

Global VPH (Volume Phase Holographic) Grating Market 2023 by Manufacturers, Regions, Type and Application, Forecast to 2029

https://marketpublishers.com/r/G9EF147AA35AEN.html

Date: February 2023

Pages: 91

Price: US\$ 3,480.00 (Single User License)

ID: G9EF147AA35AEN

Abstracts

VPH Grating, AKA Gel Grating, is coated with dichromated gelatin under optical glass. Two beams of coherent plane wave or spherical wave are irradiated onto the recording material at a certain angle. The recording material records the interference fringe, and the grating is processed after development The refractive index distribution of the sinusoidal waveform corresponding to the intensity of the interference fringes is formed on the recording material, thus VPH is obtained.

According to our (Global Info Research) latest study, the global VPH (Volume Phase Holographic) Grating market size was valued at USD million in 2022 and is forecast to a readjusted size of USD million by 2029 with a CAGR of % during review period. The influence of COVID-19 and the Russia-Ukraine War were considered while estimating market sizes.

This report is a detailed and comprehensive analysis for global VPH (Volume Phase Holographic) Grating 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 2023, are provided.

Key Features:

Global VPH (Volume Phase Holographic) Grating market size and forecasts, in consumption value (\$ Million), sales quantity (K Units), and average selling prices



(US\$/Unit), 2018-2029

Global VPH (Volume Phase Holographic) Grating market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2018-2029

Global VPH (Volume Phase Holographic) Grating market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2018-2029

Global VPH (Volume Phase Holographic) Grating market shares of main players, shipments in revenue (\$ Million), sales quantity (K Units), and ASP (US\$/Unit), 2018-2023

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 VPH (Volume Phase Holographic) Grating

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 VPH (Volume Phase Holographic) Grating market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Wasatch Photonics, Kaiser Optical Systems, HORIBA Scientific, Holographix and Photon Mission, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Market Segmentation

VPH (Volume Phase Holographic) Grating market is split by Type and by Application. For the period 2018-2029, 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	
Enhanced-Volume Phase Holographic Gratings	
HOEs	
Market segment by Application	
Spectrometer	
Pulse Compression/Stretching	
Astronomy	
OCT Imaging	
Major players covered	
Wasatch Photonics	
Kaiser Optical Systems	
HORIBA Scientific	
Holographix	
Photon Mission	
Aunion	
Sphereoptics	
ThorLabs	



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 VPH (Volume Phase Holographic) Grating product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of VPH (Volume Phase Holographic) Grating, with price, sales, revenue and global market share of VPH (Volume Phase Holographic) Grating from 2018 to 2023.

Chapter 3, the VPH (Volume Phase Holographic) Grating competitive situation, sales quantity, revenue and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the VPH (Volume Phase Holographic) Grating breakdown data are shown at the regional level, to show the sales quantity, consumption value and growth by regions, from 2018 to 2029.

Chapter 5 and 6, to segment the sales by Type and application, with sales market share and growth rate by type, application, from 2018 to 2029.

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 2017 to 2022.and VPH (Volume Phase Holographic) Grating market forecast, by regions, type and application, with sales and revenue, from 2024 to 2029.



Chapter 12, market dynamics, drivers, restraints, trends, Porters Five Forces analysis, and Influence of COVID-19 and Russia-Ukraine War.

Chapter 13, the key raw materials and key suppliers, and industry chain of VPH (Volume Phase Holographic) Grating.

Chapter 14 and 15, to describe VPH (Volume Phase Holographic) Grating sales channel, distributors, customers, research findings and conclusion.



