

Global 4G Image Intensifier Tube Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

<https://marketpublishers.com/r/G00B011D3410EN.html>

Date: August 2026

Pages: 98

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

ID: G00B011D3410EN

Abstracts

According to our (Global Info Research) latest study, the global 4G Image Intensifier Tube market size was valued at US\$ 790 million in 2025 and is forecast to a readjusted size of US\$ 1996 million by 2032 with a CAGR of 14.9% during review period.

4G image intensifier tube is a type of technology grade product of high-performance night vision image enhancement tube, mainly used to convert and amplify weak visible light and near-infrared light at night into observable images. It is the core component of individual night vision devices, helmet night vision systems, weapon sights, vehicle night vision equipment, and border defense photoelectric detection systems. Its working principle is that weak light first enters the photocathode and is converted into electrons. The electrons are multiplied and amplified by the microchannel plate, and then bombard the fluorescent screen to form a visible image, which is then output by the eyepiece or imaging system. 4G image enhancement tubes typically emphasize wide spectral response, high signal-to-noise ratio, high resolution, small halo, fast automatic gating, and strong light protection capabilities. Their performance is higher than that of ordinary second-generation and some third-generation image enhancement tubes, and they can maintain clear image quality in low light, strong weak light switching, complex backgrounds, and rapidly moving scenes. Its main costs are concentrated in the areas of photocathode, microchannel board, vacuum packaging, high-voltage power supply, fluorescent screen, testing and screening, and yield loss. Downstream demand mainly comes from military and police equipment, night vision machines, border monitoring, unmanned reconnaissance, security patrols, and research low light imaging. In 2025, global 4G Image Intensifier Tube production reached approximately 298,762 Units, with an average global market price of around US\$ 2,570 per unit.

4G image intensifier tube belong to high-end optoelectronic devices with high barriers, small batches, and high unit prices. Although the market size is not large, their technological content and strategic value are relatively high. With the increasing demand for night combat, border patrol, counter-terrorism law enforcement, unmanned platform reconnaissance, and complex environmental security, high-performance night vision equipment is upgrading from a single observation function to high-definition, lightweight, low-power, wide spectrum, and digital fusion. This will continue to drive the growth of demand for 4G image enhancement tubes and high-performance chips of the same level. From the supply side, this field is limited by the preparation of photocathodes, microchannel plate consistency, vacuum packaging yield, FOM value screening, and military certification system. The number of enterprises that can stably supply in bulk worldwide is relatively small, the market concentration is high, and the price is not easy to quickly decline. In the medium to long term, pure digital low light sensors, thermal imaging, and multispectral fusion systems will exert some substitution pressure on traditional image enhancement tubes. However, high-performance image enhancement tubes still have significant advantages in real-time performance, low latency, low power consumption, passive imaging, and individual wearing experience. Therefore, 4G image enhancement tubes are more likely to be integrated with digital night vision, thermal imaging, and augmented reality display modules in the future, rather than being completely replaced by a single technology. The market opportunities mainly focus on high FOM value products, lightweight 16mm tubes, automatic door control tubes, low halo tubes, and overall system upgrades.

This report is a detailed and comprehensive analysis for global 4G Image Intensifier Tube 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 4G Image Intensifier Tube market size and forecasts, in consumption value (\$ Million), sales quantity (Units), and average selling prices (US\$/Unit), 2021-2032

Global 4G Image Intensifier Tube market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (Units), and average selling prices (US\$/Unit), 2021-2032

Global 4G Image Intensifier Tube market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (Units), and average selling prices (US\$/Unit), 2021-2032

Global 4G Image Intensifier Tube market shares of main players, shipments in revenue (\$ Million), sales quantity (Units), and ASP (US\$/Unit), 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 4G Image Intensifier Tube

- 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 4G Image Intensifier Tube 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 L3Harris, Exosens(Photonis Defense), Elbit Systems, Northern Night Vision Technology Group, Katod, Harder Digital, 3E, etc.

