

Organic Photovoltaic Market Size, Share & Trends Analysis Report By Type (Small-molecule OPV Cells, Polymer-based OPV Cells), By Application (Building-Integrated Photovoltaics, Consumer Electronics, Automotive, Indoor Energy Harvesting), By Region, And Segment Forecasts, 2026 - 2033

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Abstracts

The global organic photovoltaic (OPV) market size was valued at USD 94.7 million in 2025 and is projected to grow from USD 119.0 million in 2026 to USD 544.6 million by 2033, at a CAGR of 24.3% from 2026 to 2033. Europe dominated the market, accounting for the largest revenue share of 39.0% in 2025. OPV is a type of solar technology that uses carbon-based semiconductor materials to convert sunlight into electricity.

They are lightweight, flexible, and can be made semi-transparent, making them suitable for applications such as BIPV, wearable electronics, and indoor energy harvesting.

Global Organic Photovoltaic Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2021 to 2033. For this study, Grand View Research has segmented the global organic photovoltaics market report based on type, application, and region.

Type Outlook (Revenue, USD Million, 2021 - 2033)

Small-molecule OPV Cells

Polymer-based OPV Cells

Application Outlook (Revenue, USD Million, 2021 - 2033)

Building-Integrated Photovoltaics (BIPV)

Consumer Electronics

Automotive

Indoor Energy Harvesting

Defense & Aerospace

Others

Regional Outlook (Revenue, USD Million, 2021 - 2033)

North America

U.S.

Canada

Mexico

Europe

Germany

UK

France

Italy

Spain

Asia Pacific

China

India

Japan

South Korea

Australia

Latin America

Brazil

Argentina

Middle East & Africa

Saudi Arabia

UAE

South Africa

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