 LONGi
- 11.11 RENESOLA
- 11.12 RISEN ENERGY Co. LTD
- 11.13 REC Solar Holdings AS
- 11.14 Shenzhen Shine Solar Co.Ltd
- 11.15 SOLAR FRONTIER K.K.
- 11.16 SunPower Corporation
- 11.17 Su-vastika Systems Private Limited
- 11.18 The Solaria Corporation
- 11.19 Trina Solar
- 11.20 VIKRAM SOLAR LTD
- 11.21 Yingli Solar

I would like to order

Product name: Solar PV Module Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

Product link: <https://marketpublishers.com/r/S3CE270F5342EN.html>

Price: US\$ 4,850.00 (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/S3CE270F5342EN.html>