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

Market Segmentation

4G Image Intensifier Tube 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

16mm

18mm

25mm

Other

Market segment by Fluorescent Screen Material

P45

P43

Market segment by Sales Model

Direct Selling

Distribution

Market segment by Application

Night Vision Equipment

Weapon Sights

Other

Major players covered

L3Harris

Exosens(Photonis Defense)

Elbit Systems

Northern Night Vision Technology Group

Katod

Harder Digital

3E

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 4G Image Intensifier Tube product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of 4G Image Intensifier Tube, with price, sales quantity, revenue, and global market share of 4G Image Intensifier Tube from 2021 to 2026.

Chapter 3, the 4G Image Intensifier Tube competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the 4G Image Intensifier Tube 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 4G Image Intensifier Tube 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 4G Image Intensifier Tube.

Chapter 14 and 15, to describe 4G Image Intensifier Tube sales channel, distributors, customers, research findings and conclusion.

Contents

1 MARKET OVERVIEW

1.1 Product Overview and Scope

1.2 Market Estimation Caveats and Base Year

1.3 Market Analysis by Type

1.3.1 Overview: Global 4G Image Intensifier Tube Consumption Value by Type: 2021 Versus 2025 Versus 2032

1.3.2 16mm

1.3.3 18mm

1.3.4 25mm

1.3.5 Other

1.4 Market Analysis by Fluorescent Screen Material

1.4.1 Overview: Global 4G Image Intensifier Tube Consumption Value by Fluorescent Screen Material: 2021 Versus 2025 Versus 2032

1.4.2 P45

1.4.3 P43

1.5 Market Analysis by Sales Model

1.5.1 Overview: Global 4G Image Intensifier Tube Consumption Value by Sales Model: 2021 Versus 2025 Versus 2032

1.5.2 Direct Selling

1.5.3 Distribution

1.6 Market Analysis by Application

1.6.1 Overview: Global 4G Image Intensifier Tube Consumption Value by Application: 2021 Versus 2025 Versus 2032

1.6.2 Night Vision Equipment

1.6.3 Weapon Sights

1.6.4 Other

1.7 Global 4G Image Intensifier Tube Market Size & Forecast

1.7.1 Global 4G Image Intensifier Tube Consumption Value (2021 & 2025 & 2032)

1.7.2 Global 4G Image Intensifier Tube Sales Quantity (2021-2032)

1.7.3 Global 4G Image Intensifier Tube Average Price (2021-2032)

2 MANUFACTURERS PROFILES

2.1 L3Harris

2.1.1 L3Harris Details

2.1.2 L3Harris Major Business

- 2.1.3 L3Harris 4G Image Intensifier Tube Product and Services
- 2.1.4 L3Harris 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
- 2.1.5 L3Harris Recent Developments/Updates
- 2.2 Exosens(Photonis Defense)
 - 2.2.1 Exosens(Photonis Defense) Details
 - 2.2.2 Exosens(Photonis Defense) Major Business
 - 2.2.3 Exosens(Photonis Defense) 4G Image Intensifier Tube Product and Services
 - 2.2.4 Exosens(Photonis Defense) 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
 - 2.2.5 Exosens(Photonis Defense) Recent Developments/Updates
- 2.3 Elbit Systems
 - 2.3.1 Elbit Systems Details
 - 2.3.2 Elbit Systems Major Business
 - 2.3.3 Elbit Systems 4G Image Intensifier Tube Product and Services
 - 2.3.4 Elbit Systems 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
 - 2.3.5 Elbit Systems Recent Developments/Updates
- 2.4 Northern Night Vision Technology Group
 - 2.4.1 Northern Night Vision Technology Group Details
 - 2.4.2 Northern Night Vision Technology Group Major Business
 - 2.4.3 Northern Night Vision Technology Group 4G Image Intensifier Tube Product and Services
 - 2.4.4 Northern Night Vision Technology Group 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
 - 2.4.5 Northern Night Vision Technology Group Recent Developments/Updates
- 2.5 Katod
 - 2.5.1 Katod Details
 - 2.5.2 Katod Major Business
 - 2.5.3 Katod 4G Image Intensifier Tube Product and Services
 - 2.5.4 Katod 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)
 - 2.5.5 Katod Recent Developments/Updates
- 2.6 Harder Digital
 - 2.6.1 Harder Digital Details
 - 2.6.2 Harder Digital Major Business
 - 2.6.3 Harder Digital 4G Image Intensifier Tube Product and Services
 - 2.6.4 Harder Digital 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)

