+357 96 030922
info@marketpublishers.com

Global Polarization Volume Grating (PVG) Film Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

https://marketpublishers.com/r/GEC692C13DA3EN.html
Date: September 2026
Pages: 84
Price: US$ 3,480.00 (Single User License)
ID: GEC692C13DA3EN

Abstracts

According to our (Global Info Research) latest study, the global Polarization Volume Grating (PVG) Film market size was valued at US$ 3.24 million in 2025 and is forecast to a readjusted size of US$ 25.95 million by 2032 with a CAGR of 31.4% during review period.

Polarization Volume Grating (PVG) Film is a functional diffractive optical film based primarily on anisotropic liquid-crystal or polymerizable reactive-mesogen materials with periodically controlled molecular orientation through the film thickness. The engineered volume structure combines Bragg diffraction, polarization selectivity, and geometric-phase control, allowing incident light to be efficiently redirected under designed wavelength, incident-angle, and polarization conditions. PVG films may operate in reflective or transmissive configurations and can be fabricated as transferable functional films or directly integrated onto glass, resin, or other optical substrates. The commercial scope of this study focuses on the PVG functional layer and its corresponding manufacturing value, including material deposition, photoalignment, polarization-holographic exposure, polymerization, curing, and related functional-layer processing. Major applications include augmented reality glasses, other head-mounted and near-eye displays, automotive head-up displays, and beam-steering or optical-communication systems. Current commercialization is concentrated particularly in diffractive waveguides, where PVG structures can perform in-coupling, pupil expansion, and out-coupling while supporting thin, transparent optical architectures. PVG has emerged as one of the important technical routes being explored for next-generation diffractive AR waveguides.

+357 96 030922
info@marketpublishers.com

Key Findings

The equivalent value of PVG functional layers was approximately US$10–12 per piece globally in 2025.

Substrate-integrated PVG films remain the dominant product form.

Augmented reality (AR) glasses are currently the largest application market.

China is currently the most concentrated region for PVG commercialization and pilot-scale manufacturing.

Market Trends

The main technology trend is shifting from laboratory-scale polarization-holographic recording toward repeatable coating, photoalignment, exposure and curing processes suitable for larger-area and higher-throughput manufacturing. Reactive mesogens and polymerizable liquid-crystal materials enable molecular alignment in the liquid state and subsequent conversion into durable anisotropic films, while slot-die coating, inkjet deposition and multilayer processing create potential pathways toward scalable production. Another trend is the development of broadband, multilayer, multi-slant and wavelength-optimized PVG structures to improve field of view, color uniformity and angular efficiency in full-color AR systems. At the commercial level, cost reduction is becoming increasingly important: one PVG waveguide producer reported complete waveguide costs of approximately US$10–30 per piece in 2025, indicating that materials localization, process simplification and manufacturing yield improvements are beginning to reshape the economics of PVG-based waveguides.

Market Dynamics

The PVG film market is currently characterized by a combination of rapidly improving manufacturability and a still-limited installed commercial base. Demand is being pulled forward by lightweight AR glasses and near-eye displays, while supply remains constrained by relatively few organizations with proven capabilities across liquid-crystal material formulation, optical design, coating, photoalignment, holographic exposure and precision inspection. The commercialization cycle therefore depends not only on optical

+357 96 030922
info@marketpublishers.com

performance but also on yield, environmental stability, uniformity across the aperture and the ability to reproduce grating parameters at scale. The December 2025 commissioning of a dedicated PVG pilot production line provides evidence that the industry is moving beyond prototype manufacturing, although volume commercialization remains at an early stage.

Drivers

The primary driver is the need for thinner, lighter and more power-efficient optical architectures for display-enabled AR glasses. PVG waveguides can provide polarization-selective diffraction, high transparency and flexible grating engineering while maintaining a planar optical structure. The technology is particularly attractive where optical efficiency directly influences display-engine power consumption and battery life. Continued development of microdisplay engines, compact projection modules and AI-enabled smart glasses is increasing demand for optical waveguides that can balance brightness, transparency, weight and manufacturing cost. East China-based research and industrialization programs have already moved PVG waveguides from laboratory prototypes toward pilot manufacturing and commercial engineering cooperation.

Restraints

The largest restraint is the early maturity of the manufacturing process. PVG requires tight control of liquid-crystal alignment, coating thickness, grating pitch, slant angle, chirality, exposure conditions and polymerization uniformity. Small variations can affect diffraction efficiency, color uniformity, eyebox performance or stray light. The Society for Information Display has noted that PVH-type manufacturing has not yet reached the same level of industrialization as mature optical-film processes, even though photoalignment and scalable coating methods provide a path toward mass manufacturing. Competition from surface-relief gratings, conventional volume holographic gratings, geometric waveguides and emerging metasurface solutions also limits the addressable penetration rate of PVG rather than allowing the technology to capture the entire AR waveguide market.

