

# Thin-Film Encapsulation (TFE) Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 - 2032

<https://marketpublishers.com/r/T29786D734A5EN.html>

Date: September 2024

Pages: 220

Price: US\$ 4,365.00 (Single User License)

ID: T29786D734A5EN

## Abstracts

The Global Thin-Film Encapsulation (TFE) Market was valued at USD 120.5 million in 2023 and is expected to grow at a CAGR of 20% from 2024 to 2032. This rapid growth is driven by the increasing consumer preference for flexible and wearable electronics. Devices like smartwatches, fitness trackers, and foldable smartphones require advanced protection to ensure durability and performance. TFE technology plays a crucial role in these devices by protecting sensitive electronic components from moisture and oxygen, which can degrade performance and reduce lifespan. By providing a robust barrier against environmental damage, TFE enhances the reliability and longevity of flexible electronics.

As consumers continue to embrace innovative, bendable devices, the demand for effective TFE solutions is expected to rise, fueling further advancements in the market. The advancements in organic light-emitting diode (OLED) technology are also significantly impacting the TFE market. OLEDs are highly sought after for their vibrant colors, high contrast ratios, and energy efficiency, making them popular in applications like smartphones, televisions, and automotive displays. As OLED technology continues to evolve, the need for reliable TFE solutions will grow, ensuring the protection of these sensitive components from environmental factors.

Based on deposition type, the market is divided into inorganic layer deposition and organic layer deposition. In 2023, the inorganic layer deposition segment held the largest market share, accounting for over 56% of the revenue. Inorganic materials, such as silicon dioxide (SiO<sub>2</sub>) and silicon nitride (Si<sub>3</sub>N<sub>4</sub>), are widely used due to their superior durability and excellent moisture and oxygen barrier properties. Their ability to withstand high temperatures and provide long-term protection makes them ideal for high-performance displays and electronic devices, contributing to their dominance in the market.

The application segment includes flexible OLED displays, flexible OLED lighting, thin-film photovoltaic, and others. The flexible OLED display segment is projected to be the fastest-growing, with a CAGR of over 21%. This growth is driven by the increasing demand for lightweight, flexible displays in consumer electronics, especially smartphones and wearables. The segment's expansion is further fueled by advancements in flexible OLED technology and its growing use in foldable devices and automotive displays. In 2023, the Asia-Pacific region accounted for the largest market share, over 39%, and is expected to maintain its dominance throughout the forecast period. Countries like China, South Korea, and Japan are at the forefront of technological advancements in flexible displays and OLED technology, driving substantial demand for TFE solutions.

## Contents

### Report Content

#### **CHAPTER 1 METHODOLOGY & SCOPE**

- 1.1 Market scope & definition
- 1.2 Base estimates & calculations
- 1.3 Forecast parameters
- 1.4 Data sources
  - 1.4.1 Primary
  - 1.4.2 Secondary
    - 1.4.2.1 Paid sources
    - 1.4.2.2 Public sources

#### **CHAPTER 2 EXECUTIVE SUMMARY**

- 2.1 Industry 360° synopsis, 2021 - 2032

#### **CHAPTER 3 INDUSTRY INSIGHTS**

- 3.1 Industry ecosystem analysis
- 3.2 Vendor matrix
- 3.3 Technology & innovation landscape
- 3.4 Patent analysis
- 3.5 Key news and initiatives
- 3.6 Regulatory landscape
- 3.7 Impact forces
  - 3.7.1 Growth drivers
    - 3.7.1.1 Increasing demand for flexible and wearable electronics
    - 3.7.1.2 Advancements in OLED technology
    - 3.7.1.3 Growth of the internet of things (IoT)
    - 3.7.1.4 Increasing investments in flexible solar cells
    - 3.7.1.5 Expansion of the automotive industry
  - 3.7.2 Industry pitfalls & challenges
    - 3.7.2.1 High initial costs
    - 3.7.2.2 Technical challenges and complexity
- 3.8 Growth potential analysis
- 3.9 Porter's analysis