2.6.5 Harder Digital Recent Developments/Updates

2.7 3E

2.7.1 3E Details

2.7.2 3E Major Business

2.7.3 3E 4G Image Intensifier Tube Product and Services

2.7.4 3E 4G Image Intensifier Tube Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2021-2026)

2.7.5 3E Recent Developments/Updates

3 COMPETITIVE ENVIRONMENT: 4G IMAGE INTENSIFIER TUBE BY MANUFACTURER

3.1 Global 4G Image Intensifier Tube Sales Quantity by Manufacturer (2021-2026)

3.2 Global 4G Image Intensifier Tube Revenue by Manufacturer (2021-2026)

3.3 Global 4G Image Intensifier Tube Average Price by Manufacturer (2021-2026)

3.4 Market Share Analysis (2025)

3.4.1 Producer Shipments of 4G Image Intensifier Tube by Manufacturer Revenue (\$MM) and Market Share (%): 2025

3.4.2 Top 3 4G Image Intensifier Tube Manufacturer Market Share in 2025

3.4.3 Top 6 4G Image Intensifier Tube Manufacturer Market Share in 2025

3.5 4G Image Intensifier Tube Market: Overall Company Footprint Analysis

3.5.1 4G Image Intensifier Tube Market: Region Footprint

3.5.2 4G Image Intensifier Tube Market: Company Product Type Footprint

3.5.3 4G Image Intensifier Tube 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 4G Image Intensifier Tube Market Size by Region

4.1.1 Global 4G Image Intensifier Tube Sales Quantity by Region (2021-2032)

4.1.2 Global 4G Image Intensifier Tube Consumption Value by Region (2021-2032)

4.1.3 Global 4G Image Intensifier Tube Average Price by Region (2021-2032)

4.2 North America 4G Image Intensifier Tube Consumption Value (2021-2032)

4.3 Europe 4G Image Intensifier Tube Consumption Value (2021-2032)

4.4 Asia-Pacific 4G Image Intensifier Tube Consumption Value (2021-2032)

4.5 South America 4G Image Intensifier Tube Consumption Value (2021-2032)

4.6 Middle East & Africa 4G Image Intensifier Tube Consumption Value (2021-2032)

5 MARKET SEGMENT BY TYPE

- 5.1 Global 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 5.2 Global 4G Image Intensifier Tube Consumption Value by Type (2021-2032)
- 5.3 Global 4G Image Intensifier Tube Average Price by Type (2021-2032)

6 MARKET SEGMENT BY APPLICATION

- 6.1 Global 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 6.2 Global 4G Image Intensifier Tube Consumption Value by Application (2021-2032)
- 6.3 Global 4G Image Intensifier Tube Average Price by Application (2021-2032)

7 NORTH AMERICA

- 7.1 North America 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 7.2 North America 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 7.3 North America 4G Image Intensifier Tube Market Size by Country
 - 7.3.1 North America 4G Image Intensifier Tube Sales Quantity by Country (2021-2032)
 - 7.3.2 North America 4G Image Intensifier Tube 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 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 8.2 Europe 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 8.3 Europe 4G Image Intensifier Tube Market Size by Country
 - 8.3.1 Europe 4G Image Intensifier Tube Sales Quantity by Country (2021-2032)
 - 8.3.2 Europe 4G Image Intensifier Tube Consumption Value by Country (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 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 9.2 Asia-Pacific 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 9.3 Asia-Pacific 4G Image Intensifier Tube Market Size by Region
 - 9.3.1 Asia-Pacific 4G Image Intensifier Tube Sales Quantity by Region (2021-2032)
 - 9.3.2 Asia-Pacific 4G Image Intensifier Tube 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 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 10.2 South America 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 10.3 South America 4G Image Intensifier Tube Market Size by Country
 - 10.3.1 South America 4G Image Intensifier Tube Sales Quantity by Country (2021-2032)
 - 10.3.2 South America 4G Image Intensifier Tube 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)

11 MIDDLE EAST & AFRICA

- 11.1 Middle East & Africa 4G Image Intensifier Tube Sales Quantity by Type (2021-2032)
- 11.2 Middle East & Africa 4G Image Intensifier Tube Sales Quantity by Application (2021-2032)
- 11.3 Middle East & Africa 4G Image Intensifier Tube Market Size by Country
 - 11.3.1 Middle East & Africa 4G Image Intensifier Tube Sales Quantity by Country (2021-2032)
 - 11.3.2 Middle East & Africa 4G Image Intensifier Tube 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 4G Image Intensifier Tube Market Drivers

