

# Global Lead-free Perovskite Solar Cell Market Research Report 2023

<https://marketpublishers.com/r/GA3635B5F583EN.html>

Date: November 2023

Pages: 101

Price: US\$ 2,900.00 (Single User License)

ID: GA3635B5F583EN

## Abstracts

This report aims to provide a comprehensive presentation of the global market for Lead-free Perovskite Solar Cell, with both quantitative and qualitative analysis, to help readers develop business/growth strategies, assess the market competitive situation, analyze their position in the current marketplace, and make informed business decisions regarding Lead-free Perovskite Solar Cell.

The Lead-free Perovskite Solar Cell market size, estimations, and forecasts are provided in terms of output/shipments (K Units) and revenue (\$ millions), considering 2022 as the base year, with history and forecast data for the period from 2018 to 2029. This report segments the global Lead-free Perovskite Solar Cell market comprehensively. Regional market sizes, concerning products by type, by application and by players, are also provided.

For a more in-depth understanding of the market, the report provides profiles of the competitive landscape, key competitors, and their respective market ranks. The report also discusses technological trends and new product developments.

The report will help the Lead-free Perovskite Solar Cell manufacturers, new entrants, and industry chain related companies in this market with information on the revenues, production, and average price for the overall market and the sub-segments across the different segments, by company, by type, by application, and by regions.

By Company

Panasonic

Oxford PV

Ricoh

Fujikura

3GSolar

Greatcell Energy (Dyesol)

Exeger (Fortum)

Sharp Corporation

Peccell

Solaronix

G24 Power

Kaneka

Shenzhen Topraysolar Co., Ltd.

Dazheng (Jiangsu) Micro Nano Technology Co., Ltd.

Guangdong Mailuo Energy Technology Co., Ltd.

## Segment by Type

Formal Structured Cells

Trans Structured Cells

## Segment by Application

Consumer Electronics

IOT

Smart Workplace

Other

### Production by Region

North America

Europe

China

Japan

### Consumption by Region

North America

United States

Canada

Europe

Germany

France

U.K.

Italy

Russia

## Asia-Pacific

China

Japan

South Korea

China Taiwan

Southeast Asia

India

## Latin America

Mexico

Brazil

## Core Chapters

Chapter 1: Introduces the report scope of the report, executive summary of different market segments (by region, by type, by application, etc), including the market size of each market segment, future development potential, and so on. It offers a high-level view of the current state of the market and its likely evolution in the short to mid-term, and long term.

Chapter 2: Detailed analysis of Lead-free Perovskite Solar Cell manufacturers competitive landscape, price, production and value market share, latest development plan, merger, and acquisition information, etc.

Chapter 3: Production/output, value of Lead-free Perovskite Solar Cell by region/country. It provides a quantitative analysis of the market size and development potential of each region in the next six years.

Chapter 4: Consumption of Lead-free Perovskite Solar Cell in regional level and country level. It provides a quantitative analysis of the market size and development potential of

each region and its main countries and introduces the market development, future development prospects, market space, and production of each country in the world.

Chapter 5: Provides the analysis of various market segments by type, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different market segments.

Chapter 6: Provides the analysis of various market segments by application, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different downstream markets.

Chapter 7: Provides profiles of key players, introducing the basic situation of the key companies in the market in detail, including product production/output, value, price, gross margin, product introduction, recent development, etc.

Chapter 8: Analysis of industrial chain, including the upstream and downstream of the industry.

Chapter 9: Introduces the market dynamics, latest developments of the market, the driving factors and restrictive factors of the market, the challenges and risks faced by manufacturers in the industry, and the analysis of relevant policies in the industry.

Chapter 10: The main points and conclusions of the report.

## Contents

### **1 LEAD-FREE PEROVSKITE SOLAR CELL MARKET OVERVIEW**

- 1.1 Product Definition
- 1.2 Lead-free Perovskite Solar Cell Segment by Type
  - 1.2.1 Global Lead-free Perovskite Solar Cell Market Value Growth Rate Analysis by Type 2022 VS 2029
  - 1.2.2 Formal Structured Cells
  - 1.2.3 Trans Structured Cells
- 1.3 Lead-free Perovskite Solar Cell Segment by Application
  - 1.3.1 Global Lead-free Perovskite Solar Cell Market Value Growth Rate Analysis by Application: 2022 VS 2029
  - 1.3.2 Consumer Electronics
  - 1.3.3 IOT
  - 1.3.4 Smart Workplace
  - 1.3.5 Other
- 1.4 Global Market Growth Prospects
  - 1.4.1 Global Lead-free Perovskite Solar Cell Production Value Estimates and Forecasts (2018-2029)
  - 1.4.2 Global Lead-free Perovskite Solar Cell Production Capacity Estimates and Forecasts (2018-2029)
  - 1.4.3 Global Lead-free Perovskite Solar Cell Production Estimates and Forecasts (2018-2029)
  - 1.4.4 Global Lead-free Perovskite Solar Cell Market Average Price Estimates and Forecasts (2018-2029)
- 1.5 Assumptions and Limitations