Contents

1 MARKET OVERVIEW

- 1.1 Product Overview and Scope of VPH (Volume Phase Holographic) Grating
- 1.2 Market Estimation Caveats and Base Year
- 1.3 Market Analysis by Type
- 1.3.1 Overview: Global VPH (Volume Phase Holographic) Grating Consumption Value by Type: 2018 Versus 2022 Versus 2029
 - 1.3.2 Enhanced-Volume Phase Holographic Gratings
 - 1.3.3 HOEs
- 1.4 Market Analysis by Application
- 1.4.1 Overview: Global VPH (Volume Phase Holographic) Grating Consumption Value by Application: 2018 Versus 2022 Versus 2029
 - 1.4.2 Spectrometer
 - 1.4.3 Pulse Compression/Stretching
 - 1.4.4 Astronomy
 - 1.4.5 OCT Imaging
- 1.5 Global VPH (Volume Phase Holographic) Grating Market Size & Forecast
- 1.5.1 Global VPH (Volume Phase Holographic) Grating Consumption Value (2018 & 2022 & 2029)
 - 1.5.2 Global VPH (Volume Phase Holographic) Grating Sales Quantity (2018-2029)
 - 1.5.3 Global VPH (Volume Phase Holographic) Grating Average Price (2018-2029)

2 MANUFACTURERS PROFILES

- 2.1 Wasatch Photonics
 - 2.1.1 Wasatch Photonics Details
 - 2.1.2 Wasatch Photonics Major Business
- 2.1.3 Wasatch Photonics VPH (Volume Phase Holographic) Grating Product and Services
- 2.1.4 Wasatch Photonics VPH (Volume Phase Holographic) Grating Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
 - 2.1.5 Wasatch Photonics Recent Developments/Updates
- 2.2 Kaiser Optical Systems
 - 2.2.1 Kaiser Optical Systems Details
 - 2.2.2 Kaiser Optical Systems Major Business
- 2.2.3 Kaiser Optical Systems VPH (Volume Phase Holographic) Grating Product and Services



- 2.2.4 Kaiser Optical Systems VPH (Volume Phase Holographic) Grating Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
- 2.2.5 Kaiser Optical Systems Recent Developments/Updates
- 2.3 HORIBA Scientific
 - 2.3.1 HORIBA Scientific Details
 - 2.3.2 HORIBA Scientific Major Business
- 2.3.3 HORIBA Scientific VPH (Volume Phase Holographic) Grating Product and Services
- 2.3.4 HORIBA Scientific VPH (Volume Phase Holographic) Grating Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
 - 2.3.5 HORIBA Scientific Recent Developments/Updates
- 2.4 Holographix
 - 2.4.1 Holographix Details
 - 2.4.2 Holographix Major Business
 - 2.4.3 Holographix VPH (Volume Phase Holographic) Grating Product and Services
- 2.4.4 Holographix VPH (Volume Phase Holographic) Grating Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
 - 2.4.5 Holographix Recent Developments/Updates
- 2.5 Photon Mission
 - 2.5.1 Photon Mission Details
 - 2.5.2 Photon Mission Major Business
 - 2.5.3 Photon Mission VPH (Volume Phase Holographic) Grating Product and Services
 - 2.5.4 Photon Mission VPH (Volume Phase Holographic) Grating Sales Quantity,

Average Price, Revenue, Gross Margin and Market Share (2018-2023)

- 2.5.5 Photon Mission Recent Developments/Updates
- 2.6 Aunion
 - 2.6.1 Aunion Details
 - 2.6.2 Aunion Major Business
 - 2.6.3 Aunion VPH (Volume Phase Holographic) Grating Product and Services
 - 2.6.4 Aunion VPH (Volume Phase Holographic) Grating Sales Quantity, Average

Price, Revenue, Gross Margin and Market Share (2018-2023)

- 2.6.5 Aunion Recent Developments/Updates
- 2.7 Sphereoptics
 - 2.7.1 Sphereoptics Details
 - 2.7.2 Sphereoptics Major Business
 - 2.7.3 Sphereoptics VPH (Volume Phase Holographic) Grating Product and Services
 - 2.7.4 Sphereoptics VPH (Volume Phase Holographic) Grating Sales Quantity, Average
- Price, Revenue, Gross Margin and Market Share (2018-2023)
 - 2.7.5 Sphereoptics Recent Developments/Updates



- 2.8 ThorLabs
 - 2.8.1 ThorLabs Details
 - 2.8.2 ThorLabs Major Business
 - 2.8.3 ThorLabs VPH (Volume Phase Holographic) Grating Product and Services
- 2.8.4 ThorLabs VPH (Volume Phase Holographic) Grating Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
- 2.8.5 ThorLabs Recent Developments/Updates