Opportunities

The largest opportunity remains consumer and lightweight enterprise AR glasses, where lower optical-engine power consumption and thinner waveguide structures can

+357 96 030922
info@marketpublishers.com

create significant system-level value. Full-color PVG, multilayer structures, large-eyebox designs and two-dimensional pupil expansion are likely to receive the greatest development attention. Automotive HUD represents a secondary opportunity as holographic and diffractive optical elements are increasingly investigated for compact light manipulation, although PVG commercialization in automotive systems remains substantially less mature than in AR glasses. Additional opportunities exist in other near-eye displays, beam steering, sensing and selected optical-communication systems, but these applications should currently be treated as smaller emerging segments rather than the core revenue base.

Challenges

The central challenge is converting strong laboratory optical performance into stable high-volume manufacturing. Yield, large-area uniformity, material lifetime, temperature and humidity reliability, wavelength consistency and alignment accuracy must all meet consumer-electronics manufacturing requirements. Another challenge is cost allocation: PVG is typically manufactured as a micrometer-scale functional layer integrated with a waveguide substrate, so the economic value of the PVG film itself is often embedded within the finished waveguide rather than sold as an independent film. This makes standardized ASP comparisons difficult and increases uncertainty in supplier revenue estimates. Technology competition also remains significant because AR brands can select different waveguide architectures according to field of view, brightness, weight, appearance and cost targets.

Industry Chain Analysis

The upstream PVG film industry chain includes reactive mesogens and polymerizable liquid-crystal materials, chiral additives, photoalignment materials, photoinitiators, optical substrates and coating-related chemicals, together with precision coating, polarization exposure, curing and optical-inspection equipment. The midstream consists of PVG material formulation, optical design, photoalignment patterning, coating, holographic exposure, polymerization, multilayer lamination and functional-layer inspection. Downstream customers integrate the PVG functional layer into optical waveguides, optical engines, display modules and complete AR or near-eye systems. Reactive mesogens are particularly important because they can be aligned as liquid-crystal materials and subsequently polymerized into durable anisotropic optical films.

+357 96 030922
info@marketpublishers.com

Value Chain Analysis

The highest-value capabilities are concentrated less in commodity substrate supply and more in proprietary liquid-crystal formulations, polarization-holographic design, photoalignment, exposure process control, multilayer architecture, optical simulation and high-yield manufacturing. As manufacturing scales, raw-material and coating costs are expected to decline as a percentage of finished-waveguide value, while process know-how, yield management and optical-design intellectual property remain key sources of differentiation. The declining cost of complete PVG waveguides reported in 2025 shows that process optimization can materially reduce system cost, but it also suggests that PVG functional-layer ASPs are likely to trend downward as output rises.

Segment Insights

By diffraction mode, the market can be divided into reflective PVG, transmissive PVG and others. By product form, substrate-integrated PVG film currently represents the principal commercial structure, while free-standing or transferable PVG film remains important for flexible integration and future high-throughput film processing. By spectral configuration, the market includes single-band and multi-band PVG, with multi-band and full-color architectures becoming increasingly important for consumer AR. By application, Augmented Reality (AR) Glasses represent the largest segment, followed by Automotive Head-up Display (HUD), Other Head-mounted and Near-eye Displays, Beam Steering and Optical Communication, and Others. The commercial center of gravity remains AR because current PVG product announcements, pilot manufacturing and engineering activity are concentrated primarily around diffractive AR waveguides.

Downstream Market Opportunities

AR glasses offer the clearest near-term downstream opportunity because optical efficiency, transparency and weight directly affect wearability and battery life. Industrial and enterprise AR applications can provide earlier adoption opportunities because customers are often more tolerant of higher system prices when hands-free visualization improves productivity. Consumer AR represents the larger long-term opportunity but imposes much stricter requirements for appearance, weight, optical consistency and cost. Automotive HUD and other optical-control applications provide additional diversification potential, but their qualification cycles, reliability requirements and system architectures differ materially from consumer near-eye displays and are therefore expected to develop more gradually.

+357 96 030922
info@marketpublishers.com

Regional Insights

China is currently the most active region in publicly visible PVG commercialization, engineering validation and pilot production. In December 2025, a dedicated PVG waveguide pilot line was commissioned in Jiangxi, with disclosed annual capacity of around 50,000 pieces and yield above 80%, providing an important industrialization milestone. North America remains important in fundamental PVG/PVH research, optical architecture and intellectual property. Europe retains strengths in liquid-crystal materials, reactive mesogens and optical-film process development, while Japan has established capabilities in advanced display materials and waveguide engineering. At present, South Korea, Taiwan and other Asian regions show more limited publicly verified independent PVG film production, although they remain relevant through broader display and AR supply chains.

