

Wide Band Gap (WBG) Power Device Market By Type (GaN, SiC), By Application (Communication, Automotive, Consumer Electronics, Aerospace, Healthcare, Others) : Global Opportunity Analysis and Industry Forecast, 2024-2033

<https://marketpublishers.com/r/W3D466C563EEEN.html>

Date: June 2024

Pages: 350

Price: US\$ 2,601.00 (Single User License)

ID: W3D466C563EEEN

Abstracts

Wide Band Gap (WBG) Power Device Market

The wide band gap (WBG) power device market was valued at \$0.9 billion in 2023 and is projected to reach \$2.5 billion by 2033, growing at a CAGR of 10.9% from 2024 to 2033.

WBG power device is a category of semiconductor devices utilizing materials with high energy differences, such as silicon carbide (SiC) or gallium nitride (GaN) during their manufacturing. SiC and GaN are known to offer excellent thermal conductivity, thus ensuring reliability and enabling efficient heat dissipation in demanding applications. WBG power devices are ideal for power conversion and control in diverse industries, including renewable energy, automotive, consumer electronics, and industrial applications. The key attributes of WBG power devices include fast switching speeds, low conduction losses, and high breakdown voltages.

The telecommunications, aerospace, and consumer electronics sectors are the major drivers of the wide band gap (WBG) power device market as their applications are subject to space & weight constraints. WBG devices enable the miniaturization of power electronics, hence witness a high demand. In addition, the devices are observing a significant requirement in the renewable energy sector for the integration of energy resources into power grid. To optimize power consumption in real time, the deployment of AI and the Internet of Things (IoT) is trending in the market. These

technologies are enhancing the remote monitoring and smart management of power devices.

Despite the advantages, the challenges pertaining to material defects, reliability problems, and manufacturing intricacies act as a major restraint for the wide band gap (WBG) power device market. Furthermore, the deployment of advanced WBG devices into existing framework requires intensive testing and modifications, which limits the expansion of the market. On the contrary, the accelerating adoption of electric vehicles (EVs) is presenting lucrative opportunities for the market. WBG power devices play a critical role in refining the performance of EVs, by offering quick switching speeds and high operating temperatures. As per the International Energy Agency, EVs are expected to account for more than 60% of the total vehicles sales by 2030. Such soaring figures are an indicator of a bright future for the wide band gap (WBG) power device market.

Segment Review

The wide band gap (WBG) power device market is segmented by type, application, and region. On the basis of type, the market is bifurcated into GaN and SiC. Depending on application, it is divided into communication, automotive, consumer electronics, aerospace, healthcare, and others. Region wise, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

Key Findings

On the basis of type, the GaN segment dominates the wide band gap (WBG) power device market.

Depending on application, the consumer electronics segment accounts for a high market share.

Region wise, Asia-Pacific is the highest revenue generator in the wide band gap (WBG) power device market.

Competition Analysis

The major players operating in the global wide band gap (WBG) power device market include Infineon Technologies AG, ROHM CO., LTD., Mitsubishi Electric Corporation, STMicroelectronics, Fuji Electric Co., Ltd., TOSHIBA CORPORATION, Microchip

Technology Inc., Cree LED, Inc., GeneSiC, and GaN systems. These major players have adopted various key development strategies such as business expansion, new product launches, and partnerships, to strengthen their foothold in the competitive market.

Additional benefits you will get with this purchase are:

Quarterly Update and* (only available with a corporate license, on listed price)

5 additional Company Profile of client Choice pre- or Post-purchase, as a free update.

Free Upcoming Version on the Purchase of Five and Enterprise User License.

16 analyst hours of support* (post-purchase, if you find additional data requirements upon review of the report, you may receive support amounting to 16 analyst hours to solve questions, and post-sale queries)

15% Free Customization* (in case the scope or segment of the report does not match your requirements, 15% is equivalent to 3 working days of free work, applicable once)

Free data Pack on the Five and Enterprise User License. (Excel version of the report)

Free Updated report if the report is 6-12 months old or older.

24-hour priority response*

Free Industry updates and white papers.

Possible Customization with this report (with additional cost and timeline, please talk to the sales executive to know more)

Installed Base analysis

Investment Opportunities

Scenario Analysis & Growth Trend Comparison

Upcoming/New Entrant by Regions

Technology Trend Analysis

Patient/epidemiology data at country, region, global level

Regulatory Guidelines

Additional company profiles with specific client's interest

Additional country or region analysis- market size and forecast

Average Selling Price Analysis / Price Point Analysis

Expanded list for Company Profiles

Historic market data

Import Export Analysis/Data

SWOT Analysis

Key Market Segments

By Type

GaN

SiC

By Application

Communication

Automotive

Consumer Electronics

Aerospace

Healthcare

Others

By Region

North America

U.S.

