

Global Diamond Battery Market Growth (Status and Outlook) 2025-2031

<https://marketpublishers.com/r/GD8A6D56BB4EEN.html>

Date: August 2025

Pages: 90

Price: US\$ 3,660.00 (Single User License)

ID: GD8A6D56BB4EEN

Abstracts

According to this study, the global Diamond Battery market size will reach US\$ 16.2 million by 2031.

Diamond Battery is an innovative nuclear battery technology that uses the decay energy of radioactive isotopes and the semiconductor properties of diamond to generate electricity. It was proposed by a research team from the University of Bristol in the UK in 2016. It mainly uses radioactive carbon-14 (^{14}C) or nickel-63 (^{63}Ni) in nuclear waste as an energy source, and converts radiation energy into electrical energy through the semiconductor structure of diamond material.

LPI (LP Information)' newest research report, the "Diamond Battery Industry Forecast" looks at past sales and reviews total world Diamond Battery sales in 2024, providing a comprehensive analysis by region and market sector of projected Diamond Battery sales for 2025 through 2031. With Diamond Battery sales broken down by region, market sector and sub-sector, this report provides a detailed analysis in US\$ millions of the world Diamond Battery industry.

This Insight Report provides a comprehensive analysis of the global Diamond Battery landscape and highlights key trends related to product segmentation, company formation, revenue, and market share, latest development, and M&A activity. This report also analyses the strategies of leading global companies with a focus on Diamond Battery portfolios and capabilities, market entry strategies, market positions, and geographic footprints, to better understand these firms' unique position in an accelerating global Diamond Battery market.

This Insight Report evaluates the key market trends, drivers, and affecting factors

shaping the global outlook for Diamond Battery and breaks down the forecast by Type, by Application, geography, and market size to highlight emerging pockets of opportunity. With a transparent methodology based on hundreds of bottom-up qualitative and quantitative market inputs, this study forecast offers a highly nuanced view of the current state and future trajectory in the global Diamond Battery.

This report presents a comprehensive overview, market shares, and growth opportunities of Diamond Battery market by product type, application, key players and key regions and countries.

Segmentation by Type:

Carbon-14 (¹⁴C) Diamond Battery

Nickel-63 (⁶³Ni) Diamond Battery

Tritium (³H) Diamond Battery

Promethium-147 (¹⁴⁷Pm) Diamond Battery

Segmentation by Application:

Aerospace

Medical Devices

IoT

Nuclear Waste Management

Others

This report also splits the market by region:

Americas

United States

Canada

Mexico

Brazil

APAC

China

Japan

Korea

Southeast Asia

India

Australia

Europe

Germany

France

UK

Italy

Russia

Middle East & Africa

Egypt

South Africa

Israel

Turkey

GCC Countries

The below companies that are profiled have been selected based on inputs gathered from primary experts and analyzing the company's coverage, product portfolio, its market penetration.

University of Bristol

Arkenlight

Russian Academy of Sciences

Argonne National Laboratory

JAEA

Tokyo Tech

CEA

NDB Inc.

Contents

1 SCOPE OF THE REPORT

- 1.1 Market Introduction
- 1.2 Years Considered
- 1.3 Research Objectives
- 1.4 Market Research Methodology
- 1.5 Research Process and Data Source
- 1.6 Economic Indicators
- 1.7 Currency Considered

2 EXECUTIVE SUMMARY

- 2.1 World Market Overview
 - 2.1.1 Global Diamond Battery Market Size 2025-2031
 - 2.1.2 Diamond Battery Market Size CAGR by Region
- 2.2 Diamond Battery Segment by Type
 - 2.2.1 Carbon-14 (^{14}C) Diamond Battery
 - 2.2.2 Nickel-63 (^{63}Ni) Diamond Battery
 - 2.2.3 Tritium (^3H) Diamond Battery
 - 2.2.4 Promethium-147 (^{147}Pm) Diamond Battery
- 2.3 Diamond Battery Market Size by Type
 - 2.3.1 Global Diamond Battery Market Size Market Share by Type (2025-2031)
 - 2.3.2 Global Diamond Battery Market Size Growth Rate by Type (2025-2031)
- 2.4 Diamond Battery Segment by Application
 - 2.4.1 Aerospace
 - 2.4.2 Medical Devices
 - 2.4.3 IoT
 - 2.4.4 Nuclear Waste Management
 - 2.4.5 Others
- 2.5 Diamond Battery Market Size by Application (2025-2031)
 - 2.5.1 Global Diamond Battery Market Size Market Share by Application (2025-2031)
 - 2.5.2 Global Diamond Battery Market Size Growth Rate by Application (2025-2031)