Competitive Landscape Analysis

The competitive landscape remains highly concentrated and technology-driven rather than scale-driven. China currently has the clearest cluster of companies and industrial platforms moving from prototype development toward pilot and initial mass production, while North America and Europe remain influential through material science, optical design and foundational technology development. Japan participates primarily through advanced display, liquid-crystal and waveguide engineering capabilities. The principal competitive barriers are proprietary material systems, photoalignment and holographic exposure know-how, optical design capability, production yield, reliability validation and the ability to integrate PVG layers with different waveguide substrates. As the market moves toward higher volumes, competition is likely to shift from demonstrating optical performance toward achieving repeatable yield, lower unit cost, full-color performance and scalable customer delivery.

Report Scope

This report is a detailed and comprehensive analysis for global Polarization Volume Grating (PVG) Film market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Diffraction Mode and by Application. As the market is constantly changing, this report explores the competition, supply and demand

+357 96 030922
info@marketpublishers.com

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 Polarization Volume Grating (PVG) Film market size and forecasts, in consumption value ($ Million), sales quantity (K Pcs), and average selling prices (US$/Pcs), 2021-2032

Global Polarization Volume Grating (PVG) Film market size and forecasts by region and country, in consumption value ($ Million), sales quantity (K Pcs), and average selling prices (US$/Pcs), 2021-2032

Global Polarization Volume Grating (PVG) Film market size and forecasts, by Diffraction Mode and by Application, in consumption value ($ Million), sales quantity (K Pcs), and average selling prices (US$/Pcs), 2021-2032

Global Polarization Volume Grating (PVG) Film market shares of main players, shipments in revenue ($ Million), sales quantity (K Pcs), and ASP (US$/Pcs), 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 Polarization Volume Grating (PVG) Film

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 Polarization Volume Grating (PVG) Film 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 Goowave Technology Co., Ltd.,

+357 96 030922
info@marketpublishers.com

Nanjing Parallel Vision Technology Co., Ltd., Nanjing Jingcui Optical Technology Co., Ltd., etc.

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

Polarization Volume Grating (PVG) Film market is split by Diffraction Mode and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Diffraction Mode, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market Segmentation

Market segment by Diffraction Mode

Reflective PVG

Transmissive PVG

Others

Market segment by Spectral Configuration

Single-band PVG

Multi-band PVG

Others

Market segment by Waveguide Coupling Function

In-coupling PVG

Pupil-expansion PVG

+357 96 030922
info@marketpublishers.com

Out-coupling PVG

Multi-function PVG

Others

Market segment by Application

Automotive Head-up Display (HUD)

Head-mounted and Near-eye Displays

Beam Steering and Optical Communication

Others

Major players covered

Goowave Technology Co., Ltd.

Nanjing Parallel Vision Technology Co., Ltd.

Nanjing Jingcui Optical Technology Co., Ltd.

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)

+357 96 030922
info@marketpublishers.com

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

Chapter Outline

Chapter 1, to describe Polarization Volume Grating (PVG) Film product scope, market overview, market estimation caveats and base year.
Chapter 2, to profile the top manufacturers of Polarization Volume Grating (PVG) Film, with price, sales quantity, revenue, and global market share of Polarization Volume Grating (PVG) Film from 2021 to 2026.
Chapter 3, the Polarization Volume Grating (PVG) Film competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.
Chapter 4, the Polarization Volume Grating (PVG) Film 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 Diffraction Mode and by Application, with sales market share and growth rate by Diffraction Mode, 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 Polarization Volume Grating (PVG) Film market forecast, by regions, by Diffraction Mode, 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 Polarization Volume Grating (PVG) Film.
Chapter 14 and 15, to describe Polarization Volume Grating (PVG) Film sales channel, distributors, customers, research findings and conclusion.