### **2 MARKET COMPETITION BY MANUFACTURERS**

- 2.1 Global Lead-free Perovskite Solar Cell Production Market Share by Manufacturers (2018-2023)
- 2.2 Global Lead-free Perovskite Solar Cell Production Value Market Share by Manufacturers (2018-2023)
- 2.3 Global Key Players of Lead-free Perovskite Solar Cell, Industry Ranking, 2021 VS 2022 VS 2023
- 2.4 Global Lead-free Perovskite Solar Cell Market Share by Company Type (Tier 1, Tier 2 and Tier 3)
- 2.5 Global Lead-free Perovskite Solar Cell Average Price by Manufacturers (2018-2023)

- 2.6 Global Key Manufacturers of Lead-free Perovskite Solar Cell, Manufacturing Base Distribution and Headquarters
- 2.7 Global Key Manufacturers of Lead-free Perovskite Solar Cell, Product Offered and Application
- 2.8 Global Key Manufacturers of Lead-free Perovskite Solar Cell, Date of Enter into This Industry
- 2.9 Lead-free Perovskite Solar Cell Market Competitive Situation and Trends
  - 2.9.1 Lead-free Perovskite Solar Cell Market Concentration Rate
  - 2.9.2 Global 5 and 10 Largest Lead-free Perovskite Solar Cell Players Market Share by Revenue
- 2.10 Mergers & Acquisitions, Expansion

### **3 LEAD-FREE PEROVSKITE SOLAR CELL PRODUCTION BY REGION**

- 3.1 Global Lead-free Perovskite Solar Cell Production Value Estimates and Forecasts by Region: 2018 VS 2022 VS 2029
- 3.2 Global Lead-free Perovskite Solar Cell Production Value by Region (2018-2029)
  - 3.2.1 Global Lead-free Perovskite Solar Cell Production Value Market Share by Region (2018-2023)
  - 3.2.2 Global Forecasted Production Value of Lead-free Perovskite Solar Cell by Region (2024-2029)
- 3.3 Global Lead-free Perovskite Solar Cell Production Estimates and Forecasts by Region: 2018 VS 2022 VS 2029
- 3.4 Global Lead-free Perovskite Solar Cell Production by Region (2018-2029)
  - 3.4.1 Global Lead-free Perovskite Solar Cell Production Market Share by Region (2018-2023)
  - 3.4.2 Global Forecasted Production of Lead-free Perovskite Solar Cell by Region (2024-2029)
- 3.5 Global Lead-free Perovskite Solar Cell Market Price Analysis by Region (2018-2023)
- 3.6 Global Lead-free Perovskite Solar Cell Production and Value, Year-over-Year Growth
  - 3.6.1 North America Lead-free Perovskite Solar Cell Production Value Estimates and Forecasts (2018-2029)
  - 3.6.2 Europe Lead-free Perovskite Solar Cell Production Value Estimates and Forecasts (2018-2029)
  - 3.6.3 China Lead-free Perovskite Solar Cell Production Value Estimates and Forecasts (2018-2029)
  - 3.6.4 Japan Lead-free Perovskite Solar Cell Production Value Estimates and

Forecasts (2018-2029)

