

# **Sapphire Technology Market by Growth Technologies (KY, CZ, HEM, and EFG), Substrate Wafer (Si-on-Sapphire, SiC-on-Sapphire, GaN-on-Sapphire, and Others), Devices, Applications, and Geography - Analysis & Forecast to 2013 - 2020**

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## **Abstracts**

The Global Sapphire market in Semiconductors report analyzes the sapphire ecosystem and key application markets that include LED, displays, consumer appliances, aerospace and defense, and other applications. The technology market covers the market share of different technologies for production of sapphire, as well as the different available shapes and sizes of sapphire. Revenue estimates and forecasts are provided from 2013 to 2020 for the sapphire market in semiconductors. It gives a detailed view of the major geographic regions in the sapphire market such as Americas, Europe, Asia-Pacific (APAC), and Rest of the World (ROW). The report discusses about the most recent happenings of the market with winning imperatives and burning issues.

The penetration of sapphire in the industrial, power and aerospace & defense industry is explosive due to the developments in sapphire wafer production. One of the major reasons for high growth in opto semiconductor applications is the effective cost structure of sapphire substrates.

The major market for the sapphire market in semiconductors lie in APAC countries, such as South Korea, Japan, Taiwan, China, and so on. The Americas and Europe is following the market. Some of the major players of the sapphire technology ecosystem are Rubicon Technology (U.S.), Insaco Inc. (U.S.), GT Advanced Technology (U.S.), Monocrystal (Russia), Kyocera (Japan), DK Aztec Co., Ltd. (Korea), Saint-Gobain Crystals (France), Tera Xtal (China), and Sumitomo Chemical Co., Ltd. (Japan).

This report is focused on giving a detailed view on the complete sapphire industry with regards to the substrate market, along with the detailed market segmentations combined with qualitative analysis at each and every aspect of the classifications done by devices, characteristics, application, sub-applications, and geography. All the numbers, that is, both - revenue and volume, at every level of detail, are forecasted till 2020 to give a glimpse of the potential revenue base in this market.

## Contents

### 1 INTRODUCTION

- 1.1 Overview
- 1.2 Key Take-Away
- 1.3 Report Description
- 1.4 Report Scope
- 1.5 Market Segments and Market Aspects Covered
- 1.6 Stakeholders
- 1.7 Report Assumptions
  - 1.7.1 General Assumptions and Assumptions
  - 1.7.2 Year Wise & Forecast Assumptions
- 1.8 Research Methodology
  - 1.8.1 Market Size
  - 1.8.2 Market Crackdown and Data Traingulation
  - 1.8.3 Market Forecasting Model
  - 1.8.4 Key Data Points Taken From Primary Sources
  - 1.8.5 Key Data Points From Secondary Research
  - 1.8.6 Key Companies of Primary Research

### 2 EXECUTIVE SUMMARY

### 3 COVER STORY: PRIMARY INTERVIEW

### 4 PREMIUM INSIGHTS

- 4.1 Geography Life-Cycle of Sapphire Semiconductor Market
- 4.2 Growth Strategy Matrix (Ansoff Matrix)
  - 4.2.1 Market Development
    - 4.2.1.1 Switzerland, U.S., and Germany Can Be the Potential Markets in the Days to Come
  - 4.2.2 Diversification
    - 4.2.2.1 Forward Integration to Be the Smartest Strategy For Wafer Players
  - 4.2.3 Market Penetration
    - 4.2.3.1 Korea, Japan, Taiwan, and China Are the Most Flourishing Geographies For Existing Players As Well As New Entrants
  - 4.2.4 Product Development
    - 4.2.4.1 Product Development in New Markets Would Be the Game Changing