3 DIAMOND BATTERY KEY PLAYERS

- 3.1 Date of Key Players Enter into Diamond Battery
- 3.2 Key Players Diamond Battery Product Offered

- 3.3 Key Players Diamond Battery Funding/Investment Analysis
- 3.4 Funding/Investment
 - 3.4.1 Funding/Investment by Regions
 - 3.4.2 Funding/Investment by End-Industry
- 3.5 Key Players Diamond Battery Valuation & Market Capitalization
- 3.6 Key Players Mergers & Acquisitions, Expansion Plans
- 3.7 Market Ranking
- 3.8 New Product/Technology Launches
- 3.9 Partnerships, Agreements, and Collaborations
- 3.10 Mergers and Acquisitions

4 DIAMOND BATTERY BY REGIONS

- 4.1 Diamond Battery Market Size by Regions (2025-2031)
- 4.2 United States Diamond Battery Market Size Growth (2025-2031)
- 4.3 China Diamond Battery Market Size Growth (2025-2031)
- 4.4 Europe Diamond Battery Market Size Growth (2025-2031)
- 4.5 Rest of World Diamond Battery Market Size Growth (2025-2031)

5 UNITED STATES

- 5.1 United States Diamond Battery Market Size by Type (2025-2031)
- 5.2 United States Diamond Battery Market Size by Application (2025-2031)

6 EUROPE

- 6.1 Europe Diamond Battery Market Size by Type (2025-2031)
- 6.2 Europe Diamond Battery Market Size by Application (2025-2031)

7 CHINA

- 7.1 China Diamond Battery Market Size by Type (2025-2031)
- 7.2 China Diamond Battery Market Size by Application (2025-2031)

8 REST OF WORLD

- 8.1 Rest of World Diamond Battery Market Size by Type (2025-2031)
- 8.2 Rest of World Diamond Battery Market Size by Application (2025-2031)
- 8.3 Japan

8.4 South Korea

8.5 Southeast Asia

9 MARKET DRIVERS, CHALLENGES AND TRENDS

9.1 Market Drivers & Growth Opportunities

9.2 Market Challenges & Risks

9.3 Industry Trends

10 KEY INVESTORS IN DIAMOND BATTERY

10.1 Company A

10.1.1 Company A Company Details

10.1.2 Company Description

10.1.3 Companies Invested by Company A

10.1.4 Company A Key Development and Market Layout

10.2 Company B

10.2.1 Company B Company Details

10.2.2 Company Description

10.2.3 Companies Invested by Company B

10.2.4 Company B Key Development and Market Layout

10.3 Company C

10.3.1 Company C Company Details

10.3.2 Company Description

10.3.3 Companies Invested by Company C

10.3.4 Company C Key Development and Market Layout

10.4 Company D

10.5

11 KEY PLAYERS ANALYSIS

11.1 University of Bristol

11.1.1 University of Bristol Company Details

11.1.2 University of Bristol Diamond Battery Product Offered

11.1.3 University of Bristol Diamond Battery Market Size (2024 VS 2030)

11.1.4 University of Bristol Main Business Overview

11.1.5 University of Bristol News

11.2 Arkenlight

11.2.1 Arkenlight Company Details

- 11.2.2 Arkenlight Diamond Battery Product Offered
- 11.2.3 Arkenlight Diamond Battery Market Size (2024 VS 2030)
- 11.2.4 Arkenlight Main Business Overview
- 11.2.5 Arkenlight News
- 11.3 Russian Academy of Sciences
 - 11.3.1 Russian Academy of Sciences Company Details
 - 11.3.2 Russian Academy of Sciences Diamond Battery Product Offered
 - 11.3.3 Russian Academy of Sciences Diamond Battery Market Size (2024 VS 2030)
 - 11.3.4 Russian Academy of Sciences Main Business Overview
 - 11.3.5 Russian Academy of Sciences News
- 11.4 Argonne National Laboratory
 - 11.4.1 Argonne National Laboratory Company Details
 - 11.4.2 Argonne National Laboratory Diamond Battery Product Offered
 - 11.4.3 Argonne National Laboratory Diamond Battery Market Size (2024 VS 2030)
 - 11.4.4 Argonne National Laboratory Main Business Overview
 - 11.4.5 Argonne National Laboratory News
- 11.5 JAEA
 - 11.5.1 JAEA Company Details
 - 11.5.2 JAEA Diamond Battery Product Offered
 - 11.5.3 JAEA Diamond Battery Market Size (2024 VS 2030)
 - 11.5.4 JAEA Main Business Overview
 - 11.5.5 JAEA News
- 11.6 Tokyo Tech
 - 11.6.1 Tokyo Tech Company Details
 - 11.6.2 Tokyo Tech Diamond Battery Product Offered
 - 11.6.3 Tokyo Tech Diamond Battery Market Size (2024 VS 2030)
 - 11.6.4 Tokyo Tech Main Business Overview
 - 11.6.5 Tokyo Tech News
- 11.7 CEA
 - 11.7.1 CEA Company Details
 - 11.7.2 CEA Diamond Battery Product Offered
 - 11.7.3 CEA Diamond Battery Market Size (2024 VS 2030)
 - 11.7.4 CEA Main Business Overview
 - 11.7.5 CEA News
- 11.8 NDB Inc.
 - 11.8.1 NDB Inc. Company Details
 - 11.8.2 NDB Inc. Diamond Battery Product Offered
 - 11.8.3 NDB Inc. Diamond Battery Market Size (2024 VS 2030)
 - 11.8.4 NDB Inc. Main Business Overview