3 COMPETITIVE ENVIRONMENT: VPH (VOLUME PHASE HOLOGRAPHIC) GRATING BY MANUFACTURER

- 3.1 Global VPH (Volume Phase Holographic) Grating Sales Quantity by Manufacturer (2018-2023)
- 3.2 Global VPH (Volume Phase Holographic) Grating Revenue by Manufacturer (2018-2023)
- 3.3 Global VPH (Volume Phase Holographic) Grating Average Price by Manufacturer (2018-2023)
- 3.4 Market Share Analysis (2022)
- 3.4.1 Producer Shipments of VPH (Volume Phase Holographic) Grating by Manufacturer Revenue (\$MM) and Market Share (%): 2022
- 3.4.2 Top 3 VPH (Volume Phase Holographic) Grating Manufacturer Market Share in 2022
- 3.4.2 Top 6 VPH (Volume Phase Holographic) Grating Manufacturer Market Share in
- 3.5 VPH (Volume Phase Holographic) Grating Market: Overall Company Footprint Analysis
- 3.5.1 VPH (Volume Phase Holographic) Grating Market: Region Footprint
- 3.5.2 VPH (Volume Phase Holographic) Grating Market: Company Product Type Footprint
- 3.5.3 VPH (Volume Phase Holographic) Grating 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 VPH (Volume Phase Holographic) Grating Market Size by Region4.1.1 Global VPH (Volume Phase Holographic) Grating Sales Quantity by Region

(2018-2029)



- 4.1.2 Global VPH (Volume Phase Holographic) Grating Consumption Value by Region (2018-2029)
- 4.1.3 Global VPH (Volume Phase Holographic) Grating Average Price by Region (2018-2029)
- 4.2 North America VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029)
- 4.3 Europe VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029)
- 4.4 Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029)
- 4.5 South America VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029)
- 4.6 Middle East and Africa VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029)

5 MARKET SEGMENT BY TYPE

- 5.1 Global VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 5.2 Global VPH (Volume Phase Holographic) Grating Consumption Value by Type (2018-2029)
- 5.3 Global VPH (Volume Phase Holographic) Grating Average Price by Type (2018-2029)

6 MARKET SEGMENT BY APPLICATION

- 6.1 Global VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 6.2 Global VPH (Volume Phase Holographic) Grating Consumption Value by Application (2018-2029)
- 6.3 Global VPH (Volume Phase Holographic) Grating Average Price by Application (2018-2029)

7 NORTH AMERICA

- 7.1 North America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 7.2 North America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 7.3 North America VPH (Volume Phase Holographic) Grating Market Size by Country



- 7.3.1 North America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2029)
- 7.3.2 North America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2029)
 - 7.3.3 United States Market Size and Forecast (2018-2029)
 - 7.3.4 Canada Market Size and Forecast (2018-2029)
 - 7.3.5 Mexico Market Size and Forecast (2018-2029)

8 EUROPE

- 8.1 Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 8.2 Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 8.3 Europe VPH (Volume Phase Holographic) Grating Market Size by Country
- 8.3.1 Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2029)
- 8.3.2 Europe VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2029)
 - 8.3.3 Germany Market Size and Forecast (2018-2029)
 - 8.3.4 France Market Size and Forecast (2018-2029)
 - 8.3.5 United Kingdom Market Size and Forecast (2018-2029)
 - 8.3.6 Russia Market Size and Forecast (2018-2029)
 - 8.3.7 Italy Market Size and Forecast (2018-2029)

9 ASIA-PACIFIC

- 9.1 Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 9.2 Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 9.3 Asia-Pacific VPH (Volume Phase Holographic) Grating Market Size by Region
- 9.3.1 Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2018-2029)
- 9.3.2 Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value by Region (2018-2029)
 - 9.3.3 China Market Size and Forecast (2018-2029)
 - 9.3.4 Japan Market Size and Forecast (2018-2029)
- 9.3.5 Korea Market Size and Forecast (2018-2029)



- 9.3.6 India Market Size and Forecast (2018-2029)
- 9.3.7 Southeast Asia Market Size and Forecast (2018-2029)
- 9.3.8 Australia Market Size and Forecast (2018-2029)