Canada

Mexico

Europe

Germany

UK

France

Spain

Italy

Rest of Europe

Asia-Pacific

China

India

Japan

South Korea

Australia

Rest of Asia-Pacific

LAMEA

Brazil

Saudi Arabia

South Africa

Rest of LAMEA

Key Market Players

Infineon Technologies AG

ROHM CO., LTD.

Mitsubishi Electric Corporation

STMicroelectronics

Fuji Electric Co., Ltd.

TOSHIBA CORPORATION

Microchip Technology Inc.

Cree LED, Inc.

GeneSiC

GaN systems

Contents

CHAPTER 1: INTRODUCTION

- 1.1. Report Description
- 1.2. Key Market Segments
- 1.3. Key Benefits
- 1.4. Research Methodology
 - 1.4.1. Primary Research
 - 1.4.2. Secondary Research
 - 1.4.3. Analyst Tools and Models

CHAPTER 2: EXECUTIVE SUMMARY

- 2.1. CXO Perspective

CHAPTER 3: MARKET LANDSCAPE

- 3.1. Market Definition and Scope
- 3.2. Key Findings
 - 3.2.1. Top Investment Pockets
 - 3.2.2. Top Winning Strategies
- 3.3. Porter's Five Forces Analysis
 - 3.3.1. Bargaining Power of Suppliers
 - 3.3.2. Threat of New Entrants
 - 3.3.3. Threat of Substitutes
 - 3.3.4. Competitive Rivalry
 - 3.3.5. Bargaining Power among Buyers
- 3.4. Market Dynamics
 - 3.4.1. Drivers
 - 3.4.2. Restraints
 - 3.4.3. Opportunities

CHAPTER 4: TUNGSTEN ELECTRODE MARKET, BY PRODUCT TYPE

- 4.1. Market Overview
 - 4.1.1 Market Size and Forecast, By Product Type
- 4.2. Pure Tungsten
 - 4.2.1. Key Market Trends, Growth Factors and Opportunities

- 4.2.2. Market Size and Forecast, By Region
- 4.2.3. Market Share Analysis, By Country
- 4.3. Thoriated Tungsten
 - 4.3.1. Key Market Trends, Growth Factors and Opportunities
 - 4.3.2. Market Size and Forecast, By Region
 - 4.3.3. Market Share Analysis, By Country
- 4.4. Lanthanum Tungsten
 - 4.4.1. Key Market Trends, Growth Factors and Opportunities
 - 4.4.2. Market Size and Forecast, By Region
 - 4.4.3. Market Share Analysis, By Country
- 4.5. Cerium Tungsten
 - 4.5.1. Key Market Trends, Growth Factors and Opportunities
 - 4.5.2. Market Size and Forecast, By Region
 - 4.5.3. Market Share Analysis, By Country
- 4.6. Others
 - 4.6.1. Key Market Trends, Growth Factors and Opportunities
 - 4.6.2. Market Size and Forecast, By Region
 - 4.6.3. Market Share Analysis, By Country

CHAPTER 5: TUNGSTEN ELECTRODE MARKET, BY APPLICATION

- 5.1. Market Overview
 - 5.1.1 Market Size and Forecast, By Application
- 5.2. TIG Welding
 - 5.2.1. Key Market Trends, Growth Factors and Opportunities
 - 5.2.2. Market Size and Forecast, By Region
 - 5.2.3. Market Share Analysis, By Country
- 5.3. Plasma Welding
 - 5.3.1. Key Market Trends, Growth Factors and Opportunities
 - 5.3.2. Market Size and Forecast, By Region
 - 5.3.3. Market Share Analysis, By Country
- 5.4. Thermal Spray
 - 5.4.1. Key Market Trends, Growth Factors and Opportunities
 - 5.4.2. Market Size and Forecast, By Region
 - 5.4.3. Market Share Analysis, By Country
- 5.5. Cutting
 - 5.5.1. Key Market Trends, Growth Factors and Opportunities
 - 5.5.2. Market Size and Forecast, By Region
 - 5.5.3. Market Share Analysis, By Country