11.8.5 NDB Inc. News

12 RESEARCH FINDINGS AND CONCLUSION

List Of Tables

LIST OF TABLES

Table 1. Diamond Battery Market Size CAGR by Region (2025-2031) (\$ millions)

Table 2. Major Players of Carbon-14 (¹⁴C) Diamond Battery

Table 3. Major Players of Nickel-63 (⁶³Ni) Diamond Battery

Table 4. Major Players of Tritium (³H) Diamond Battery

Table 5. Major Players of Promethium-147 (¹⁴⁷Pm) Diamond Battery

Table 6. Global Market Size by Type (2025-2031) (\$ millions)

Table 7. Global Diamond Battery Market Size Market Share by Type (2025-2031)

Table 8. Global Diamond Battery Market Size by Application (2025-2031) (\$ millions)

Table 9. Global Diamond Battery Market Size Market Share by Application (2025-2031)

Table 10. Date of Global Key Players Enter into Diamond Battery Market

Table 11. Global Key Players Diamond Battery Product Offered

Table 12. Key Players Diamond Battery Funding/Investment (Million USD)

Table 13. Funding/Investment by Regions

Table 14. Funding/Investment by End-Industry

Table 15. Key Players Diamond Battery Valuation & Market Capitalization (Million USD)

Table 16. Key Players Mergers & Acquisitions, Expansion Plans

Table 17. Diamond Battery New Product/Technology Launches

Table 18. Diamond Battery Industry Partnerships, Agreements, and Collaborations

Table 19. Diamond Battery Industry Mergers and Acquisitions

Table 20. Global Diamond Battery Market Size by Regions 2025-2031 (\$ millions)

Table 21. Global Diamond Battery Market Size Market Share by Regions 2025-2031

Table 22. United States Diamond Battery Market Size by Type (2025-2031) (\$ millions)

Table 23. United States Diamond Battery Market Size Market Share by Type (2025-2031)

Table 24. United States Diamond Battery Market Size by Application (2025-2031) (\$ millions)

Table 25. United States Diamond Battery Market Size Market Share by Application (2025-2031)

Table 26. Europe Diamond Battery Market Size by Type (2025-2031) (\$ millions)

Table 27. Europe Diamond Battery Market Size Market Share by Type (2025-2031)

Table 28. Europe Diamond Battery Market Size by Application (2025-2031) (\$ millions)

Table 29. Europe Diamond Battery Market Size Market Share by Application (2025-2031)

Table 30. China Diamond Battery Market Size by Type (2025-2031) (\$ millions)

Table 31. China Diamond Battery Market Size Market Share by Type (2025-2031)

