

Next-Generation Solar Cells Market - 2024-2032

<https://marketpublishers.com/r/N48AD00D081EEN.html>

Date: June 2025

Pages: 217

Price: US\$ 2,999.00 (Single User License)

ID: N48AD00D081EEN

Abstracts

The Next-Generation Solar Cells Market was valued at US\$ 4.21 billion in 2024 and is anticipated to reach US\$ 19.62 billion by 2032, at a CAGR of 0.2121 from 2026 to 2032.

The report delivers in-depth insights into key market dynamics, including regional growth trends, market segmentation, CAGR projections, and the revenue performance of leading industry players. It also highlights major growth drivers shaping the market landscape. Designed to provide a clear and comprehensive perspective, the report offers a detailed view of the current market size in terms of both value and volume, along with emerging opportunities and the overall development outlook of the Next-Generation Solar Cells Market.

This report delivers a comprehensive overview of the Next-Generation Solar Cells Market, with both quantitative and qualitative analyses, to help readers develop growth strategies, assess the competitive landscape, evaluate their position in the current market, and make informed business decisions regarding Next-Generation Solar Cells Market. The Next-Generation Solar Cells Market size, estimates, and forecasts are provided in terms of output/shipments (K MT) and revenue (US\$ millions), with 2025 as the base year and historical and forecast data for 2024–2032.

Next-Generation Solar Cells Market Scope:

By Solutions

On-Grid Systems

Off-Grid Systems

Hybrid Systems

By Material Type

- Cadmium Telluride (CdTe)
- Copper Indium Gallium Selenide (CIGS)
- Amorphous Silicon (a-Si)
- Gallium Arsenide (GaAs)
- Perovskite Solar Cells
- Organic Photovoltaics (OPV)
- Quantum Dot Solar Cells
- Others

By Application

- Virtual Assistants & Chatbots
- Medical Diagnostics
- Personalized Learning
- Fraud Detection & Risk Management
- HR & Recruitment
- Process Automation
- Others

Key Players

Miasole

JinkoSolar Holding Co., Ltd.

Trina Solar Co., Ltd.

JA Solar Technology Co., Ltd.

First Solar, Inc.

Hanwha Q CELLS Co., Ltd.

Oxford Photovoltaics Ltd.

Kaneka Corporation

Ascent Solar Technologies, Inc.

GCL-New Energy Holdings Limited

Major Highlights

This report delivers a comprehensive overview of the Next-Generation Solar Cells Market, with both quantitative and qualitative analyses, to help readers develop growth strategies, assess the competitive landscape, evaluate their position in the current market, and make informed business decisions regarding Next-Generation Solar Cells Market. The Next-Generation Solar Cells Market size, estimates, and forecasts are provided in terms of output/shipments (K Sqm) and revenue (US\$ millions), with 2025 as the base year and historical and forecast data for 2024–2032.

This report will assist keyword manufacturers, new entrants, and companies across the industry value chain with information on revenues, production, and average prices for the overall market and its sub-segments, by company, by Type, by Application, and by region.

Regional Analysis:

North America (U.S., Canada, Mexico)

Europe (U.K., Italy, Germany, Russia, France, Spain, The Netherlands and Rest of Europe)

Asia-Pacific (India, Japan, China, South Korea, Australia, Indonesia Rest of Asia Pacific)

South America (Colombia, Brazil, Argentina, Rest of South America)

Middle East & Africa (Saudi Arabia, U.A.E., South Africa, Rest of Middle East & Africa)

Partner Identification

Increase Your Customer Base by 3X using our Partner Identification tool

Uncover strategic collaboration opportunities with DataM vetted partners aligned to your ecosystem.

Identify high potential M&A targets based on synergies, market positioning and growth trajectory.

Prioritize partners by strategic fit rather than general capability.

Why Choose DataM?

Data-Driven Insights: Dive into detailed analyses with granular insights such as pricing, market shares and value chain evaluations, enriched by interviews with industry leaders and disruptors.

Post-Purchase Support and Expert Analyst Consultations: As a valued client, gain direct access to our expert analysts for personalized advice and strategic guidance, tailored to your specific needs and challenges.

White Papers and Case Studies: Benefit quarterly from our in-depth studies related to your purchased titles, tailored to refine your operational and marketing strategies for maximum impact.

Annual Updates on Purchased Reports: As an existing customer, enjoy the privilege of annual updates to your reports, ensuring you stay abreast of the latest market insights and technological advancements. Terms and conditions apply.

Specialized Focus on Emerging Markets: DataM differentiates itself by delivering in-depth, specialized insights specifically for emerging markets, rather than offering generalized geographic overviews. This approach equips our clients with a nuanced understanding and actionable intelligence that are essential for navigating and succeeding in high-growth regions.

Value of DataM Reports: Our reports offer specialized insights tailored to the latest trends and specific business inquiries. This personalized approach provides a deeper, strategic perspective, ensuring you receive the precise information necessary to make informed decisions. These insights complement and go beyond what is typically available in generic databases.