CHAPTER 6: TUNGSTEN ELECTRODE MARKET, BY REGION

6.1. Market Overview

6.1.1 Market Size and Forecast, By Region

6.2. North America

6.2.1. Key Market Trends and Opportunities

6.2.2. Market Size and Forecast, By Product Type

6.2.3. Market Size and Forecast, By Application

6.2.4. Market Size and Forecast, By Country

6.2.5. U.S. Tungsten Electrode Market

6.2.5.1. Market Size and Forecast, By Product Type

6.2.5.2. Market Size and Forecast, By Application

6.2.6. Canada Tungsten Electrode Market

6.2.6.1. Market Size and Forecast, By Product Type

6.2.6.2. Market Size and Forecast, By Application

6.2.7. Mexico Tungsten Electrode Market

6.2.7.1. Market Size and Forecast, By Product Type

6.2.7.2. Market Size and Forecast, By Application

6.3. Europe

6.3.1. Key Market Trends and Opportunities

6.3.2. Market Size and Forecast, By Product Type

6.3.3. Market Size and Forecast, By Application

6.3.4. Market Size and Forecast, By Country

6.3.5. France Tungsten Electrode Market

6.3.5.1. Market Size and Forecast, By Product Type

6.3.5.2. Market Size and Forecast, By Application

6.3.6. Germany Tungsten Electrode Market

6.3.6.1. Market Size and Forecast, By Product Type

6.3.6.2. Market Size and Forecast, By Application

6.3.7. Italy Tungsten Electrode Market

6.3.7.1. Market Size and Forecast, By Product Type

6.3.7.2. Market Size and Forecast, By Application

6.3.8. Spain Tungsten Electrode Market

6.3.8.1. Market Size and Forecast, By Product Type

6.3.8.2. Market Size and Forecast, By Application

6.3.9. UK Tungsten Electrode Market

6.3.9.1. Market Size and Forecast, By Product Type

6.3.9.2. Market Size and Forecast, By Application

- 6.3.10. Russia Tungsten Electrode Market
 - 6.3.10.1. Market Size and Forecast, By Product Type
 - 6.3.10.2. Market Size and Forecast, By Application
- 6.3.11. Rest of Europe Tungsten Electrode Market
 - 6.3.11.1. Market Size and Forecast, By Product Type
 - 6.3.11.2. Market Size and Forecast, By Application
- 6.4. Asia-Pacific
 - 6.4.1. Key Market Trends and Opportunities
 - 6.4.2. Market Size and Forecast, By Product Type
 - 6.4.3. Market Size and Forecast, By Application
 - 6.4.4. Market Size and Forecast, By Country
 - 6.4.5. China Tungsten Electrode Market
 - 6.4.5.1. Market Size and Forecast, By Product Type
 - 6.4.5.2. Market Size and Forecast, By Application
 - 6.4.6. Japan Tungsten Electrode Market
 - 6.4.6.1. Market Size and Forecast, By Product Type
 - 6.4.6.2. Market Size and Forecast, By Application
 - 6.4.7. India Tungsten Electrode Market
 - 6.4.7.1. Market Size and Forecast, By Product Type
 - 6.4.7.2. Market Size and Forecast, By Application
 - 6.4.8. South Korea Tungsten Electrode Market
 - 6.4.8.1. Market Size and Forecast, By Product Type
 - 6.4.8.2. Market Size and Forecast, By Application
 - 6.4.9. Australia Tungsten Electrode Market
 - 6.4.9.1. Market Size and Forecast, By Product Type
 - 6.4.9.2. Market Size and Forecast, By Application
 - 6.4.10. Thailand Tungsten Electrode Market
 - 6.4.10.1. Market Size and Forecast, By Product Type
 - 6.4.10.2. Market Size and Forecast, By Application
 - 6.4.11. Malaysia Tungsten Electrode Market
 - 6.4.11.1. Market Size and Forecast, By Product Type
 - 6.4.11.2. Market Size and Forecast, By Application
 - 6.4.12. Indonesia Tungsten Electrode Market
 - 6.4.12.1. Market Size and Forecast, By Product Type
 - 6.4.12.2. Market Size and Forecast, By Application
 - 6.4.13. Rest of Asia-Pacific Tungsten Electrode Market
 - 6.4.13.1. Market Size and Forecast, By Product Type
 - 6.4.13.2. Market Size and Forecast, By Application
- 6.5. LAMEA

- 6.5.1. Key Market Trends and Opportunities
- 6.5.2. Market Size and Forecast, By Product Type
- 6.5.3. Market Size and Forecast, By Application
- 6.5.4. Market Size and Forecast, By Country
- 6.5.5. Brazil Tungsten Electrode Market
 - 6.5.5.1. Market Size and Forecast, By Product Type
 - 6.5.5.2. Market Size and Forecast, By Application
- 6.5.6. South Africa Tungsten Electrode Market
 - 6.5.6.1. Market Size and Forecast, By Product Type
 - 6.5.6.2. Market Size and Forecast, By Application
- 6.5.7. Saudi Arabia Tungsten Electrode Market
 - 6.5.7.1. Market Size and Forecast, By Product Type
 - 6.5.7.2. Market Size and Forecast, By Application
- 6.5.8. UAE Tungsten Electrode Market
 - 6.5.8.1. Market Size and Forecast, By Product Type
 - 6.5.8.2. Market Size and Forecast, By Application
- 6.5.9. Argentina Tungsten Electrode Market
 - 6.5.9.1. Market Size and Forecast, By Product Type
 - 6.5.9.2. Market Size and Forecast, By Application
- 6.5.10. Rest of LAMEA Tungsten Electrode Market
 - 6.5.10.1. Market Size and Forecast, By Product Type
 - 6.5.10.2. Market Size and Forecast, By Application