12.2 4G Image Intensifier Tube Market Restraints

12.3 4G Image Intensifier Tube 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 4G Image Intensifier Tube and Key Manufacturers

13.2 Manufacturing Costs Percentage of 4G Image Intensifier Tube

13.3 4G Image Intensifier Tube Production Process

13.4 Industry Value Chain Analysis

14 SHIPMENTS BY DISTRIBUTION CHANNEL

14.1 Sales Channel

14.1.1 Direct to End-User

14.1.2 Distributors

14.2 4G Image Intensifier Tube Typical Distributors

14.3 4G Image Intensifier Tube 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 UV-IR Biolighting Module Consumption Value by Spectrum Composition, (USD Million), 2021 & 2025 & 2032

Table 2. Global UV-IR Biolighting Module Consumption Value by Power Density, (USD Million), 2021 & 2025 & 2032

Table 3. Global UV-IR Biolighting Module Consumption Value by Photon Flux, (USD Million), 2021 & 2025 & 2032

Table 4. Global UV-IR Biolighting Module Consumption Value by Application, (USD Million), 2021 & 2025 & 2032

Table 5. Signify Basic Information, Manufacturing Base and Competitors

Table 6. Signify Major Business

Table 7. Signify UV-IR Biolighting Module Product and Services

Table 8. Signify UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 9. Signify Recent Developments/Updates

Table 10. Ams Osram Basic Information, Manufacturing Base and Competitors

Table 11. Ams Osram Major Business

Table 12. Ams Osram UV-IR Biolighting Module Product and Services

Table 13. Ams Osram UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 14. Ams Osram Recent Developments/Updates

Table 15. Fluence By Signify Basic Information, Manufacturing Base and Competitors

Table 16. Fluence By Signify Major Business

Table 17. Fluence By Signify UV-IR Biolighting Module Product and Services

Table 18. Fluence By Signify UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 19. Fluence By Signify Recent Developments/Updates

Table 20. Heliospectra Ab Basic Information, Manufacturing Base and Competitors

Table 21. Heliospectra Ab Major Business

Table 22. Heliospectra Ab UV-IR Biolighting Module Product and Services

Table 23. Heliospectra Ab UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 24. Heliospectra Ab Recent Developments/Updates

Table 25. Valoya Oy Basic Information, Manufacturing Base and Competitors

Table 26. Valoya Oy Major Business

Table 27. Valoya Oy UV-IR Biolighting Module Product and Services

Table 28. Valoya Oy UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 29. Valoya Oy Recent Developments/Updates

Table 30. Gavita International B.V. Basic Information, Manufacturing Base and Competitors

Table 31. Gavita International B.V. Major Business

Table 32. Gavita International B.V. UV-IR Biolighting Module Product and Services

Table 33. Gavita International B.V. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 34. Gavita International B.V. Recent Developments/Updates

Table 35. Hortilux Schröder B.V. Basic Information, Manufacturing Base and Competitors

Table 36. Hortilux Schröder B.V. Major Business

Table 37. Hortilux Schröder B.V. UV-IR Biolighting Module Product and Services

Table 38. Hortilux Schröder B.V. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 39. Hortilux Schröder B.V. Recent Developments/Updates

Table 40. Current Lighting Solutions Llc Basic Information, Manufacturing Base and Competitors

Table 41. Current Lighting Solutions Llc Major Business

Table 42. Current Lighting Solutions Llc UV-IR Biolighting Module Product and Services

Table 43. Current Lighting Solutions Llc UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 44. Current Lighting Solutions Llc Recent Developments/Updates

Table 45. Illumitex Inc. Basic Information, Manufacturing Base and Competitors

Table 46. Illumitex Inc. Major Business

Table 47. Illumitex Inc. UV-IR Biolighting Module Product and Services

Table 48. Illumitex Inc. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 49. Illumitex Inc. Recent Developments/Updates

Table 50. California Lightworks Inc. Basic Information, Manufacturing Base and Competitors