+357 96 030922
info@marketpublishers.com

Contents

1 MARKET OVERVIEW

1.1 Product Overview and Scope
1.2 Market Estimation Caveats and Base Year
1.3 Market Analysis by Diffraction Mode
  1.3.1 Overview: Global Polarization Volume Grating (PVG) Film Consumption Value by Diffraction Mode: 2021 Versus 2025 Versus 2032
  1.3.2 Reflective PVG
  1.3.3 Transmissive PVG
  1.3.4 Others
1.4 Market Analysis by Spectral Configuration
  1.4.1 Overview: Global Polarization Volume Grating (PVG) Film Consumption Value by Spectral Configuration: 2021 Versus 2025 Versus 2032
  1.4.2 Single-band PVG
  1.4.3 Multi-band PVG
  1.4.4 Others
1.5 Market Analysis by Waveguide Coupling Function
  1.5.1 Overview: Global Polarization Volume Grating (PVG) Film Consumption Value by Waveguide Coupling Function: 2021 Versus 2025 Versus 2032
  1.5.2 In-coupling PVG
  1.5.3 Pupil-expansion PVG
  1.5.4 Out-coupling PVG
  1.5.5 Multi-function PVG
  1.5.6 Others
1.6 Market Analysis by Application
  1.6.1 Overview: Global Polarization Volume Grating (PVG) Film Consumption Value by Application: 2021 Versus 2025 Versus 2032
  1.6.2 Automotive Head-up Display (HUD)
  1.6.3 Head-mounted and Near-eye Displays
  1.6.4 Beam Steering and Optical Communication
  1.6.5 Others
1.7 Global Polarization Volume Grating (PVG) Film Market Size & Forecast
  1.7.1 Global Polarization Volume Grating (PVG) Film Consumption Value (2021 & 2025 & 2032)
  1.7.2 Global Polarization Volume Grating (PVG) Film Sales Quantity (2021-2032)
  1.7.3 Global Polarization Volume Grating (PVG) Film Average Price (2021-2032)

+357 96 030922
info@marketpublishers.com

2 MANUFACTURERS PROFILES

2.1 Goowave Technology Co., Ltd.
2.1.1 Goowave Technology Co., Ltd. Details
2.1.2 Goowave Technology Co., Ltd. Major Business
2.1.3 Goowave Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
2.1.4 Goowave Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
2.1.5 Goowave Technology Co., Ltd. Recent Developments/Updates
2.2 Nanjing Parallel Vision Technology Co., Ltd.
2.2.1 Nanjing Parallel Vision Technology Co., Ltd. Details
2.2.2 Nanjing Parallel Vision Technology Co., Ltd. Major Business
2.2.3 Nanjing Parallel Vision Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
2.2.4 Nanjing Parallel Vision Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
2.2.5 Nanjing Parallel Vision Technology Co., Ltd. Recent Developments/Updates
2.3 Nanjing Jingcui Optical Technology Co., Ltd.
2.3.1 Nanjing Jingcui Optical Technology Co., Ltd. Details
2.3.2 Nanjing Jingcui Optical Technology Co., Ltd. Major Business
2.3.3 Nanjing Jingcui Optical Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
2.3.4 Nanjing Jingcui Optical Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
2.3.5 Nanjing Jingcui Optical Technology Co., Ltd. Recent Developments/Updates

3 COMPETITIVE ENVIRONMENT: POLARIZATION VOLUME GRATING (PVG) FILM BY MANUFACTURER

3.1 Global Polarization Volume Grating (PVG) Film Sales Quantity by Manufacturer (2021-2026)
3.2 Global Polarization Volume Grating (PVG) Film Revenue by Manufacturer (2021-2026)
3.3 Global Polarization Volume Grating (PVG) Film Average Price by Manufacturer (2021-2026)
3.4 Market Share Analysis (2025)

+357 96 030922
info@marketpublishers.com

3.4.1 Producer Shipments of Polarization Volume Grating (PVG) Film by Manufacturer Revenue ($MM) and Market Share (%): 2025
3.4.2 Top 3 Polarization Volume Grating (PVG) Film Manufacturer Market Share in 2025
3.4.3 Top 6 Polarization Volume Grating (PVG) Film Manufacturer Market Share in 2025
3.5 Polarization Volume Grating (PVG) Film Market: Overall Company Footprint Analysis
3.5.1 Polarization Volume Grating (PVG) Film Market: Region Footprint
3.5.2 Polarization Volume Grating (PVG) Film Market: Company Product Type Footprint
3.5.3 Polarization Volume Grating (PVG) Film Market: Company Product Application Footprint
3.6 New Market Entrants and Barriers to Market Entry
3.7 Mergers, Acquisition, Agreements, and Collaborations

4 CONSUMPTION ANALYSIS BY REGION

4.1 Global Polarization Volume Grating (PVG) Film Market Size by Region
4.1.1 Global Polarization Volume Grating (PVG) Film Sales Quantity by Region (2021-2032)
4.1.2 Global Polarization Volume Grating (PVG) Film Consumption Value by Region (2021-2032)
4.1.3 Global Polarization Volume Grating (PVG) Film Average Price by Region (2021-2032)
4.2 North America Polarization Volume Grating (PVG) Film Consumption Value (2021-2032)
4.3 Europe Polarization Volume Grating (PVG) Film Consumption Value (2021-2032)
4.4 Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value (2021-2032)
4.5 South America Polarization Volume Grating (PVG) Film Consumption Value (2021-2032)
4.6 Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value (2021-2032)