## **4 LEAD-FREE PEROVSKITE SOLAR CELL CONSUMPTION BY REGION**

4.1 Global Lead-free Perovskite Solar Cell Consumption Estimates and Forecasts by Region: 2018 VS 2022 VS 2029

4.2 Global Lead-free Perovskite Solar Cell Consumption by Region (2018-2029)

4.2.1 Global Lead-free Perovskite Solar Cell Consumption by Region (2018-2023)

4.2.2 Global Lead-free Perovskite Solar Cell Forecasted Consumption by Region (2024-2029)

4.3 North America

4.3.1 North America Lead-free Perovskite Solar Cell Consumption Growth Rate by Country: 2018 VS 2022 VS 2029

4.3.2 North America Lead-free Perovskite Solar Cell Consumption by Country (2018-2029)

4.3.3 United States

4.3.4 Canada

4.4 Europe

4.4.1 Europe Lead-free Perovskite Solar Cell Consumption Growth Rate by Country: 2018 VS 2022 VS 2029

4.4.2 Europe Lead-free Perovskite Solar Cell Consumption by Country (2018-2029)

4.4.3 Germany

4.4.4 France

4.4.5 U.K.

4.4.6 Italy

4.4.7 Russia

4.5 Asia Pacific

4.5.1 Asia Pacific Lead-free Perovskite Solar Cell Consumption Growth Rate by Region: 2018 VS 2022 VS 2029

4.5.2 Asia Pacific Lead-free Perovskite Solar Cell Consumption by Region (2018-2029)

4.5.3 China

4.5.4 Japan

4.5.5 South Korea

4.5.6 China Taiwan

4.5.7 Southeast Asia

4.5.8 India

4.6 Latin America, Middle East & Africa

4.6.1 Latin America, Middle East & Africa Lead-free Perovskite Solar Cell



Consumption Growth Rate by Country: 2018 VS 2022 VS 2029

4.6.2 Latin America, Middle East & Africa Lead-free Perovskite Solar Cell

Consumption by Country (2018-2029)

4.6.3 Mexico

4.6.4 Brazil

4.6.5 Turkey

## **5 SEGMENT BY TYPE**

5.1 Global Lead-free Perovskite Solar Cell Production by Type (2018-2029)

5.1.1 Global Lead-free Perovskite Solar Cell Production by Type (2018-2023)

5.1.2 Global Lead-free Perovskite Solar Cell Production by Type (2024-2029)

5.1.3 Global Lead-free Perovskite Solar Cell Production Market Share by Type (2018-2029)

5.2 Global Lead-free Perovskite Solar Cell Production Value by Type (2018-2029)

5.2.1 Global Lead-free Perovskite Solar Cell Production Value by Type (2018-2023)

5.2.2 Global Lead-free Perovskite Solar Cell Production Value by Type (2024-2029)

5.2.3 Global Lead-free Perovskite Solar Cell Production Value Market Share by Type (2018-2029)

5.3 Global Lead-free Perovskite Solar Cell Price by Type (2018-2029)

## **6 SEGMENT BY APPLICATION**

6.1 Global Lead-free Perovskite Solar Cell Production by Application (2018-2029)

6.1.1 Global Lead-free Perovskite Solar Cell Production by Application (2018-2023)

6.1.2 Global Lead-free Perovskite Solar Cell Production by Application (2024-2029)

6.1.3 Global Lead-free Perovskite Solar Cell Production Market Share by Application (2018-2029)

6.2 Global Lead-free Perovskite Solar Cell Production Value by Application (2018-2029)

6.2.1 Global Lead-free Perovskite Solar Cell Production Value by Application (2018-2023)

6.2.2 Global Lead-free Perovskite Solar Cell Production Value by Application (2024-2029)

6.2.3 Global Lead-free Perovskite Solar Cell Production Value Market Share by Application (2018-2029)

6.3 Global Lead-free Perovskite Solar Cell Price by Application (2018-2029)

## **7 KEY COMPANIES PROFILED**

## 7.1 Panasonic

7.1.1 Panasonic Lead-free Perovskite Solar Cell Corporation Information

7.1.2 Panasonic Lead-free Perovskite Solar Cell Product Portfolio

7.1.3 Panasonic Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.1.4 Panasonic Main Business and Markets Served

7.1.5 Panasonic Recent Developments/Updates

## 7.2 Oxford PV

7.2.1 Oxford PV Lead-free Perovskite Solar Cell Corporation Information

7.2.2 Oxford PV Lead-free Perovskite Solar Cell Product Portfolio

7.2.3 Oxford PV Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.2.4 Oxford PV Main Business and Markets Served

7.2.5 Oxford PV Recent Developments/Updates

## 7.3 Ricoh

7.3.1 Ricoh Lead-free Perovskite Solar Cell Corporation Information

7.3.2 Ricoh Lead-free Perovskite Solar Cell Product Portfolio

7.3.3 Ricoh Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.3.4 Ricoh Main Business and Markets Served

7.3.5 Ricoh Recent Developments/Updates

## 7.4 Fujikura

7.4.1 Fujikura Lead-free Perovskite Solar Cell Corporation Information

7.4.2 Fujikura Lead-free Perovskite Solar Cell Product Portfolio

7.4.3 Fujikura Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.4.4 Fujikura Main Business and Markets Served

7.4.5 Fujikura Recent Developments/Updates

## 7.5 3GSolar

7.5.1 3GSolar Lead-free Perovskite Solar Cell Corporation Information

7.5.2 3GSolar Lead-free Perovskite Solar Cell Product Portfolio

7.5.3 3GSolar Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.5.4 3GSolar Main Business and Markets Served

