

# Global Thin-film Single-electrode Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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## Abstracts

According to our (Global Info Research) latest study, the global Thin-film Single-electrode market size was valued at US\$ 1593 million in 2025 and is forecast to a readjusted size of US\$ 3447 million by 2032 with a CAGR of 11.6% during review period.

Thin-film single-electrode refers to a device architecture in which an ultra-thin functional material layer (typically nanometers to micrometers thick) is deposited onto a conductive substrate and operates with only one active electrode layer exposed, commonly used in thin-film batteries, sensors, electrochemical devices, and certain semiconductor or energy-storage applications. Unlike conventional multilayer cells, the single-electrode configuration simplifies structure, reduces material consumption, and enables miniaturization for microelectronics, MEMS, and integrated energy devices. The supply chain begins with upstream materials (high-purity metals, metal oxides, lithium compounds, conductive substrates such as stainless steel or silicon wafers, and specialty target materials for sputtering or evaporation), followed by midstream thin-film deposition processes (physical vapor deposition (PVD), chemical vapor deposition (CVD), atomic layer deposition (ALD), sputtering, or electrochemical deposition), then patterning and integration (photolithography, etching, encapsulation), and finally downstream integration into end applications such as microbatteries, biosensors, RF components, IoT devices, and semiconductor systems. The value concentration typically lies in precision deposition equipment, material purity control, and device integration know-how rather than bulk material volume. In 2025, global output of thin-film single-electrodes reached approximately 62 million m<sup>2</sup>, supported by an installed production capacity of around 86 million m<sup>2</sup> annually. Average selling prices ranged between USD 21 and USD 45 per m<sup>2</sup>, with industry gross margins averaging about

31%.

This report is a detailed and comprehensive analysis for global Thin-film Single-electrode market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

### **Key Features:**

Global Thin-film Single-electrode market size and forecasts, in consumption value (\$ Million), sales quantity (K Sqm), and average selling prices (US\$/Sq m), 2021-2032

Global Thin-film Single-electrode market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (K Sqm), and average selling prices (US\$/Sq m), 2021-2032

Global Thin-film Single-electrode market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (K Sqm), and average selling prices (US\$/Sq m), 2021-2032

Global Thin-film Single-electrode market shares of main players, shipments in revenue (\$ Million), sales quantity (K Sqm), and ASP (US\$/Sq m), 2021-2026

### **The Primary Objectives in This Report Are:**

- To determine the size of the total market opportunity of global and key countries
- To assess the growth potential for Thin-film Single-electrode
- To forecast future growth in each product and end-use market
- To assess competitive factors affecting the marketplace

This report profiles key players in the global Thin-film Single-electrode market based on the following parameters - company overview, sales quantity, revenue, price, gross

margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Umicore (Belgium), Materion (USA), Plansee Group (Austria), Heraeus (Germany), Proterial (Japan), JX Advanced Metals (Japan), Sumitomo (Japan), Mitsui (Japan), TANAKA (Japan), Linde (Ireland), etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

## **Market Segmentation**

Thin-film Single-electrode market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

### Market segment by Type

Metal-based Film

Carbon-based Film

Polymer-based Film

### Market segment by Deposition

Physical Vapor Deposition (PVD)

Chemical Vapor Deposition (CVD)

Electrochemical Deposition (ECD)

### Market segment by Application

Energy Storage

Semiconductor

Photovoltaic

Others

#### Major players covered

Umicore (Belgium)

Materion (USA)

Plansee Group (Austria)

Heraeus (Germany)

Proterial (Japan)

JX Advanced Metals (Japan)

Sumitomo (Japan)

Mitsui (Japan)

TANAKA (Japan)

Linde (Ireland)

#### Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of

Middle East & Africa)

**The content of the study subjects, includes a total of 15 chapters:**

Chapter 1, to describe Thin-film Single-electrode product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Thin-film Single-electrode, with price, sales quantity, revenue, and global market share of Thin-film Single-electrode from 2021 to 2026.

Chapter 3, the Thin-film Single-electrode competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Thin-film Single-electrode breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Type and by Application, with sales market share and growth rate by Type, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026. and Thin-film Single-electrode market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Thin-film Single-electrode.

Chapter 14 and 15, to describe Thin-film Single-electrode sales channel, distributors, customers, research findings and conclusion.

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