5 MARKET SEGMENT BY DIFFRACTION MODE

5.1 Global Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)

+357 96 030922
info@marketpublishers.com

5.2 Global Polarization Volume Grating (PVG) Film Consumption Value by Diffraction Mode (2021-2032)
5.3 Global Polarization Volume Grating (PVG) Film Average Price by Diffraction Mode (2021-2032)

6 MARKET SEGMENT BY APPLICATION

6.1 Global Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
6.2 Global Polarization Volume Grating (PVG) Film Consumption Value by Application (2021-2032)
6.3 Global Polarization Volume Grating (PVG) Film Average Price by Application (2021-2032)

7 NORTH AMERICA

7.1 North America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)
7.2 North America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
7.3 North America Polarization Volume Grating (PVG) Film Market Size by Country
  7.3.1 North America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2032)
  7.3.2 North America Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2032)
  7.3.3 United States Market Size and Forecast (2021-2032)
  7.3.4 Canada Market Size and Forecast (2021-2032)
  7.3.5 Mexico Market Size and Forecast (2021-2032)

8 EUROPE

8.1 Europe Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)
8.2 Europe Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
8.3 Europe Polarization Volume Grating (PVG) Film Market Size by Country
  8.3.1 Europe Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2032)
  8.3.2 Europe Polarization Volume Grating (PVG) Film Consumption Value by Country

+357 96 030922
info@marketpublishers.com

(2021-2032)
8.3.3 Germany Market Size and Forecast (2021-2032)
8.3.4 France Market Size and Forecast (2021-2032)
8.3.5 United Kingdom Market Size and Forecast (2021-2032)
8.3.6 Russia Market Size and Forecast (2021-2032)
8.3.7 Italy Market Size and Forecast (2021-2032)

9 ASIA-PACIFIC

9.1 Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)
9.2 Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
9.3 Asia-Pacific Polarization Volume Grating (PVG) Film Market Size by Region
9.3.1 Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Region (2021-2032)
9.3.2 Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value by Region (2021-2032)
9.3.3 China Market Size and Forecast (2021-2032)
9.3.4 Japan Market Size and Forecast (2021-2032)
9.3.5 South Korea Market Size and Forecast (2021-2032)
9.3.6 India Market Size and Forecast (2021-2032)
9.3.7 Southeast Asia Market Size and Forecast (2021-2032)
9.3.8 Australia Market Size and Forecast (2021-2032)

10 SOUTH AMERICA

10.1 South America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)
10.2 South America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
10.3 South America Polarization Volume Grating (PVG) Film Market Size by Country
10.3.1 South America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2032)
10.3.2 South America Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2032)
10.3.3 Brazil Market Size and Forecast (2021-2032)
10.3.4 Argentina Market Size and Forecast (2021-2032)

+357 96 030922
info@marketpublishers.com

11 MIDDLE EAST & AFRICA

11.1 Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2032)
11.2 Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2032)
11.3 Middle East & Africa Polarization Volume Grating (PVG) Film Market Size by Country
  11.3.1 Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2032)
  11.3.2 Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2032)
  11.3.3 Turkey Market Size and Forecast (2021-2032)
  11.3.4 Egypt Market Size and Forecast (2021-2032)
  11.3.5 Saudi Arabia Market Size and Forecast (2021-2032)
  11.3.6 South Africa Market Size and Forecast (2021-2032)

12 MARKET DYNAMICS

12.1 Polarization Volume Grating (PVG) Film Market Drivers
12.2 Polarization Volume Grating (PVG) Film Market Restraints
12.3 Polarization Volume Grating (PVG) Film Trends Analysis
12.4 Porters Five Forces Analysis
  12.4.1 Threat of New Entrants
  12.4.2 Bargaining Power of Suppliers
  12.4.3 Bargaining Power of Buyers
  12.4.4 Threat of Substitutes
  12.4.5 Competitive Rivalry

13 RAW MATERIAL AND INDUSTRY CHAIN

13.1 Raw Material of Polarization Volume Grating (PVG) Film and Key Manufacturers
13.2 Manufacturing Costs Percentage of Polarization Volume Grating (PVG) Film
13.3 Polarization Volume Grating (PVG) Film Production Process
13.4 Industry Value Chain Analysis

14 SHIPMENTS BY DISTRIBUTION CHANNEL

14.1 Sales Channel

+357 96 030922
info@marketpublishers.com

14.1.1 Direct to End-User
14.1.2 Distributors
14.2 Polarization Volume Grating (PVG) Film Typical Distributors
14.3 Polarization Volume Grating (PVG) Film Typical Customers