CHAPTER 7: COMPETITIVE LANDSCAPE

- 7.1. Introduction
- 7.2. Top Winning Strategies
- 7.3. Product Mapping of Top 10 Player
- 7.4. Competitive Dashboard
- 7.5. Competitive Heatmap
- 7.6. Top Player Positioning, 2023

CHAPTER 8: COMPANY PROFILES

- 8.1. Diamond Ground Products
 - 8.1.1. Company Overview
 - 8.1.2. Key Executives
 - 8.1.3. Company Snapshot
 - 8.1.4. Operating Business Segments

- 8.1.5. Product Portfolio
- 8.1.6. Business Performance
- 8.1.7. Key Strategic Moves and Developments
- 8.2. Astaras, Inc.
 - 8.2.1. Company Overview
 - 8.2.2. Key Executives
 - 8.2.3. Company Snapshot
 - 8.2.4. Operating Business Segments
 - 8.2.5. Product Portfolio
 - 8.2.6. Business Performance
 - 8.2.7. Key Strategic Moves and Developments
- 8.3. Weldstone
 - 8.3.1. Company Overview
 - 8.3.2. Key Executives
 - 8.3.3. Company Snapshot
 - 8.3.4. Operating Business Segments
 - 8.3.5. Product Portfolio
 - 8.3.6. Business Performance
 - 8.3.7. Key Strategic Moves and Developments
- 8.4. Winner Tungsten Products Co. Ltd.
 - 8.4.1. Company Overview
 - 8.4.2. Key Executives
 - 8.4.3. Company Snapshot
 - 8.4.4. Operating Business Segments
 - 8.4.5. Product Portfolio
 - 8.4.6. Business Performance
 - 8.4.7. Key Strategic Moves and Developments
- 8.5. Huntingdon Fusion Techniques
 - 8.5.1. Company Overview
 - 8.5.2. Key Executives
 - 8.5.3. Company Snapshot
 - 8.5.4. Operating Business Segments
 - 8.5.5. Product Portfolio
 - 8.5.6. Business Performance
 - 8.5.7. Key Strategic Moves and Developments
- 8.6. Metal Cutting
 - 8.6.1. Company Overview
 - 8.6.2. Key Executives
 - 8.6.3. Company Snapshot

- 8.6.4. Operating Business Segments
- 8.6.5. Product Portfolio
- 8.6.6. Business Performance
- 8.6.7. Key Strategic Moves and Developments
- 8.7. BGRIMM
 - 8.7.1. Company Overview
 - 8.7.2. Key Executives
 - 8.7.3. Company Snapshot
 - 8.7.4. Operating Business Segments
 - 8.7.5. Product Portfolio
 - 8.7.6. Business Performance
 - 8.7.7. Key Strategic Moves and Developments
- 8.8. Advanced Materials Science And Technology Co., Ltd.
 - 8.8.1. Company Overview
 - 8.8.2. Key Executives
 - 8.8.3. Company Snapshot
 - 8.8.4. Operating Business Segments
 - 8.8.5. Product Portfolio
 - 8.8.6. Business Performance
 - 8.8.7. Key Strategic Moves and Developments
- 8.9. Sunrain Tungsten
 - 8.9.1. Company Overview
 - 8.9.2. Key Executives
 - 8.9.3. Company Snapshot
 - 8.9.4. Operating Business Segments
 - 8.9.5. Product Portfolio
 - 8.9.6. Business Performance
 - 8.9.7. Key Strategic Moves and Developments
- 8.10. ATTL Advanced Materials Co., Ltd
 - 8.10.1. Company Overview
 - 8.10.2. Key Executives
 - 8.10.3. Company Snapshot
 - 8.10.4. Operating Business Segments
 - 8.10.5. Product Portfolio
 - 8.10.6. Business Performance
 - 8.10.7. Key Strategic Moves and Developments

I would like to order

Product name: Wide Band Gap (WBG) Power Device Market By Type (GaN, SiC), By Application (Communication, Automotive, Consumer Electronics, Aerospace, Healthcare, Others) : Global Opportunity Analysis and Industry Forecast, 2024-2033

Product link: <https://marketpublishers.com/r/W3D466C563EEEN.html>

Price: US\$ 2,601.00 (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/W3D466C563EEEN.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