10 SOUTH AMERICA

- 10.1 South America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 10.2 South America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 10.3 South America VPH (Volume Phase Holographic) Grating Market Size by Country 10.3.1 South America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2029)
- 10.3.2 South America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2029)
 - 10.3.3 Brazil Market Size and Forecast (2018-2029)
 - 10.3.4 Argentina Market Size and Forecast (2018-2029)

11 MIDDLE EAST & AFRICA

- 11.1 Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2029)
- 11.2 Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2029)
- 11.3 Middle East & Africa VPH (Volume Phase Holographic) Grating Market Size by Country
- 11.3.1 Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2029)
- 11.3.2 Middle East & Africa VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2029)
 - 11.3.3 Turkey Market Size and Forecast (2018-2029)
 - 11.3.4 Egypt Market Size and Forecast (2018-2029)
 - 11.3.5 Saudi Arabia Market Size and Forecast (2018-2029)
 - 11.3.6 South Africa Market Size and Forecast (2018-2029)

12 MARKET DYNAMICS

- 12.1 VPH (Volume Phase Holographic) Grating Market Drivers
- 12.2 VPH (Volume Phase Holographic) Grating Market Restraints



- 12.3 VPH (Volume Phase Holographic) Grating 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
- 12.5 Influence of COVID-19 and Russia-Ukraine War
 - 12.5.1 Influence of COVID-19
 - 12.5.2 Influence of Russia-Ukraine War

13 RAW MATERIAL AND INDUSTRY CHAIN

- 13.1 Raw Material of VPH (Volume Phase Holographic) Grating and Key Manufacturers
- 13.2 Manufacturing Costs Percentage of VPH (Volume Phase Holographic) Grating
- 13.3 VPH (Volume Phase Holographic) Grating Production Process
- 13.4 VPH (Volume Phase Holographic) Grating Industrial Chain

14 SHIPMENTS BY DISTRIBUTION CHANNEL

- 14.1 Sales Channel
 - 14.1.1 Direct to End-User
 - 14.1.2 Distributors
- 14.2 VPH (Volume Phase Holographic) Grating Typical Distributors
- 14.3 VPH (Volume Phase Holographic) Grating Typical Customers

15 RESEARCH FINDINGS AND CONCLUSION

16 APPENDIX

- 16.1 Methodology
- 16.2 Research Process and Data Source
- 16.3 Disclaimer



List Of Tables

LIST OF TABLES

- Table 1. Global VPH (Volume Phase Holographic) Grating Consumption Value by Type, (USD Million), 2018 & 2022 & 2029
- Table 2. Global VPH (Volume Phase Holographic) Grating Consumption Value by Application, (USD Million), 2018 & 2022 & 2029
- Table 3. Wasatch Photonics Basic Information, Manufacturing Base and Competitors
- Table 4. Wasatch Photonics Major Business
- Table 5. Wasatch Photonics VPH (Volume Phase Holographic) Grating Product and Services
- Table 6. Wasatch Photonics VPH (Volume Phase Holographic) Grating Sales Quantity (K Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 7. Wasatch Photonics Recent Developments/Updates
- Table 8. Kaiser Optical Systems Basic Information, Manufacturing Base and Competitors
- Table 9. Kaiser Optical Systems Major Business
- Table 10. Kaiser Optical Systems VPH (Volume Phase Holographic) Grating Product and Services
- Table 11. Kaiser Optical Systems VPH (Volume Phase Holographic) Grating Sales Quantity (K Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 12. Kaiser Optical Systems Recent Developments/Updates
- Table 13. HORIBA Scientific Basic Information, Manufacturing Base and Competitors
- Table 14. HORIBA Scientific Major Business
- Table 15. HORIBA Scientific VPH (Volume Phase Holographic) Grating Product and Services
- Table 16. HORIBA Scientific VPH (Volume Phase Holographic) Grating Sales Quantity (K Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 17. HORIBA Scientific Recent Developments/Updates
- Table 18. Holographix Basic Information, Manufacturing Base and Competitors
- Table 19. Holographix Major Business
- Table 20. Holographix VPH (Volume Phase Holographic) Grating Product and Services
- Table 21. Holographix VPH (Volume Phase Holographic) Grating Sales Quantity (K
- Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)