Strategy For New Entrants

4.3 Supply & Demand-Side Factor Analysis

4.4 Market Investment Analysis

4.4.1 Major Pro-Factors For Investment in Global Sapphire Market in Semiconductors Market

4.4.2 Major Barriers For Investment in Global Sapphire Market in Semiconductors Market

## **5 MARKET OVERVIEW**

5.1 Introduction

5.1.1 Sapphire Market Segmentation

5.1.2 Sapphire Material Market

5.1.3 Sapphire Technology, Devices & Products

5.1.4 Global Market Overview

5.2 History & Evolution

5.3 Sapphire Properties

5.3.1 General Properties

5.3.2 thermal Properties

5.3.3 Physical/Mechanical Properties

5.3.4 Optical Properties

5.3.5 Electrical Properties

5.3.6 Chemical Properties

5.4 Technology Trends

5.4.1 Adoption of Pss (Patterned Sapphire Substrates)

5.4.2 Large-Diameter Wafers

5.4.3 RFIC (Radio Frequency Integrated Circuits)

5.4.3.1 Sos RFIC

5.5 Value & Supply Chain Analysis

5.5.1 Business Models & Global Scaling Analysis

5.5.2 Material-Based Players

5.5.3 Research Organizations & Universities

5.5.4 Technology Developers & Patent Holders

5.5.5 Device & Product Developers

## **6 MARKET ANALYSIS**

6.1 Introduction

6.2 Market Dynamics

### 6.2.1 Market Drivers

6.2.1.1 High Cost Effectiveness Compare to Other Competing Materials

6.2.1.2 Vast Addressable Markets For Sapphire Power Semiconductors

6.2.1.3 Vast Addressable Market For Led Applications

6.2.1.4 Strong and Established Material Player Industry Segment, Growing Support From Ecosystems of Other Materials

### 6.2.2 Market Restraints

6.2.2.1 High Level of New Entrants Due to Market and Technology Attractiveness and High Degree of Competition

6.2.2.2 Competition From High-End Materials Such As Si, Sic, Gan and Others

### 6.2.3 Market Opportunities

6.2.3.1 Adoption of Sapphire in Mobile Display Covers Represents the Single Largest Opportunity

### 6.3 Burning Issues

6.3.1 Process Optimization Across Production Process to Maximize Yield

6.3.2 Bulk Growth Processes Need to Be Better Understood and Controlled

### 6.4 Winning Imperatives

6.4.1 Improved Quality and Consistency of Products

6.4.2 Moving toward A Larger Diameter Such As 6 and 8 Inches Which Would Drive the Need For Larger Scale Equipment and Reduced Raw Materials Costs

### 6.5 Industry Trends

6.5.1 Market Timeline on the Basis of Technology

### 6.6 Porter's Analysis

6.6.1 Threat From the New Entrants

6.6.2 Threat From the Substitutes

6.6.3 Bargaining Power of Suppliers

6.6.4 Bargaining Power of Buyers

6.6.5 Degree of Competition

## **7 GLOBAL SAPPHIRE MARKET IN SEMICONDUCTORS BY TECHNOLOGY**

### 7.1 Introduction

### 7.2 Sapphire Substrate Technology and Process

7.2.1 Slicing

7.2.2 Lapping

7.2.3 Die Polishing

7.2.4 Cmp

### 7.3 Market By Production Method

7.3.1 Cvd (Chemical Vapor Deposition)

- 7.3.2 Liquid Phase and thermal Exfoliation
- 7.3.3 Hype (Hybrid Vapor Phase Epitaxy)
- 7.3.4 Others
- 7.4 Growth Methods For Sapphire
  - 7.4.1 Kyropoulos Method
  - 7.4.2 Czochralski Crystal Pulling Method
  - 7.4.3 Hem (Heat Exchanger Method)
  - 7.4.4 Efg (Edge-Defined Film-Fed Growth) Method
  - 7.4.5 Others

## **8 GLOBAL SAPPHIRE MARKET IN SEMICONDUCTORS BY SAPPHIRE SUBSTRATE WAFER AND ORIENTATION TYPE**

- 8.1 Sapphire Market By Types
  - 8.1.1 Silicon on Sapphire (Sos)
  - 8.1.2 Silicon Carbide on Sapphire
  - 8.1.3 Gallium Nitride on Sapphire
  - 8.1.4 Others
- 8.2 Wafer Size
  - 8.2.1 2-Inch
  - 8.2.2 4-Inch
  - 8.2.3 6-Inch
  - 8.2.4 Others
- 8.3 Market By Plane Orientation
  - 8.3.1 A-Plane
  - 8.3.2 C-Plane
  - 8.3.3 R-Plane
  - 8.3.4 M-Plane