- Table 32. China Diamond Battery Market Size by Application (2025-2031) (\$ millions)
- Table 33. China Diamond Battery Market Size Market Share by Application (2025-2031)
- Table 34. Rest of World Diamond Battery Market Size by Type (2025-2031) (\$ millions)
- Table 35. Rest of World Diamond Battery Market Size Market Share by Type (2025-2031)
- Table 36. Rest of World Diamond Battery Market Size by Application (2025-2031) (\$ millions)
- Table 37. Rest of World Diamond Battery Market Size Market Share by Application (2025-2031)
- Table 38. Key Market Drivers & Growth Opportunities of Diamond Battery
- Table 39. Key Market Challenges & Risks of Diamond Battery
- Table 40. Key Industry Trends of Diamond Battery
- Table 41. Company A Company Details
- Table 42. Companies Invested by Company A
- Table 43. Company A Key Development and Market Layout
- Table 44. Company B Company Details
- Table 45. Companies Invested by Company B
- Table 46. Company B Key Development and Market Layout
- Table 47. Company C Company Details
- Table 48. Companies Invested by Company C
- Table 49. Company C Key Development and Market Layout
- Table 50. University of Bristol Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 51. University of Bristol Diamond Battery Market Size (2024 VS 2030)
- Table 52. Arkenlight Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 53. Arkenlight Diamond Battery Market Size (2024 VS 2030)
- Table 54. Russian Academy of Sciences Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 55. Russian Academy of Sciences Diamond Battery Market Size (2024 VS 2030)
- Table 56. Argonne National Laboratory Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 57. Argonne National Laboratory Diamond Battery Market Size (2024 VS 2030)
- Table 58. JAEA Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 59. JAEA Diamond Battery Market Size (2024 VS 2030)
- Table 60. Tokyo Tech Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 61. Tokyo Tech Diamond Battery Market Size (2024 VS 2030)

Table 62. CEA Basic Information, Head Office, Major Market Areas and Its Competitors

Table 63. CEA Diamond Battery Market Size (2024 VS 2030)

Table 64. NDB Inc. Basic Information, Head Office, Major Market Areas and Its Competitors

Table 65. NDB Inc. Diamond Battery Market Size (2024 VS 2030)

List Of Figures

LIST OF FIGURES

- Figure 1. Picture of Diamond Battery
- Figure 2. Diamond Battery Report Years Considered
- Figure 3. Research Objectives
- Figure 4. Research Methodology
- Figure 5. Research Process and Data Source
- Figure 6. Global Diamond Battery Market Size Growth Rate 2025-2031 (\$ millions)
- Figure 7. Diamond Battery Market Size by Region (2024 & 2031) (\$ millions)
- Figure 8. Global Diamond Battery Market Size Market Share by Type (2025-2031)
- Figure 9. Global Carbon-14 (¹⁴C) Diamond Battery Market Size Growth Rate
- Figure 10. Global Nickel-63 (⁶³Ni) Diamond Battery Market Size Growth Rate
- Figure 11. Diamond Battery in Aerospace
- Figure 12. Global Diamond Battery Market: Aerospace (2025-2031) (\$ millions)
- Figure 13. Diamond Battery in Medical Devices
- Figure 14. Global Diamond Battery Market: Medical Devices (2025-2031) (\$ millions)
- Figure 15. Diamond Battery in IoT
- Figure 16. Global Diamond Battery Market: IoT (2025-2031) (\$ millions)
- Figure 17. Diamond Battery in Nuclear Waste Management
- Figure 18. Global Diamond Battery Market: Nuclear Waste Management (2025-2031) (\$ millions)
- Figure 19. Diamond Battery in Others
- Figure 20. Global Diamond Battery Market: Others (2025-2031) (\$ millions)
- Figure 21. Global Diamond Battery Market Size Market Share by Application (2025-2031)
- Figure 22. Global Diamond Battery Market Size in Aerospace Growth Rate
- Figure 23. Global Diamond Battery Market Size in Medical Devices Growth Rate
- Figure 24. Funding/Investment
- Figure 25. Global Diamond Battery Market Size Market Share by Regions 2025-2031
- Figure 26. United States Diamond Battery Market Size 2025-2031 (\$ millions)
- Figure 27. China Diamond Battery Market Size 2025-2031 (\$ millions)
- Figure 28. Europe Diamond Battery Market Size 2025-2031 (\$ millions)
- Figure 29. Rest of World Diamond Battery Market Size 2025-2031 (\$ millions)
- Figure 30. United States Diamond Battery Consumption Market Share by Type in 2029
- Figure 31. United States Diamond Battery Market Size Market Share by Application in 2029
- Figure 32. Europe Diamond Battery Consumption Market Share by Type in 2029

Figure 33. Europe Diamond Battery Market Size Market Share by Application in 2029

Figure 34. China Diamond Battery Consumption Market Share by Type in 2029

Figure 35. China Diamond Battery Market Size Market Share by Application in 2029

Figure 36. Rest of World Diamond Battery Consumption Market Share by Type in 2029

Figure 37. Rest of World Diamond Battery Market Size Market Share by Application in 2029

I would like to order

Product name: Global Diamond Battery Market Growth (Status and Outlook) 2025-2031

Product link: <https://marketpublishers.com/r/GD8A6D56BB4EEN.html>

Price: US\$ 3,660.00 (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/GD8A6D56BB4EEN.html>