Target Audience 2026

Manufacturers/ Buyers

Industry Investors/Investment Bankers

Research Professionals

Emerging Companies

Contents

1. METHODOLOGY AND SCOPE

- 1.1. Research Methodology
- 1.2. Research Objective and Scope of the Report

2. DEFINITION AND OVERVIEW

3. EXECUTIVE SUMMARY

- 3.1. Snippet by Solutions
- 3.2. Snippet by Material Type
- 3.3. Snippet by Application
- 3.4. Snippet by Region

4. DYNAMICS

- 4.1. Impacting Factors
 - 4.1.1. Drivers
 - 4.1.1.1. Rapid Decline in Solar Cell Manufacturing Costs
 - 4.1.2. Restraints
 - 4.1.2.1. Supply Chain Challenges for Critical Raw Materials
 - 4.1.3. Opportunity
 - 4.1.4. Impact Analysis

5. INDUSTRY ANALYSIS

- 5.1. Porter's Five Force Analysis
- 5.2. Supply Chain Analysis
- 5.3. Pricing Analysis
- 5.4. Regulatory Analysis
- 5.5. Sustainability Analysis
- 5.6. Industry Trend Analysis
- 5.7. DMI Opinion

6. BY SOLUTIONS

- 6.1. Introduction

- 6.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions
- 6.1.2. Market Attractiveness Index, By Solutions
- 6.2. On-Grid Systems*
 - 6.2.1. Introduction
 - 6.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 6.3. Off-Grid Systems
- 6.4. Hybrid Systems

7. BY MATERIAL TYPE

- 7.1. Introduction
 - 7.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type
 - 7.1.2. Market Attractiveness Index, By Material Type
- 7.2. Cadmium Telluride (CdTe)*
 - 7.2.1. Introduction
 - 7.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 7.3. Copper Indium Gallium Selenide (CIGS)
- 7.4. Amorphous Silicon (a-Si)
- 7.5. Gallium Arsenide (GaAs)
- 7.6. Perovskite Solar Cells
- 7.7. Organic Photovoltaics (OPV)
- 7.8. Quantum Dot Solar Cells
- 7.9. Others

8. BY APPLICATION

- 8.1. Introduction
 - 8.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application
 - 8.1.2. Market Attractiveness Index, By Application
- 8.2. Virtual Assistants & Chatbots*
 - 8.2.1. Introduction
 - 8.2.2. Market Size Analysis and Y-o-Y Growth Analysis (%)
- 8.3. Medical Diagnostics
- 8.4. Personalized Learning
- 8.5. Fraud Detection & Risk Management
- 8.6. HR & Recruitment
- 8.7. Process Automation
- 8.8. Others

9. BY REGION

9.1. Introduction

9.1.1. Market Size Analysis and Y-o-Y Growth Analysis (%), By Region

9.1.2. Market Attractiveness Index, By Region

9.2. North America

9.2.1. Introduction

9.2.2. Key Region-Specific Dynamics

9.2.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions

9.2.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type

9.2.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application

9.2.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country

9.2.6.1. US

9.2.6.2. Canada

9.2.6.3. Mexico

9.3. Europe

9.3.1. Introduction

9.3.2. Key Region-Specific Dynamics

9.3.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions

9.3.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type

9.3.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application

9.3.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country

9.3.6.1. Germany

9.3.6.2. UK

9.3.6.3. France

9.3.6.4. Italy

9.3.6.5. Spain

9.3.6.6. Rest of Europe

9.4. South America

9.4.1. Introduction

9.4.2. Key Region-Specific Dynamics

9.4.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions

9.4.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type

9.4.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application

9.4.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country

9.4.6.1. Brazil

9.4.6.2. Argentina

9.4.6.3. Rest of South America

9.5. Asia-Pacific

- 9.5.1. Introduction
- 9.5.2. Key Region-Specific Dynamics
- 9.5.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions
- 9.5.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type
- 9.5.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application
- 9.5.6. Market Size Analysis and Y-o-Y Growth Analysis (%), By Country
 - 9.5.6.1. China
 - 9.5.6.2. India
 - 9.5.6.3. Japan
 - 9.5.6.4. Australia
 - 9.5.6.5. Rest of Asia-Pacific

9.6. Middle East and Africa

- 9.6.1. Introduction
- 9.6.2. Key Region-Specific Dynamics
- 9.6.3. Market Size Analysis and Y-o-Y Growth Analysis (%), By Solutions
- 9.6.4. Market Size Analysis and Y-o-Y Growth Analysis (%), By Material Type
- 9.6.5. Market Size Analysis and Y-o-Y Growth Analysis (%), By Application

10. COMPETITIVE LANDSCAPE

- 10.1. Competitive Scenario
- 10.2. Market Positioning/Share Analysis
- 10.3. Mergers and Acquisitions Analysis

11. COMPANY PROFILES

- 11.1. Miasole*
 - 11.1.1. Company Overview
 - 11.1.2. Product Portfolio and Description
 - 11.1.3. Financial Overview
 - 11.1.4. Key Developments
- 11.2. JinkoSolar Holding Co., Ltd.
- 11.3. Trina Solar Co., Ltd.
- 11.4. JA Solar Technology Co., Ltd.
- 11.5. First Solar, Inc.
- 11.6. Hanwha Q CELLS Co., Ltd.
- 11.7. Oxford Photovoltaics Ltd.
- 11.8. Kaneka Corporation
- 11.9. Ascent Solar Technologies, Inc.

11.10. GCL-New Energy Holdings Limited (LIST NOT EXHAUSTIVE)

12. APPENDIX

12.1. About Us and Services

12.2. Contact Us

I would like to order

Product name: Next-Generation Solar Cells Market - 2024-2032

Product link: <https://marketpublishers.com/r/N48AD00D081EEN.html>

Price: US\$ 2,999.00 (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/N48AD00D081EEN.html>