## **9 GLOBAL SAPPHIRE MARKET IN SEMICONDUCTORS BY DEVICES**

- 9.1 Introduction
- 9.2 Power Semiconductor Market
  - 9.2.1 Power Discrete Market
    - 9.2.1.1 Diodes
    - 9.2.1.2 Switches
    - 9.2.1.3 Others
  - 9.2.2 Power Ic Market
    - 9.2.2.1 RFIC

#### 9.2.2.2 MMIC

### 9.3 Opto Semiconductor Market

## **10 GLOBAL SAPPHIRE MARKET IN SEMICONDUCTORS BY APPLICATION**

### 10.1 Introduction

### 10.2 Ict Application

#### 10.2.1 Switching Systems

#### 10.2.2 Rf Applications

#### 10.2.3 Other Applications

### 10.3 Consumer Electronic Application

#### 10.3.1 Smartphones

#### 10.3.2 Camera Lens Cover

#### 10.3.3 Display Cover

#### 10.3.4 Led

#### 10.3.5 HB Led

#### 10.3.6 Color Led

#### 10.3.7 Others

### 10.4 Power Sector Applications

#### 10.4.1 Power Ic Application

#### 10.4.2 RFIC Application

#### 10.4.3 MMIC Application

#### 10.4.4 Other Applications

### 10.5 Aerospace & Defense Semiconductor Applications

#### 10.5.1 Sapphire-Based Transparent Armors

#### 10.5.2 Sapphire Aerospace Window Applications

#### 10.5.3 Others

### 10.6 Other Applications

#### 10.6.1 Medical Applications

#### 10.6.2 Industrial Applications

#### 10.6.3 Automotive Applications

#### 10.6.4 Other Applications

## **11 GLOBAL SAPPHIRE MARKET IN SEMICONDUCTOR BY GEOGRAPHY**

### 11.1 Introduction

### 11.2 Americas

#### 11.2.1 North America

#### 11.2.2 South America

- 11.3 Europe
  - 11.3.1 U.K.
  - 11.3.2 Germany
  - 11.3.3 Others
- 11.4 Asia-Pacific
  - 11.4.1 China
  - 11.4.2 Japan
  - 11.4.3 Korea
  - 11.4.4 Taiwan
  - 11.4.5 Others
- 11.5 Rest of the World
  - 11.5.1 Middle East
  - 11.5.2 Others

## **12 COMPETITIVE LANDSCAPE**

- 12.1 Introduction
- 12.2 Market Share Analysis of Sapphire Semiconductor Market
  - 12.2.1 Market Share Analysis on the Basis of Major Players
  - 12.2.2 Market Ranking of Sapphire Led Wafer Manufacturing Companies
  - 12.2.3 Market Share Analysis of Geographies By Material Capacity
- 12.3 Competitive Situation and Trends
  - 12.3.1 New Product Development
  - 12.3.2 Merger, Acquisition, Partnership, Expansion, and Collaborations
  - 12.3.3 Other Major Developments

## **13 COMPANY PROFILES (OVERVIEW, PRODUCTS AND SERVICES, FINANCIALS, STRATEGY & DEVELOPMENT)**

- 13.1 ACME Electronics Corporation
- 13.2 DK Aztec Co., Ltd.
- 13.3 Fraunhofer-Gesellschaft
- 13.4 GT Advanced Technologies Inc.
- 13.5 Kyocera Corporation
- 13.6 Monocrystal Inc.
- 13.7 Namiki Precision Jewel Co.,Ltd
- 13.8 Rubicon Technology Inc.
- 13.9 Sapphire Technology Co., Ltd.
- 13.1 Sumitomo Chemical Co., Ltd.



13.11 Tera Xtal Technology Corporation (Details on Overview, Products and Services, Financials, Strategy & Development Might Not Be Captured in Case of Unlisted Companies.)