Table 51. California Lightworks Inc. Major Business

Table 52. California Lightworks Inc. UV-IR Biolighting Module Product and Services

Table 53. California Lightworks Inc. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share

(2021-2026)

Table 54. California Lightworks Inc. Recent Developments/Updates

Table 55. Lumigrow Inc. Basic Information, Manufacturing Base and Competitors

Table 56. Lumigrow Inc. Major Business

Table 57. Lumigrow Inc. UV-IR Biolighting Module Product and Services

Table 58. Lumigrow Inc. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 59. Lumigrow Inc. Recent Developments/Updates

Table 60. Kessil Lighting Basic Information, Manufacturing Base and Competitors

Table 61. Kessil Lighting Major Business

Table 62. Kessil Lighting UV-IR Biolighting Module Product and Services

Table 63. Kessil Lighting UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 64. Kessil Lighting Recent Developments/Updates

Table 65. Senmatic A/S Basic Information, Manufacturing Base and Competitors

Table 66. Senmatic A/S Major Business

Table 67. Senmatic A/S UV-IR Biolighting Module Product and Services

Table 68. Senmatic A/S UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 69. Senmatic A/S Recent Developments/Updates

Table 70. Fionia Lighting A/S Basic Information, Manufacturing Base and Competitors

Table 71. Fionia Lighting A/S Major Business

Table 72. Fionia Lighting A/S UV-IR Biolighting Module Product and Services

Table 73. Fionia Lighting A/S UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 74. Fionia Lighting A/S Recent Developments/Updates

Table 75. Agrolux Nederland B.V. Basic Information, Manufacturing Base and Competitors

Table 76. Agrolux Nederland B.V. Major Business

Table 77. Agrolux Nederland B.V. UV-IR Biolighting Module Product and Services

Table 78. Agrolux Nederland B.V. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 79. Agrolux Nederland B.V. Recent Developments/Updates

Table 80. Sananbio Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 81. Sananbio Co., Ltd. Major Business

Table 82. Sananbio Co., Ltd. UV-IR Biolighting Module Product and Services

Table 83. Sananbio Co., Ltd. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 84. Sananbio Co., Ltd. Recent Developments/Updates

Table 85. Ohmax Optoelectronic Basic Information, Manufacturing Base and Competitors

Table 86. Ohmax Optoelectronic Major Business

Table 87. Ohmax Optoelectronic UV-IR Biolighting Module Product and Services

Table 88. Ohmax Optoelectronic UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 89. Ohmax Optoelectronic Recent Developments/Updates

Table 90. Cidly Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 91. Cidly Technology Co., Ltd. Major Business

Table 92. Cidly Technology Co., Ltd. UV-IR Biolighting Module Product and Services

Table 93. Cidly Technology Co., Ltd. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 94. Cidly Technology Co., Ltd. Recent Developments/Updates

Table 95. Nanolux Technology Inc. Basic Information, Manufacturing Base and Competitors

Table 96. Nanolux Technology Inc. Major Business

Table 97. Nanolux Technology Inc. UV-IR Biolighting Module Product and Services

Table 98. Nanolux Technology Inc. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 99. Nanolux Technology Inc. Recent Developments/Updates

Table 100. Yaham Lighting Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 101. Yaham Lighting Co., Ltd. Major Business

Table 102. Yaham Lighting Co., Ltd. UV-IR Biolighting Module Product and Services

Table 103. Yaham Lighting Co., Ltd. UV-IR Biolighting Module Sales Quantity (Units), Average Price (US\$/Unit), Revenue (USD Million), Gross Margin and Market Share (2021-2026)

Table 104. Yaham Lighting Co., Ltd. Recent Developments/Updates

Table 105. Global UV-IR Biolighting Module Sales Quantity by Manufacturer (2021-2026) & (Units)

Table 106. Global UV-IR Biolighting Module Revenue by Manufacturer (2021-2026) & (USD Million)

Table 107. Global UV-IR Biolighting Module Average Price by Manufacturer (2021-2026) & (US\$/Unit)

Table 108. Market Position of Manufacturers in UV-IR Biolighting Module, (Tier 1, Tier 2, and Tier 3), Based on Revenue in 2025

Table 109. Head Office and UV-IR Biolighting Module Production Site of Key Manufacturer