- Table 22. Holographix Recent Developments/Updates
- Table 23. Photon Mission Basic Information, Manufacturing Base and Competitors
- Table 24. Photon Mission Major Business
- Table 25. Photon Mission VPH (Volume Phase Holographic) Grating Product and Services
- Table 26. Photon Mission VPH (Volume Phase Holographic) Grating Sales Quantity (K Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 27. Photon Mission Recent Developments/Updates
- Table 28. Aunion Basic Information, Manufacturing Base and Competitors
- Table 29. Aunion Major Business
- Table 30. Aunion VPH (Volume Phase Holographic) Grating Product and Services
- Table 31. Aunion VPH (Volume Phase Holographic) Grating Sales Quantity (K Units),
- Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 32. Aunion Recent Developments/Updates
- Table 33. Sphereoptics Basic Information, Manufacturing Base and Competitors
- Table 34. Sphereoptics Major Business
- Table 35. Sphereoptics VPH (Volume Phase Holographic) Grating Product and Services
- Table 36. Sphereoptics VPH (Volume Phase Holographic) Grating Sales Quantity (K Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 37. Sphereoptics Recent Developments/Updates
- Table 38. ThorLabs Basic Information, Manufacturing Base and Competitors
- Table 39. ThorLabs Major Business
- Table 40. ThorLabs VPH (Volume Phase Holographic) Grating Product and Services
- Table 41. ThorLabs VPH (Volume Phase Holographic) Grating Sales Quantity (K Units),
- Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2018-2023)
- Table 42. ThorLabs Recent Developments/Updates
- Table 43. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Manufacturer (2018-2023) & (K Units)
- Table 44. Global VPH (Volume Phase Holographic) Grating Revenue by Manufacturer (2018-2023) & (USD Million)
- Table 45. Global VPH (Volume Phase Holographic) Grating Average Price by Manufacturer (2018-2023) & (US\$/Unit)
- Table 46. Market Position of Manufacturers in VPH (Volume Phase Holographic)
- Grating, (Tier 1, Tier 2, and Tier 3), Based on Consumption Value in 2022



Table 47. Head Office and VPH (Volume Phase Holographic) Grating Production Site of Key Manufacturer

Table 48. VPH (Volume Phase Holographic) Grating Market: Company Product Type Footprint

Table 49. VPH (Volume Phase Holographic) Grating Market: Company Product Application Footprint

Table 50. VPH (Volume Phase Holographic) Grating New Market Entrants and Barriers to Market Entry

Table 51. VPH (Volume Phase Holographic) Grating Mergers, Acquisition, Agreements, and Collaborations

Table 52. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2018-2023) & (K Units)

Table 53. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2024-2029) & (K Units)

Table 54. Global VPH (Volume Phase Holographic) Grating Consumption Value by Region (2018-2023) & (USD Million)

Table 55. Global VPH (Volume Phase Holographic) Grating Consumption Value by Region (2024-2029) & (USD Million)

Table 56. Global VPH (Volume Phase Holographic) Grating Average Price by Region (2018-2023) & (US\$/Unit)

Table 57. Global VPH (Volume Phase Holographic) Grating Average Price by Region (2024-2029) & (US\$/Unit)

Table 58. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 59. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 60. Global VPH (Volume Phase Holographic) Grating Consumption Value by Type (2018-2023) & (USD Million)

Table 61. Global VPH (Volume Phase Holographic) Grating Consumption Value by Type (2024-2029) & (USD Million)

Table 62. Global VPH (Volume Phase Holographic) Grating Average Price by Type (2018-2023) & (US\$/Unit)

Table 63. Global VPH (Volume Phase Holographic) Grating Average Price by Type (2024-2029) & (US\$/Unit)

Table 64. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 65. Global VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2024-2029) & (K Units)

Table 66. Global VPH (Volume Phase Holographic) Grating Consumption Value by



Application (2018-2023) & (USD Million)

Table 67. Global VPH (Volume Phase Holographic) Grating Consumption Value by Application (2024-2029) & (USD Million)

Table 68. Global VPH (Volume Phase Holographic) Grating Average Price by Application (2018-2023) & (US\$/Unit)