7.5.5 3GSolar Recent Developments/Updates

## 7.6 Greatcell Energy (Dyesol)

7.6.1 Greatcell Energy (Dyesol) Lead-free Perovskite Solar Cell Corporation Information

7.6.2 Greatcell Energy (Dyesol) Lead-free Perovskite Solar Cell Product Portfolio

7.6.3 Greatcell Energy (Dyesol) Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.6.4 Greatcell Energy (Dyesol) Main Business and Markets Served

7.6.5 Greatcell Energy (Dyesol) Recent Developments/Updates

7.7 Exeger (Fortum)

7.7.1 Exeger (Fortum) Lead-free Perovskite Solar Cell Corporation Information

7.7.2 Exeger (Fortum) Lead-free Perovskite Solar Cell Product Portfolio

7.7.3 Exeger (Fortum) Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.7.4 Exeger (Fortum) Main Business and Markets Served

7.7.5 Exeger (Fortum) Recent Developments/Updates

7.8 Sharp Corporation

7.8.1 Sharp Corporation Lead-free Perovskite Solar Cell Corporation Information

7.8.2 Sharp Corporation Lead-free Perovskite Solar Cell Product Portfolio

7.8.3 Sharp Corporation Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.8.4 Sharp Corporation Main Business and Markets Served

7.8.5 Sharp Corporation Recent Developments/Updates

7.9 Peccell

7.9.1 Peccell Lead-free Perovskite Solar Cell Corporation Information

7.9.2 Peccell Lead-free Perovskite Solar Cell Product Portfolio

7.9.3 Peccell Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.9.4 Peccell Main Business and Markets Served

7.9.5 Peccell Recent Developments/Updates

7.10 Solaronix

7.10.1 Solaronix Lead-free Perovskite Solar Cell Corporation Information

7.10.2 Solaronix Lead-free Perovskite Solar Cell Product Portfolio

7.10.3 Solaronix Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.10.4 Solaronix Main Business and Markets Served

7.10.5 Solaronix Recent Developments/Updates

7.11 G24 Power

7.11.1 G24 Power Lead-free Perovskite Solar Cell Corporation Information

7.11.2 G24 Power Lead-free Perovskite Solar Cell Product Portfolio

7.11.3 G24 Power Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.11.4 G24 Power Main Business and Markets Served

7.11.5 G24 Power Recent Developments/Updates

## 7.12 Kaneka

7.12.1 Kaneka Lead-free Perovskite Solar Cell Corporation Information

7.12.2 Kaneka Lead-free Perovskite Solar Cell Product Portfolio

7.12.3 Kaneka Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.12.4 Kaneka Main Business and Markets Served

7.12.5 Kaneka Recent Developments/Updates

## 7.13 Shenzhen Topraysolar Co., Ltd.

7.13.1 Shenzhen Topraysolar Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information

7.13.2 Shenzhen Topraysolar Co., Ltd. Lead-free Perovskite Solar Cell Product Portfolio

7.13.3 Shenzhen Topraysolar Co., Ltd. Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.13.4 Shenzhen Topraysolar Co., Ltd. Main Business and Markets Served

7.13.5 Shenzhen Topraysolar Co., Ltd. Recent Developments/Updates

## 7.14 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd.

7.14.1 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information

7.14.2 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Product Portfolio

7.14.3 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.14.4 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Main Business and Markets Served

7.14.5 Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Recent Developments/Updates

## 7.15 Guangdong Mailuo Energy Technology Co., Ltd.

7.15.1 Guangdong Mailuo Energy Technology Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information

7.15.2 Guangdong Mailuo Energy Technology Co., Ltd. Lead-free Perovskite Solar Cell Product Portfolio

7.15.3 Guangdong Mailuo Energy Technology Co., Ltd. Lead-free Perovskite Solar Cell Production, Value, Price and Gross Margin (2018-2023)

7.15.4 Guangdong Mailuo Energy Technology Co., Ltd. Main Business and Markets Served

7.15.5 Guangdong Mailuo Energy Technology Co., Ltd. Recent Developments/Updates

## **8 INDUSTRY CHAIN AND SALES CHANNELS ANALYSIS**

- 8.1 Lead-free Perovskite Solar Cell Industry Chain Analysis
- 8.2 Lead-free Perovskite Solar Cell Key Raw Materials
  - 8.2.1 Key Raw Materials
  - 8.2.2 Raw Materials Key Suppliers
- 8.3 Lead-free Perovskite Solar Cell Production Mode & Process
- 8.4 Lead-free Perovskite Solar Cell Sales and Marketing
  - 8.4.1 Lead-free Perovskite Solar Cell Sales Channels
  - 8.4.2 Lead-free Perovskite Solar Cell Distributors
- 8.5 Lead-free Perovskite Solar Cell Customers