Table 110. UV-IR Biolighting Module Market: Company Product Type Footprint

Table 111. UV-IR Biolighting Module Market: Company Product Application Footprint

Table 112. UV-IR Biolighting Module New Market Entrants and Barriers to Market Entry

Table 113. UV-IR Biolighting Module Mergers, Acquisition, Agreements, and Collaborations

Table 114. Global UV-IR Biolighting Module Consumption Value by Region (2021-2025-2032) & (USD Million) & CAGR

Table 115. Global UV-IR Biolighting Module Sales Quantity by Region (2021-2026) & (Units)

Table 116. Global UV-IR Biolighting Module Sales Quantity by Region (2027-2032) & (Units)

Table 117. Global UV-IR Biolighting Module Consumption Value by Region (2021-2026) & (USD Million)

Table 118. Global UV-IR Biolighting Module Consumption Value by Region (2027-2032) & (USD Million)

Table 119. Global UV-IR Biolighting Module Average Price by Region (2021-2026) & (US\$/Unit)

Table 120. Global UV-IR Biolighting Module Average Price by Region (2027-2032) & (US\$/Unit)

Table 121. Global UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 122. Global UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 123. Global UV-IR Biolighting Module Consumption Value by Spectrum Composition (2021-2026) & (USD Million)

Table 124. Global UV-IR Biolighting Module Consumption Value by Spectrum Composition (2027-2032) & (USD Million)

Table 125. Global UV-IR Biolighting Module Average Price by Spectrum Composition (2021-2026) & (US\$/Unit)

Table 126. Global UV-IR Biolighting Module Average Price by Spectrum Composition (2027-2032) & (US\$/Unit)

Table 127. Global UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 128. Global UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 129. Global UV-IR Biolighting Module Consumption Value by Application (2021-2026) & (USD Million)

Table 130. Global UV-IR Biolighting Module Consumption Value by Application (2027-2032) & (USD Million)

Table 131. Global UV-IR Biolighting Module Average Price by Application (2021-2026) & (US\$/Unit)

Table 132. Global UV-IR Biolighting Module Average Price by Application (2027-2032) & (US\$/Unit)

Table 133. North America UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 134. North America UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 135. North America UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 136. North America UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 137. North America UV-IR Biolighting Module Sales Quantity by Country (2021-2026) & (Units)

Table 138. North America UV-IR Biolighting Module Sales Quantity by Country (2027-2032) & (Units)

Table 139. North America UV-IR Biolighting Module Consumption Value by Country (2021-2026) & (USD Million)

Table 140. North America UV-IR Biolighting Module Consumption Value by Country (2027-2032) & (USD Million)

Table 141. Europe UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 142. Europe UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 143. Europe UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 144. Europe UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 145. Europe UV-IR Biolighting Module Sales Quantity by Country (2021-2026) & (Units)

Table 146. Europe UV-IR Biolighting Module Sales Quantity by Country (2027-2032) & (Units)

Table 147. Europe UV-IR Biolighting Module Consumption Value by Country (2021-2026) & (USD Million)

Table 148. Europe UV-IR Biolighting Module Consumption Value by Country

(2027-2032) & (USD Million)

Table 149. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 150. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 151. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 152. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 153. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Region (2021-2026) & (Units)

Table 154. Asia-Pacific UV-IR Biolighting Module Sales Quantity by Region (2027-2032) & (Units)

Table 155. Asia-Pacific UV-IR Biolighting Module Consumption Value by Region (2021-2026) & (USD Million)

Table 156. Asia-Pacific UV-IR Biolighting Module Consumption Value by Region (2027-2032) & (USD Million)

Table 157. South America UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 158. South America UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 159. South America UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 160. South America UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 161. South America UV-IR Biolighting Module Sales Quantity by Country (2021-2026) & (Units)

Table 162. South America UV-IR Biolighting Module Sales Quantity by Country (2027-2032) & (Units)

Table 163. South America UV-IR Biolighting Module Consumption Value by Country (2021-2026) & (USD Million)

Table 164. South America UV-IR Biolighting Module Consumption Value by Country (2027-2032) & (USD Million)

Table 165. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2021-2026) & (Units)

Table 166. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Spectrum Composition (2027-2032) & (Units)