Table 69. Global VPH (Volume Phase Holographic) Grating Average Price by Application (2024-2029) & (US\$/Unit)

Table 70. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 71. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 72. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 73. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2024-2029) & (K Units)

Table 74. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2023) & (K Units)

Table 75. North America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2024-2029) & (K Units)

Table 76. North America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2023) & (USD Million)

Table 77. North America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2024-2029) & (USD Million)

Table 78. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 79. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 80. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 81. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2024-2029) & (K Units)

Table 82. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2023) & (K Units)

Table 83. Europe VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2024-2029) & (K Units)

Table 84. Europe VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2023) & (USD Million)

Table 85. Europe VPH (Volume Phase Holographic) Grating Consumption Value by Country (2024-2029) & (USD Million)



Table 86. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 87. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 88. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 89. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2024-2029) & (K Units)

Table 90. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2018-2023) & (K Units)

Table 91. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2024-2029) & (K Units)

Table 92. Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value by Region (2018-2023) & (USD Million)

Table 93. Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value by Region (2024-2029) & (USD Million)

Table 94. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 95. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 96. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 97. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2024-2029) & (K Units)

Table 98. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2018-2023) & (K Units)

Table 99. South America VPH (Volume Phase Holographic) Grating Sales Quantity by Country (2024-2029) & (K Units)

Table 100. South America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2018-2023) & (USD Million)

Table 101. South America VPH (Volume Phase Holographic) Grating Consumption Value by Country (2024-2029) & (USD Million)

Table 102. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2018-2023) & (K Units)

Table 103. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Type (2024-2029) & (K Units)

Table 104. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Application (2018-2023) & (K Units)

Table 105. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales



Quantity by Application (2024-2029) & (K Units)

Table 106. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2018-2023) & (K Units)

Table 107. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity by Region (2024-2029) & (K Units)

Table 108. Middle East & Africa VPH (Volume Phase Holographic) Grating

Consumption Value by Region (2018-2023) & (USD Million)

Table 109. Middle East & Africa VPH (Volume Phase Holographic) Grating Consumption Value by Region (2024-2029) & (USD Million)

Table 110. VPH (Volume Phase Holographic) Grating Raw Material

Table 111. Key Manufacturers of VPH (Volume Phase Holographic) Grating Raw Materials

Table 112. VPH (Volume Phase Holographic) Grating Typical Distributors

Table 113. VPH (Volume Phase Holographic) Grating Typical Customers



List Of Figures

LIST OF FIGURES

Figure 1. VPH (Volume Phase Holographic) Grating Picture

Figure 2. Global VPH (Volume Phase Holographic) Grating Consumption Value by

Type, (USD Million), 2018 & 2022 & 2029

Figure 3. Global VPH (Volume Phase Holographic) Grating Consumption Value Market

Share by Type in 2022

Figure 4. Enhanced-Volume Phase Holographic Gratings Examples

Figure 5. HOEs Examples

Figure 6. Global VPH (Volume Phase Holographic) Grating Consumption Value by

Application, (USD Million), 2018 & 2022 & 2029

Figure 7. Global VPH (Volume Phase Holographic) Grating Consumption Value Market

Share by Application in 2022

Figure 8. Spectrometer Examples

Figure 9. Pulse Compression/Stretching Examples

Figure 10. Astronomy Examples

Figure 11. OCT Imaging Examples

Figure 12. Global VPH (Volume Phase Holographic) Grating Consumption Value, (USD

Million): 2018 & 2022 & 2029

Figure 13. Global VPH (Volume Phase Holographic) Grating Consumption Value and

Forecast (2018-2029) & (USD Million)

Figure 14. Global VPH (Volume Phase Holographic) Grating Sales Quantity

(2018-2029) & (K Units)

Figure 15. Global VPH (Volume Phase Holographic) Grating Average Price (2018-2029)

& (US\$/Unit)

Figure 16. Global VPH (Volume Phase Holographic) Grating Sales Quantity Market

Share by Manufacturer in 2022

Figure 17. Global VPH (Volume Phase Holographic) Grating Consumption Value Market