## **9 LEAD-FREE PEROVSKITE SOLAR CELL MARKET DYNAMICS**

- 9.1 Lead-free Perovskite Solar Cell Industry Trends
- 9.2 Lead-free Perovskite Solar Cell Market Drivers
- 9.3 Lead-free Perovskite Solar Cell Market Challenges
- 9.4 Lead-free Perovskite Solar Cell Market Restraints

## **10 RESEARCH FINDING AND CONCLUSION**

## **11 METHODOLOGY AND DATA SOURCE**

- 11.1 Methodology/Research Approach
  - 11.1.1 Research Programs/Design
  - 11.1.2 Market Size Estimation
  - 11.1.3 Market Breakdown and Data Triangulation
- 11.2 Data Source
  - 11.2.1 Secondary Sources
  - 11.2.2 Primary Sources
- 11.3 Author List
- 11.4 Disclaimer

## List Of Tables

### LIST OF TABLES

Table 1. Global Lead-free Perovskite Solar Cell Market Value by Type, (US\$ Million) & (2022 VS 2029)

Table 2. Global Lead-free Perovskite Solar Cell Market Value by Application, (US\$ Million) & (2022 VS 2029)

Table 3. Global Lead-free Perovskite Solar Cell Production Capacity (K Units) by Manufacturers in 2022

Table 4. Global Lead-free Perovskite Solar Cell Production by Manufacturers (2018-2023) & (K Units)

Table 5. Global Lead-free Perovskite Solar Cell Production Market Share by Manufacturers (2018-2023)

Table 6. Global Lead-free Perovskite Solar Cell Production Value by Manufacturers (2018-2023) & (US\$ Million)

Table 7. Global Lead-free Perovskite Solar Cell Production Value Share by Manufacturers (2018-2023)

Table 8. Global Lead-free Perovskite Solar Cell Industry Ranking 2021 VS 2022 VS 2023

Table 9. Company Type (Tier 1, Tier 2 and Tier 3) & (based on the Revenue in Lead-free Perovskite Solar Cell as of 2022)

Table 10. Global Market Lead-free Perovskite Solar Cell Average Price by Manufacturers (US\$/Unit) & (2018-2023)

Table 11. Manufacturers Lead-free Perovskite Solar Cell Production Sites and Area Served

Table 12. Manufacturers Lead-free Perovskite Solar Cell Product Types

Table 13. Global Lead-free Perovskite Solar Cell Manufacturers Market Concentration Ratio (CR5 and HHI)

Table 14. Mergers & Acquisitions, Expansion

Table 15. Global Lead-free Perovskite Solar Cell Production Value by Region: 2018 VS 2022 VS 2029 (US\$ Million)

Table 16. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) by Region (2018-2023)

Table 17. Global Lead-free Perovskite Solar Cell Production Value Market Share by Region (2018-2023)

Table 18. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) Forecast by Region (2024-2029)

Table 19. Global Lead-free Perovskite Solar Cell Production Value Market Share

Forecast by Region (2024-2029)

Table 20. Global Lead-free Perovskite Solar Cell Production Comparison by Region: 2018 VS 2022 VS 2029 (K Units)

Table 21. Global Lead-free Perovskite Solar Cell Production (K Units) by Region (2018-2023)

Table 22. Global Lead-free Perovskite Solar Cell Production Market Share by Region (2018-2023)

Table 23. Global Lead-free Perovskite Solar Cell Production (K Units) Forecast by Region (2024-2029)

Table 24. Global Lead-free Perovskite Solar Cell Production Market Share Forecast by Region (2024-2029)

Table 25. Global Lead-free Perovskite Solar Cell Market Average Price (US\$/Unit) by Region (2018-2023)

Table 26. Global Lead-free Perovskite Solar Cell Market Average Price (US\$/Unit) by Region (2024-2029)

Table 27. Global Lead-free Perovskite Solar Cell Consumption Growth Rate by Region: 2018 VS 2022 VS 2029 (K Units)

Table 28. Global Lead-free Perovskite Solar Cell Consumption by Region (2018-2023) & (K Units)

Table 29. Global Lead-free Perovskite Solar Cell Consumption Market Share by Region (2018-2023)

Table 30. Global Lead-free Perovskite Solar Cell Forecasted Consumption by Region (2024-2029) & (K Units)