15 RESEARCH FINDINGS AND CONCLUSION

16 APPENDIX

16.1 Methodology
16.2 Research Process and Data Source
16.3 Disclaimer

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

Table 1. Global Polarization Volume Grating (PVG) Film Consumption Value by Diffraction Mode, (USD Million), 2021 & 2025 & 2032
Table 2. Global Polarization Volume Grating (PVG) Film Consumption Value by Spectral Configuration, (USD Million), 2021 & 2025 & 2032
Table 3. Global Polarization Volume Grating (PVG) Film Consumption Value by Waveguide Coupling Function, (USD Million), 2021 & 2025 & 2032
Table 4. Global Polarization Volume Grating (PVG) Film Consumption Value by Application, (USD Million), 2021 & 2025 & 2032
Table 5. Goowave Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors
Table 6. Goowave Technology Co., Ltd. Major Business
Table 7. Goowave Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
Table 8. Goowave Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity (K Pcs), Average Price (US$/Pcs), Revenue (USD Million), Gross Margin and Market Share (2021-2026)
Table 9. Goowave Technology Co., Ltd. Recent Developments/Updates
Table 10. Nanjing Parallel Vision Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors
Table 11. Nanjing Parallel Vision Technology Co., Ltd. Major Business
Table 12. Nanjing Parallel Vision Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
Table 13. Nanjing Parallel Vision Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity (K Pcs), Average Price (US$/Pcs), Revenue (USD Million), Gross Margin and Market Share (2021-2026)
Table 14. Nanjing Parallel Vision Technology Co., Ltd. Recent Developments/Updates
Table 15. Nanjing Jingcui Optical Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors
Table 16. Nanjing Jingcui Optical Technology Co., Ltd. Major Business
Table 17. Nanjing Jingcui Optical Technology Co., Ltd. Polarization Volume Grating (PVG) Film Product and Services
Table 18. Nanjing Jingcui Optical Technology Co., Ltd. Polarization Volume Grating (PVG) Film Sales Quantity (K Pcs), Average Price (US$/Pcs), Revenue (USD Million), Gross Margin and Market Share (2021-2026)
Table 19. Nanjing Jingcui Optical Technology Co., Ltd. Recent Developments/Updates

+357 96 030922
info@marketpublishers.com

Table 20. Global Polarization Volume Grating (PVG) Film Sales Quantity by Manufacturer (2021-2026) & (K Pcs)
Table 21. Global Polarization Volume Grating (PVG) Film Revenue by Manufacturer (2021-2026) & (USD Million)
Table 22. Global Polarization Volume Grating (PVG) Film Average Price by Manufacturer (2021-2026) & (US$/Pcs)
Table 23. Market Position of Manufacturers in Polarization Volume Grating (PVG) Film, (Tier 1, Tier 2, and Tier 3), Based on Revenue in 2025
Table 24. Head Office and Polarization Volume Grating (PVG) Film Production Site of Key Manufacturer
Table 25. Polarization Volume Grating (PVG) Film Market: Company Product Type Footprint
Table 26. Polarization Volume Grating (PVG) Film Market: Company Product Application Footprint
Table 27. Polarization Volume Grating (PVG) Film New Market Entrants and Barriers to Market Entry
Table 28. Polarization Volume Grating (PVG) Film Mergers, Acquisition, Agreements, and Collaborations
Table 29. Global Polarization Volume Grating (PVG) Film Consumption Value by Region (2021-2025-2032) & (USD Million) & CAGR
Table 30. Global Polarization Volume Grating (PVG) Film Sales Quantity by Region (2021-2026) & (K Pcs)
Table 31. Global Polarization Volume Grating (PVG) Film Sales Quantity by Region (2027-2032) & (K Pcs)
Table 32. Global Polarization Volume Grating (PVG) Film Consumption Value by Region (2021-2026) & (USD Million)
Table 33. Global Polarization Volume Grating (PVG) Film Consumption Value by Region (2027-2032) & (USD Million)
Table 34. Global Polarization Volume Grating (PVG) Film Average Price by Region (2021-2026) & (US$/Pcs)
Table 35. Global Polarization Volume Grating (PVG) Film Average Price by Region (2027-2032) & (US$/Pcs)
Table 36. Global Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 37. Global Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 38. Global Polarization Volume Grating (PVG) Film Consumption Value by Diffraction Mode (2021-2026) & (USD Million)
Table 39. Global Polarization Volume Grating (PVG) Film Consumption Value by