## List Of Tables

### LIST OF TABLES

Table 1 General Assumptions

Table 2 Year-Wise& Forecast Assumptions

Table 3 Key Companies of Primary Research

Table 4 Global Sapphire Substrate Market Value, By Type (\$Million), (2013-2020)

Table 5 Global Sapphire Substrate Market Value, By Geography (\$Million), (2013-2020)

Table 6 thermal Properties of Sapphire

Table 7 Physical Properties of Sapphire

Table 8 Optical Properties of Sapphire

Table 9 Transmission Properties of Sapphire

Table 10 Electrical Properties of Sapphire

Table 11 Quantification of Overall Porter's Analysis For Sapphire Market in Semiconductors

Table 12 Global Sapphire Substrate Technology Market Value, By Production Methods (\$Million), (2013-2020)

Table 13 Global Sapphire CVD Production Method Market Value, By Geography (\$Million), (2013-2020)

Table 14 Global Sapphire LPE Production Method Market Value, By Geography (\$Million), (2013-2020)

Table 15 Global Sapphire HVPE Production Method Market Value, By Geography (\$Million), (2013-2020)

Table 16 Global Sapphire Other Production Methods Market Value, By Geography (\$Million), (2013-2020)

Table 17 Comparison of Growth Methods

Table 18 Global Sapphire Technology System Cost, By Growth Methods (K Usd), (2013)

Table 19 Global Sapphire Substrate Technology Market Value, By Growth Methods (\$Million), (2013-2020)

Table 20 Global Sapphire Kyropoulos Method Market Value, By Geography (\$Million), (2013-2020)

Table 21 Global Sapphire Czochralski Crystal Pulling Method Market Value, By Geography (\$Million), (2013-2020)

Table 22 Global Sapphire HEM (Heat Exchanger Method) Market Value, By Geography (\$Million), (2013-2020)

Table 23 Global Sapphire EFG (Edge Defined Film-Fed Growth) Method Market Value, By Geography (\$Million), (2013-2020)

- Table 24 Global Sapphire Substrate Market Value (\$Million) & Volume (Msi), (2013-2020)
- Table 25 Global Sapphire Substrate Market Value, By Type (\$Million), (2013-2020)
- Table 26 Global Sapphire Substrate Market Value, By Wafer Size (\$Million), (2013-2020)
- Table 27 Global Sapphire Substrate Asp's, By Wafer Size (Usd), (2013-2020)
- Table 28 Global Patterned Sapphire Substrate Asps, By Wafer Size (Usd), (2013-2020)
- Table 29 Global Sapphire Substrate Market Value, By Plane Orientation (\$Million), (2013-2020)
- Table 30 Global Sapphire Device Market Value (\$Million), (2013-2020)
- Table 31 Global Sapphire Market Value, By Devices (\$Million), (2013-2020)
- Table 32 Global Sapphire Power Semiconductor Market Value, By Type (\$Million), (2013-2020)
- Table 33 Global Sapphire Power Semiconductor Market Value, By Geography (\$Million), (2013-2020)
- Table 34 Global Sapphire Power Discrete Market Value, By Type (\$Million), (2013-2020)
- Table 35 Global Sapphire Power Ic Market Value, By Type (\$Million), (2013-2020)
- Table 36 Global Sapphire Opto-Semiconductor Market Value, By Geography (\$Million), (2013-2020)
- Table 37 Global Sapphire Substrate Market Value, By Application (\$Million), (2013-2020)
- Table 38 Global Sapphire Substrate Ict Applications Market Value, By Type (\$Million), (2013-2020)
- Table 39 Global Sapphire Substrate Ict Applications Market Value, By Geography (\$Million), (2013-2020)
- Table 40 Global Sapphire Substrate Consumer Electronics Applications Market Value, By Type (\$Million), (2013-2020)
- Table 41 Global Sapphire Substrate Consumer Electronics Applications Market Value, By Geography (\$Million), (2013-2020)
- Table 42 Sapphire Display Cover ASP (Usd), 2013-2020
- Table 43 Global Sapphire Substrate Led Applications Market Value, By Type (\$Million), (2013-2020)
- Table 44 Global Sapphire Substrate Led Applications Market Value, By Geography (\$Million), (2013-2020)
- Table 45 Led Sapphire Ingot Capacity, By Geography (Tie, Kmm) (2013-2020)
- Table 46 Global Sapphire Substrate Power Applications Market Value, By Type (\$Million), (2013-2020)
- Table 47 Global Sapphire Substrate Power Applications Market Value, By Geography