Table 31. Global Lead-free Perovskite Solar Cell Forecasted Consumption Market Share by Region (2018-2023)

Table 32. North America Lead-free Perovskite Solar Cell Consumption Growth Rate by Country: 2018 VS 2022 VS 2029 (K Units)

Table 33. North America Lead-free Perovskite Solar Cell Consumption by Country (2018-2023) & (K Units)

Table 34. North America Lead-free Perovskite Solar Cell Consumption by Country (2024-2029) & (K Units)

Table 35. Europe Lead-free Perovskite Solar Cell Consumption Growth Rate by Country: 2018 VS 2022 VS 2029 (K Units)

Table 36. Europe Lead-free Perovskite Solar Cell Consumption by Country (2018-2023) & (K Units)

Table 37. Europe Lead-free Perovskite Solar Cell Consumption by Country (2024-2029) & (K Units)

Table 38. Asia Pacific Lead-free Perovskite Solar Cell Consumption Growth Rate by Region: 2018 VS 2022 VS 2029 (K Units)

Table 39. Asia Pacific Lead-free Perovskite Solar Cell Consumption by Region (2018-2023) & (K Units)

Table 40. Asia Pacific Lead-free Perovskite Solar Cell Consumption by Region (2024-2029) & (K Units)

Table 41. Latin America, Middle East & Africa Lead-free Perovskite Solar Cell Consumption Growth Rate by Country: 2018 VS 2022 VS 2029 (K Units)

Table 42. Latin America, Middle East & Africa Lead-free Perovskite Solar Cell Consumption by Country (2018-2023) & (K Units)

Table 43. Latin America, Middle East & Africa Lead-free Perovskite Solar Cell Consumption by Country (2024-2029) & (K Units)

Table 44. Global Lead-free Perovskite Solar Cell Production (K Units) by Type (2018-2023)

Table 45. Global Lead-free Perovskite Solar Cell Production (K Units) by Type (2024-2029)

Table 46. Global Lead-free Perovskite Solar Cell Production Market Share by Type (2018-2023)

Table 47. Global Lead-free Perovskite Solar Cell Production Market Share by Type (2024-2029)

Table 48. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) by Type (2018-2023)

Table 49. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) by Type (2024-2029)

Table 50. Global Lead-free Perovskite Solar Cell Production Value Share by Type (2018-2023)

Table 51. Global Lead-free Perovskite Solar Cell Production Value Share by Type (2024-2029)

Table 52. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Type (2018-2023)

Table 53. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Type (2024-2029)

Table 54. Global Lead-free Perovskite Solar Cell Production (K Units) by Application (2018-2023)

Table 55. Global Lead-free Perovskite Solar Cell Production (K Units) by Application (2024-2029)

Table 56. Global Lead-free Perovskite Solar Cell Production Market Share by Application (2018-2023)

Table 57. Global Lead-free Perovskite Solar Cell Production Market Share by Application (2024-2029)

Table 58. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) by Application (2018-2023)

Table 59. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) by Application (2024-2029)



Application (2024-2029)

Table 60. Global Lead-free Perovskite Solar Cell Production Value Share by Application (2018-2023)

Table 61. Global Lead-free Perovskite Solar Cell Production Value Share by Application (2024-2029)

Table 62. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Application (2018-2023)

Table 63. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Application (2024-2029)

Table 64. Panasonic Lead-free Perovskite Solar Cell Corporation Information

Table 65. Panasonic Specification and Application

Table 66. Panasonic Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 67. Panasonic Main Business and Markets Served

Table 68. Panasonic Recent Developments/Updates

Table 69. Oxford PV Lead-free Perovskite Solar Cell Corporation Information

Table 70. Oxford PV Specification and Application

Table 71. Oxford PV Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 72. Oxford PV Main Business and Markets Served

Table 73. Oxford PV Recent Developments/Updates

Table 74. Ricoh Lead-free Perovskite Solar Cell Corporation Information

Table 75. Ricoh Specification and Application

Table 76. Ricoh Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 77. Ricoh Main Business and Markets Served

Table 78. Ricoh Recent Developments/Updates

Table 79. Fujikura Lead-free Perovskite Solar Cell Corporation Information

Table 80. Fujikura Specification and Application

Table 81. Fujikura Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 82. Fujikura Main Business and Markets Served

Table 83. Fujikura Recent Developments/Updates

Table 84. 3GSolar Lead-free Perovskite Solar Cell Corporation Information

Table 85. 3GSolar Specification and Application

Table 86. 3GSolar Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 87. 3GSolar Main Business and Markets Served