- 3.9.1 Supplier power
- 3.9.2 Buyer power
- 3.9.3 Threat of new entrants
- 3.9.4 Threat of substitutes
- 3.9.5 Industry rivalry
- 3.10 PESTEL analysis

## **CHAPTER 4 COMPETITIVE LANDSCAPE, 2023**

- 4.1 Company market share analysis
- 4.2 Competitive positioning matrix
- 4.3 Strategic outlook matrix

## **CHAPTER 5 MARKET ESTIMATES & FORECAST, BY DEPOSITION TYPE, 2021 - 2032 (USD MILLION)**

- 5.1 Key trends
- 5.2 Inorganic layer deposition
  - 5.2.1 PECVD (Plasma-enhanced chemical vapor deposition)
  - 5.2.2 ALD (Atomic layer deposition)
  - 5.2.3 PVD (Physical vapor deposition)
- 5.3 Organic layer deposition
  - 5.3.1 Vacuum thermal evaporation
  - 5.3.2 Inkjet printing

## **CHAPTER 6 MARKET ESTIMATES & FORECAST, BY APPLICATION, 2021 – 2032 (USD MILLION)**

- 6.1 Key trends
- 6.2 Flexible OLED display
- 6.3 Flexible OLED lightning
- 6.4 Thin-Film photovoltaic
- 6.5 Others

## **CHAPTER 7 MARKET ESTIMATES & FORECAST, BY END USE INDUSTRY, 2021 – 2032 (USD MILLION)**

- 7.1 Key trends
- 7.2 Consumer electronics

- 7.3 Automotive
- 7.4 Renewable energy
- 7.5 Healthcare
- 7.6 Aerospace & defense
- 7.7 Sports & entertainment
- 7.8 Others

## **CHAPTER 8 MARKET ESTIMATES & FORECAST, BY REGION, 2021 - 2032 (USD MILLION)**

- 8.1 Key trends
- 8.2 North America
  - 8.2.1 U.S.
  - 8.2.2 Canada
- 8.3 Europe
  - 8.3.1 UK
  - 8.3.2 Germany
  - 8.3.3 France
  - 8.3.4 Italy
  - 8.3.5 Spain
  - 8.3.6 Rest of Europe
- 8.4 Asia Pacific
  - 8.4.1 China
  - 8.4.2 India
  - 8.4.3 Japan
  - 8.4.4 South Korea
  - 8.4.5 ANZ
  - 8.4.6 Rest of Asia Pacific
- 8.5 Latin America
  - 8.5.1 Brazil
  - 8.5.2 Mexico
  - 8.5.3 Rest of Latin America
- 8.6 MEA
  - 8.6.1 UAE
  - 8.6.2 Saudi Arabia
  - 8.6.3 South Africa
  - 8.6.4 Rest of MEA

## **CHAPTER 9 COMPANY PROFILES**

- 9.1 3M
- 9.2 Ajinomoto Fine-Techno Co., Inc.
- 9.3 Applied Materials, Inc.
- 9.4 BASF (Rolic) AG
- 9.5 Beneq
- 9.6 Coat-X
- 9.7 Ergis Group
- 9.8 KANEKA CORPORATION
- 9.9 Kateeva, Inc.
- 9.10 Kyoritsu Chemical & Co., Ltd.
- 9.11 LG Chem
- 9.12 MBRAUN
- 9.13 Meyer Burger Technology AG
- 9.14 Picosun Oy
- 9.15 Samsung SDI Co., Ltd.
- 9.16 SNU Precision Co., Ltd.
- 9.17 Toppan Inc.
- 9.18 Toray Industries, Inc.
- 9.19 Universal Display Corporation (UDC)
- 9.20 Veeco Instruments Inc.

## I would like to order

Product name: Thin-Film Encapsulation (TFE) Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 - 2032

Product link: <https://marketpublishers.com/r/T29786D734A5EN.html>

Price: US\$ 4,365.00 (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/T29786D734A5EN.html>