(\$Million), (2013-2020)

Table 48 Global Sapphire Substrate Aerospace & Defense Applications Market Value, By Type (\$Million), (2013-2020)

Table 49 Global Sapphire Substrate Aerospace & Defense Applications Market Value, By Geography (\$Million), (2013-2020)

Table 50 Global Sapphire Substrate Other Applications Market Value, By Type (\$Million), (2013-2020)

Table 51 Global Sapphire Substrate Other Applications Market Value, By Geography (\$Million), (2013-2020)

Table 52 Global Sapphire Substrate Market Value, By Geography (\$Million), (2013-2020)

Table 53 Americas Sapphire Substrate Market Value, By Region (\$Million), (2013-2020)

Table 54 Americas Sapphire Substrate Market Value, By Applications (\$Million), (2013-2020)

Table 55 Europe Sapphire Substrate Market Value, By Country (\$Million), (2013-2020)

Table 56 Europe Sapphire Substrate Market Value, By Applications (\$Million), (2013-2020)

Table 57 APAC Sapphire Substrate Market Value, By Country (\$Million), (2013-2020)

Table 58 APAC Sapphire Substrate Market Value, By Applications (\$Million), (2013-2020)

Table 59 Rest of the World Sapphire Substrate Market Value, By Region (\$Million), (2013-2020)

Table 60 Rest of the World Sapphire Substrate Market Value, By Applications (\$Million), (2013-2020)

Table 61 Market Ranking of the Elite Players in the Sapphire Semiconductor Ecosystem

Table 62 Market Ranking of Sapphire Led Wafer Manufacturing Companies in the Sapphire Ecosystem

Table 63 New Product Developments and Announcements in Sapphire Semiconductor Ecosystem

Table 64 Merger, Acquisition, Partnership, Expansion, and Collaborations in Sapphire Semiconductor Ecosystem

Table 65 Other Major Developments in Sapphire Semiconductor Ecosystem

## About

With the ever-increasing evolution of sapphire substrate in material landscape, there is a surge in the demand for sapphire-based products and devices to employ in the number of commercialized applications. During the extensive research carried out in search of an alternate semiconductor material in the previous century with most amazing properties, sapphire proved useful in semiconductors market such as high-brightness emission and intensity when used in opto-semiconductors, high power efficiency in LED and other power devices, extensively flexible, and low cost.

The penetration of sapphire was in industrial and power sector with the development of sapphire wafers that were used in power IC and RFIC applications. While the penetration growth rate is healthy and substantial in power semiconductors, the penetration rate in opto semiconductors and aerospace and defense industry is explosive. One of the major reason for such a high growth in opto semiconductor applications is due to the increase in the LED demand since the inception , and the cost at which the sapphire substrate are available created a buzz in optical semiconductor sector. With new advancements in technologies, it was possible to produce larger sapphire windows that could be used in aerospace and defense industry.

According to the geography, APAC has the major share in the overall sapphire semiconductors market within which South Korea enjoys the major market chunk in this industry.

The sapphire substrate market value is expected to grow from \$XX million in 2013 to \$XX million in 2020, at an estimated CAGR of XX% from 2014 to 2020. The Si-on-sapphire market accounted for the largest share, that is, \$XX million in 2013 and is expected to reach \$XX million in 2020, at a CAGR of XX% from 2014 to 2020. As LED is the major application of the sapphire semiconductor market and Si-on-sapphire represents the major market chunk for LED, it is fuelling the overall growth of Si-on-sapphire market. SiC-on-sapphire is the next biggest market for sapphire substrate and accounted for \$XX million in 2013 and is expected to reach \$XX million in 2020, at a CAGR of XX% from 2014 to 2020.

GaN-on-sapphire market accounted for the highest growth rate across the forecast period, that is, XX% from 2014 to 2020. The reason behind this exponential growth is high-end demand from the application verticals such as aerospace and consumer

electronics.

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