Table 88. 3GSolar Recent Developments/Updates

Table 89. Greatcell Energy (Dyesol) Lead-free Perovskite Solar Cell Corporation Information

Table 90. Greatcell Energy (Dyesol) Specification and Application

Table 91. Greatcell Energy (Dyesol) Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 92. Greatcell Energy (Dyesol) Main Business and Markets Served

Table 93. Greatcell Energy (Dyesol) Recent Developments/Updates

Table 94. Exeger (Fortum) Lead-free Perovskite Solar Cell Corporation Information

Table 95. Exeger (Fortum) Specification and Application

Table 96. Exeger (Fortum) Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 97. Exeger (Fortum) Main Business and Markets Served

Table 98. Exeger (Fortum) Recent Developments/Updates

Table 99. Sharp Corporation Lead-free Perovskite Solar Cell Corporation Information

Table 100. Sharp Corporation Specification and Application

Table 101. Sharp Corporation Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 102. Sharp Corporation Main Business and Markets Served

Table 103. Sharp Corporation Recent Developments/Updates

Table 104. Peccell Lead-free Perovskite Solar Cell Corporation Information

Table 105. Peccell Specification and Application

Table 106. Peccell Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 107. Peccell Main Business and Markets Served

Table 108. Peccell Recent Developments/Updates

Table 109. Solaronix Lead-free Perovskite Solar Cell Corporation Information

Table 110. Solaronix Specification and Application

Table 111. Solaronix Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 112. Solaronix Main Business and Markets Served

Table 113. Solaronix Recent Developments/Updates

Table 114. G24 Power Lead-free Perovskite Solar Cell Corporation Information

Table 115. G24 Power Specification and Application

Table 116. G24 Power Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)

Table 117. G24 Power Main Business and Markets Served

Table 118. G24 Power Recent Developments/Updates

Table 119. Kaneka Lead-free Perovskite Solar Cell Corporation Information

Table 120. Kaneka Specification and Application

- Table 121. Kaneka Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)
- Table 122. Kaneka Main Business and Markets Served
- Table 123. Kaneka Recent Developments/Updates
- Table 124. Shenzhen Topraysolar Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information
- Table 125. Shenzhen Topraysolar Co., Ltd. Specification and Application
- Table 126. Shenzhen Topraysolar Co., Ltd. Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)
- Table 127. Shenzhen Topraysolar Co., Ltd. Main Business and Markets Served
- Table 128. Shenzhen Topraysolar Co., Ltd. Recent Developments/Updates
- Table 129. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information
- Table 130. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Specification and Application
- Table 131. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)
- Table 132. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Main Business and Markets Served
- Table 133. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Recent Developments/Updates
- Table 134. Dazheng (Jiangsu) Micro Nano Technology Co., Ltd. Lead-free Perovskite Solar Cell Corporation Information
- Table 135. Guangdong Mailuo Energy Technology Co., Ltd. Specification and Application
- Table 136. Guangdong Mailuo Energy Technology Co., Ltd. Lead-free Perovskite Solar Cell Production (K Units), Value (US\$ Million), Price (US\$/Unit) and Gross Margin (2018-2023)
- Table 137. Guangdong Mailuo Energy Technology Co., Ltd. Main Business and Markets Served
- Table 138. Guangdong Mailuo Energy Technology Co., Ltd. Recent Developments/Updates
- Table 139. Key Raw Materials Lists
- Table 140. Raw Materials Key Suppliers Lists
- Table 141. Lead-free Perovskite Solar Cell Distributors List
- Table 142. Lead-free Perovskite Solar Cell Customers List
- Table 143. Lead-free Perovskite Solar Cell Market Trends
- Table 144. Lead-free Perovskite Solar Cell Market Drivers

Table 145. Lead-free Perovskite Solar Cell Market Challenges

Table 146. Lead-free Perovskite Solar Cell Market Restraints

Table 147. Research Programs/Design for This Report

Table 148. Key Data Information from Secondary Sources

Table 149. Key Data Information from Primary Sources

## List Of Figures

### LIST OF FIGURES

Figure 1. Product Picture of Lead-free Perovskite Solar Cell

Figure 2. Global Lead-free Perovskite Solar Cell Market Value by Type, (US\$ Million) & (2022 VS 2029)

Figure 3. Global Lead-free Perovskite Solar Cell Market Share by Type: 2022 VS 2029

Figure 4. Formal Structured Cells Product Picture

Figure 5. Trans Structured Cells Product Picture

Figure 6. Global Lead-free Perovskite Solar Cell Market Value by Application, (US\$ Million) & (2022 VS 2029)

Figure 7. Global Lead-free Perovskite Solar Cell Market Share by Application: 2022 VS 2029