+357 96 030922
info@marketpublishers.com

Diffraction Mode (2027-2032) & (USD Million)
Table 40. Global Polarization Volume Grating (PVG) Film Average Price by Diffraction Mode (2021-2026) & (US$/Pcs)
Table 41. Global Polarization Volume Grating (PVG) Film Average Price by Diffraction Mode (2027-2032) & (US$/Pcs)
Table 42. Global Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)
Table 43. Global Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 44. Global Polarization Volume Grating (PVG) Film Consumption Value by Application (2021-2026) & (USD Million)
Table 45. Global Polarization Volume Grating (PVG) Film Consumption Value by Application (2027-2032) & (USD Million)
Table 46. Global Polarization Volume Grating (PVG) Film Average Price by Application (2021-2026) & (US$/Pcs)
Table 47. Global Polarization Volume Grating (PVG) Film Average Price by Application (2027-2032) & (US$/Pcs)
Table 48. North America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 49. North America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 50. North America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)
Table 51. North America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 52. North America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2026) & (K Pcs)
Table 53. North America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2027-2032) & (K Pcs)
Table 54. North America Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2026) & (USD Million)
Table 55. North America Polarization Volume Grating (PVG) Film Consumption Value by Country (2027-2032) & (USD Million)
Table 56. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 57. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 58. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)

+357 96 030922
info@marketpublishers.com

Table 59. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 60. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2026) & (K Pcs)
Table 61. Europe Polarization Volume Grating (PVG) Film Sales Quantity by Country (2027-2032) & (K Pcs)
Table 62. Europe Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2026) & (USD Million)
Table 63. Europe Polarization Volume Grating (PVG) Film Consumption Value by Country (2027-2032) & (USD Million)
Table 64. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 65. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 66. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)
Table 67. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 68. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Region (2021-2026) & (K Pcs)
Table 69. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity by Region (2027-2032) & (K Pcs)
Table 70. Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value by Region (2021-2026) & (USD Million)
Table 71. Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value by Region (2027-2032) & (USD Million)
Table 72. South America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 73. South America Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 74. South America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)
Table 75. South America Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 76. South America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2026) & (K Pcs)
Table 77. South America Polarization Volume Grating (PVG) Film Sales Quantity by Country (2027-2032) & (K Pcs)
Table 78. South America Polarization Volume Grating (PVG) Film Consumption Value

+357 96 030922
info@marketpublishers.com

by Country (2021-2026) & (USD Million)
Table 79. South America Polarization Volume Grating (PVG) Film Consumption Value by Country (2027-2032) & (USD Million)
Table 80. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2021-2026) & (K Pcs)
Table 81. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Diffraction Mode (2027-2032) & (K Pcs)
Table 82. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Application (2021-2026) & (K Pcs)
Table 83. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Application (2027-2032) & (K Pcs)
Table 84. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Country (2021-2026) & (K Pcs)
Table 85. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity by Country (2027-2032) & (K Pcs)
Table 86. Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value by Country (2021-2026) & (USD Million)
Table 87. Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value by Country (2027-2032) & (USD Million)
Table 88. Polarization Volume Grating (PVG) Film Raw Material
Table 89. Key Manufacturers of Polarization Volume Grating (PVG) Film Raw Materials
Table 90. Polarization Volume Grating (PVG) Film Typical Distributors
Table 91. Polarization Volume Grating (PVG) Film Typical Customers

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

Figure 1. Polarization Volume Grating (PVG) Film Picture
Figure 2. Global Polarization Volume Grating (PVG) Film Revenue by Diffraction Mode, (USD Million), 2021 & 2025 & 2032
Figure 3. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Diffraction Mode in 2025
Figure 4. Reflective PVG Examples
Figure 5. Transmissive PVG Examples
Figure 6. Others Examples
Figure 7. Global Polarization Volume Grating (PVG) Film Revenue by Spectral Configuration, (USD Million), 2021 & 2025 & 2032
Figure 8. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Spectral Configuration in 2025
Figure 9. Single-band PVG Examples
Figure 10. Multi-band PVG Examples
Figure 11. Others Examples
Figure 12. Global Polarization Volume Grating (PVG) Film Revenue by Waveguide Coupling Function, (USD Million), 2021 & 2025 & 2032
Figure 13. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Waveguide Coupling Function in 2025
Figure 14. In-coupling PVG Examples
Figure 15. Pupil-expansion PVG Examples
Figure 16. Out-coupling PVG Examples
Figure 17. Multi-function PVG Examples
Figure 18. Others Examples
Figure 19. Global Polarization Volume Grating (PVG) Film Consumption Value by Application, (USD Million), 2021 & 2025 & 2032
Figure 20. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Application in 2025
Figure 21. Automotive Head-up Display (HUD) Examples
Figure 22. Head-mounted and Near-eye Displays Examples
Figure 23. Beam Steering and Optical Communication Examples
Figure 24. Others Examples
Figure 25. Global Polarization Volume Grating (PVG) Film Consumption Value, (USD Million): 2021 & 2025 & 2032
Figure 26. Global Polarization Volume Grating (PVG) Film Consumption Value and