Share by Manufacturer in 2022

Figure 18. Producer Shipments of VPH (Volume Phase Holographic) Grating by

Manufacturer Sales Quantity (\$MM) and Market Share (%): 2021

Figure 19. Top 3 VPH (Volume Phase Holographic) Grating Manufacturer (Consumption

Value) Market Share in 2022

Figure 20. Top 6 VPH (Volume Phase Holographic) Grating Manufacturer (Consumption

Value) Market Share in 2022

Figure 21. Global VPH (Volume Phase Holographic) Grating Sales Quantity Market

Share by Region (2018-2029)



Figure 22. Global VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Region (2018-2029)

Figure 23. North America VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029) & (USD Million)

Figure 24. Europe VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029) & (USD Million)

Figure 25. Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029) & (USD Million)

Figure 26. South America VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029) & (USD Million)

Figure 27. Middle East & Africa VPH (Volume Phase Holographic) Grating Consumption Value (2018-2029) & (USD Million)

Figure 28. Global VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Type (2018-2029)

Figure 29. Global VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Type (2018-2029)

Figure 30. Global VPH (Volume Phase Holographic) Grating Average Price by Type (2018-2029) & (US\$/Unit)

Figure 31. Global VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 32. Global VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Application (2018-2029)

Figure 33. Global VPH (Volume Phase Holographic) Grating Average Price by Application (2018-2029) & (US\$/Unit)

Figure 34. North America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Type (2018-2029)

Figure 35. North America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 36. North America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Country (2018-2029)

Figure 37. North America VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Country (2018-2029)

Figure 38. United States VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 39. Canada VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 40. Mexico VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 41. Europe VPH (Volume Phase Holographic) Grating Sales Quantity Market



Share by Type (2018-2029)

Figure 42. Europe VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 43. Europe VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Country (2018-2029)

Figure 44. Europe VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Country (2018-2029)

Figure 45. Germany VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 46. France VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 47. United Kingdom VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 48. Russia VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 49. Italy VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 50. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Type (2018-2029)

Figure 51. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 52. Asia-Pacific VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Region (2018-2029)

Figure 53. Asia-Pacific VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Region (2018-2029)

Figure 54. China VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 55. Japan VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 56. Korea VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 57. India VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 58. Southeast Asia VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 59. Australia VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 60. South America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Type (2018-2029)



Figure 61. South America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 62. South America VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Country (2018-2029)

Figure 63. South America VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Country (2018-2029)

Figure 64. Brazil VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 65. Argentina VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 66. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Type (2018-2029)

Figure 67. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Application (2018-2029)

Figure 68. Middle East & Africa VPH (Volume Phase Holographic) Grating Sales Quantity Market Share by Region (2018-2029)

Figure 69. Middle East & Africa VPH (Volume Phase Holographic) Grating Consumption Value Market Share by Region (2018-2029)

Figure 70. Turkey VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 71. Egypt VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 72. Saudi Arabia VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 73. South Africa VPH (Volume Phase Holographic) Grating Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 74. VPH (Volume Phase Holographic) Grating Market Drivers

Figure 75. VPH (Volume Phase Holographic) Grating Market Restraints

Figure 76. VPH (Volume Phase Holographic) Grating Market Trends

Figure 77. Porters Five Forces Analysis

Figure 78. Manufacturing Cost Structure Analysis of VPH (Volume Phase Holographic) Grating in 2022

Figure 79. Manufacturing Process Analysis of VPH (Volume Phase Holographic) Grating

Figure 80. VPH (Volume Phase Holographic) Grating Industrial Chain

Figure 81. Sales Quantity Channel: Direct to End-User vs Distributors

Figure 82. Direct Channel Pros & Cons

Figure 83. Indirect Channel Pros & Cons

Figure 84. Methodology



Figure 85. Research Process and Data Source



I would like to order

Product name: Global VPH (Volume Phase Holographic) Grating Market 2023 by Manufacturers,

Regions, Type and Application, Forecast to 2029

Product link: https://marketpublishers.com/r/G9EF147AA35AEN.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

First name:

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G9EF147AA35AEN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

Last name:	
Email:	
Company:	
Address:	
City:	
Zip code:	
Country:	
Tel:	
Fax:	
Your message:	
	**All fields are required
	Custumer signature

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