Figure 8. Consumer Electronics

Figure 9. IOT

Figure 10. Smart Workplace

Figure 11. Other

Figure 12. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million), 2018 VS 2022 VS 2029

Figure 13. Global Lead-free Perovskite Solar Cell Production Value (US\$ Million) & (2018-2029)

Figure 14. Global Lead-free Perovskite Solar Cell Production (K Units) & (2018-2029)

Figure 15. Global Lead-free Perovskite Solar Cell Average Price (US\$/Unit) & (2018-2029)

Figure 16. Lead-free Perovskite Solar Cell Report Years Considered

Figure 17. Lead-free Perovskite Solar Cell Production Share by Manufacturers in 2022

Figure 18. Lead-free Perovskite Solar Cell Market Share by Company Type (Tier 1, Tier 2, and Tier 3): 2018 VS 2022

Figure 19. The Global 5 and 10 Largest Players: Market Share by Lead-free Perovskite Solar Cell Revenue in 2022

Figure 20. Global Lead-free Perovskite Solar Cell Production Value by Region: 2018 VS 2022 VS 2029 (US\$ Million)

Figure 21. Global Lead-free Perovskite Solar Cell Production Value Market Share by Region: 2018 VS 2022 VS 2029

Figure 22. Global Lead-free Perovskite Solar Cell Production Comparison by Region: 2018 VS 2022 VS 2029 (K Units)

Figure 23. Global Lead-free Perovskite Solar Cell Production Market Share by Region: 2018 VS 2022 VS 2029

Figure 24. North America Lead-free Perovskite Solar Cell Production Value (US\$ Million) Growth Rate (2018-2029)

Figure 25. Europe Lead-free Perovskite Solar Cell Production Value (US\$ Million) Growth Rate (2018-2029)

Figure 26. China Lead-free Perovskite Solar Cell Production Value (US\$ Million) Growth Rate (2018-2029)

Figure 27. Japan Lead-free Perovskite Solar Cell Production Value (US\$ Million) Growth Rate (2018-2029)

Figure 28. Global Lead-free Perovskite Solar Cell Consumption by Region: 2018 VS 2022 VS 2029 (K Units)

Figure 29. Global Lead-free Perovskite Solar Cell Consumption Market Share by Region: 2018 VS 2022 VS 2029

Figure 30. North America Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 31. North America Lead-free Perovskite Solar Cell Consumption Market Share by Country (2018-2029)

Figure 32. Canada Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 33. U.S. Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 34. Europe Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 35. Europe Lead-free Perovskite Solar Cell Consumption Market Share by Country (2018-2029)

Figure 36. Germany Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 37. France Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 38. U.K. Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 39. Italy Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 40. Russia Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 41. Asia Pacific Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 42. Asia Pacific Lead-free Perovskite Solar Cell Consumption Market Share by Regions (2018-2029)

Figure 43. China Lead-free Perovskite Solar Cell Consumption and Growth Rate

(2018-2023) & (K Units)

Figure 44. Japan Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 45. South Korea Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 46. China Taiwan Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 47. Southeast Asia Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 48. India Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 49. Latin America, Middle East & Africa Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 50. Latin America, Middle East & Africa Lead-free Perovskite Solar Cell Consumption Market Share by Country (2018-2029)

Figure 51. Mexico Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 52. Brazil Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 53. Turkey Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 54. GCC Countries Lead-free Perovskite Solar Cell Consumption and Growth Rate (2018-2023) & (K Units)

Figure 55. Global Production Market Share of Lead-free Perovskite Solar Cell by Type (2018-2029)

Figure 56. Global Production Value Market Share of Lead-free Perovskite Solar Cell by Type (2018-2029)

Figure 57. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Type (2018-2029)

Figure 58. Global Production Market Share of Lead-free Perovskite Solar Cell by Application (2018-2029)

Figure 59. Global Production Value Market Share of Lead-free Perovskite Solar Cell by Application (2018-2029)

Figure 60. Global Lead-free Perovskite Solar Cell Price (US\$/Unit) by Application (2018-2029)

Figure 61. Lead-free Perovskite Solar Cell Value Chain

Figure 62. Lead-free Perovskite Solar Cell Production Process

Figure 63. Channels of Distribution (Direct Vs Distribution)

Figure 64. Distributors Profiles

Figure 65. Bottom-up and Top-down Approaches for This Report

## Figure 66. Data Triangulation



## I would like to order

Product name: Global Lead-free Perovskite Solar Cell Market Research Report 2023

Product link: <https://marketpublishers.com/r/GA3635B5F583EN.html>

Price: US\$ 2,900.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GA3635B5F583EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970