+357 96 030922
info@marketpublishers.com

Forecast (2021-2032) & (USD Million)
Figure 27. Global Polarization Volume Grating (PVG) Film Sales Quantity (2021-2032) & (K Pcs)
Figure 28. Global Polarization Volume Grating (PVG) Film Price (2021-2032) & (US$/Pcs)
Figure 29. Global Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Manufacturer in 2025
Figure 30. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Manufacturer in 2025
Figure 31. Producer Shipments of Polarization Volume Grating (PVG) Film by Manufacturer Sales ($MM) and Market Share (%): 2025
Figure 32. Top 3 Polarization Volume Grating (PVG) Film Manufacturer (Revenue) Market Share in 2025
Figure 33. Top 6 Polarization Volume Grating (PVG) Film Manufacturer (Revenue) Market Share in 2025
Figure 34. Global Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Region (2021-2032)
Figure 35. Global Polarization Volume Grating (PVG) Film Consumption Value Market Share by Region (2021-2032)
Figure 36. North America Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 37. Europe Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 38. Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 39. South America Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 40. Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 41. Global Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 42. Global Polarization Volume Grating (PVG) Film Consumption Value Market Share by Diffraction Mode (2021-2032)
Figure 43. Global Polarization Volume Grating (PVG) Film Average Price by Diffraction Mode (2021-2032) & (US$/Pcs)
Figure 44. Global Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 45. Global Polarization Volume Grating (PVG) Film Revenue Market Share by Application (2021-2032)

+357 96 030922
info@marketpublishers.com

Figure 46. Global Polarization Volume Grating (PVG) Film Average Price by Application (2021-2032) & (US$/Pcs)
Figure 47. North America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 48. North America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 49. North America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Country (2021-2032)
Figure 50. North America Polarization Volume Grating (PVG) Film Consumption Value Market Share by Country (2021-2032)
Figure 51. United States Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 52. Canada Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 53. Mexico Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 54. Europe Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 55. Europe Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 56. Europe Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Country (2021-2032)
Figure 57. Europe Polarization Volume Grating (PVG) Film Consumption Value Market Share by Country (2021-2032)
Figure 58. Germany Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 59. France Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 60. United Kingdom Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 61. Russia Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 62. Italy Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 63. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 64. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 65. Asia-Pacific Polarization Volume Grating (PVG) Film Sales Quantity Market

+357 96 030922
info@marketpublishers.com

Share by Region (2021-2032)
Figure 66. Asia-Pacific Polarization Volume Grating (PVG) Film Consumption Value Market Share by Region (2021-2032)
Figure 67. China Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 68. Japan Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 69. South Korea Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 70. India Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 71. Southeast Asia Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 72. Australia Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 73. South America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 74. South America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 75. South America Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Country (2021-2032)
Figure 76. South America Polarization Volume Grating (PVG) Film Consumption Value Market Share by Country (2021-2032)
Figure 77. Brazil Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 78. Argentina Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 79. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Diffraction Mode (2021-2032)
Figure 80. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Application (2021-2032)
Figure 81. Middle East & Africa Polarization Volume Grating (PVG) Film Sales Quantity Market Share by Country (2021-2032)
Figure 82. Middle East & Africa Polarization Volume Grating (PVG) Film Consumption Value Market Share by Country (2021-2032)
Figure 83. Turkey Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 84. Egypt Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)

+357 96 030922
info@marketpublishers.com

Figure 85. Saudi Arabia Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 86. South Africa Polarization Volume Grating (PVG) Film Consumption Value (2021-2032) & (USD Million)
Figure 87. Polarization Volume Grating (PVG) Film Market Drivers
Figure 88. Polarization Volume Grating (PVG) Film Market Restraints
Figure 89. Polarization Volume Grating (PVG) Film Market Trends
Figure 90. Porters Five Forces Analysis
Figure 91. Manufacturing Cost Structure Analysis of Polarization Volume Grating (PVG) Film in 2025
Figure 92. Manufacturing Process Analysis of Polarization Volume Grating (PVG) Film
Figure 93. Polarization Volume Grating (PVG) Film Industrial Chain
Figure 94. Sales Channel: Direct to End-User vs Distributors
Figure 95. Direct Channel Pros & Cons
Figure 96. Indirect Channel Pros & Cons
Figure 97. Methodology
Figure 98. Research Process and Data Source

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Polarization Volume Grating (PVG) Film Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

Product link: https://marketpublishers.com/r/GEC692C13DA3EN.html

Price: US$ 3,480.00 (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/GEC692C13DA3EN.html