Table 167. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Application (2021-2026) & (Units)

Table 168. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Application (2027-2032) & (Units)

Table 169. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Country (2021-2026) & (Units)

Table 170. Middle East & Africa UV-IR Biolighting Module Sales Quantity by Country (2027-2032) & (Units)

Table 171. Middle East & Africa UV-IR Biolighting Module Consumption Value by Country (2021-2026) & (USD Million)

Table 172. Middle East & Africa UV-IR Biolighting Module Consumption Value by Country (2027-2032) & (USD Million)

Table 173. UV-IR Biolighting Module Raw Material

Table 174. Key Manufacturers of UV-IR Biolighting Module Raw Materials

Table 175. UV-IR Biolighting Module Typical Distributors

Table 176. UV-IR Biolighting Module Typical Customers

List Of Figures

LIST OF FIGURES

- Figure 1. UV-IR Biolighting Module Picture
- Figure 2. Global UV-IR Biolighting Module Revenue by Spectrum Composition, (USD Million), 2021 & 2025 & 2032
- Figure 3. Global UV-IR Biolighting Module Revenue Market Share by Spectrum Composition in 2025
- Figure 4. UV-Dominant Module Examples
- Figure 5. Balanced UV-IR Module Examples
- Figure 6. IR-Assisted Module Examples
- Figure 7. Global UV-IR Biolighting Module Revenue by Power Density, (USD Million), 2021 & 2025 & 2032
- Figure 8. Global UV-IR Biolighting Module Revenue Market Share by Power Density in 2025
- Figure 9. Low Intensity Module(? 1 ? 10 W/m?) Examples
- Figure 10. Medium Intensity Module(? 10 ? 100 W/m?) Examples
- Figure 11. High Intensity Module(? 100 ? 500 W/m?) Examples
- Figure 12. Global UV-IR Biolighting Module Revenue by Photon Flux, (USD Million), 2021 & 2025 & 2032
- Figure 13. Global UV-IR Biolighting Module Revenue Market Share by Photon Flux in 2025
- Figure 14. Low PPFD Module: 50 ? 150 ?mol/m²/s Examples
- Figure 15. Medium PPFD Module: 150 ? 400 ?mol/m²/s Examples
- Figure 16. High PPFD Module: 400 ? 800 ?mol/m²/s Examples
- Figure 17. Ultra-High PPFD Module: 800 ? 1500 ?mol/m²/s Examples
- Figure 18. Global UV-IR Biolighting Module Consumption Value by Application, (USD Million), 2021 & 2025 & 2032
- Figure 19. Global UV-IR Biolighting Module Revenue Market Share by Application in 2025
- Figure 20. Greenhouse Examples
- Figure 21. Vertical Farming Examples
- Figure 22. Indoor Plant Examples
- Figure 23. Research / Lab Examples
- Figure 24. Others Examples
- Figure 25. Global UV-IR Biolighting Module Consumption Value, (USD Million): 2021 & 2025 & 2032
- Figure 26. Global UV-IR Biolighting Module Consumption Value and Forecast

(2021-2032) & (USD Million)

Figure 27. Global UV-IR Biolighting Module Sales Quantity (2021-2032) & (Units)

Figure 28. Global UV-IR Biolighting Module Price (2021-2032) & (US\$/Unit)

Figure 29. Global UV-IR Biolighting Module Sales Quantity Market Share by Manufacturer in 2025

Figure 30. Global UV-IR Biolighting Module Revenue Market Share by Manufacturer in 2025

Figure 31. Producer Shipments of UV-IR Biolighting Module by Manufacturer Sales (\$MM) and Market Share (%): 2025

Figure 32. Top 3 UV-IR Biolighting Module Manufacturer (Revenue) Market Share in 2025

Figure 33. Top 6 UV-IR Biolighting Module Manufacturer (Revenue) Market Share in 2025

Figure 34. Global UV-IR Biolighting Module Sales Quantity Market Share by Region (2021-2032)

Figure 35. Global UV-IR Biolighting Module Consumption Value Market Share by Region (2021-2032)

Figure 36. North America UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 37. Europe UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 38. Asia-Pacific UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 39. South America UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 40. Middle East & Africa UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 41. Global UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 42. Global UV-IR Biolighting Module Consumption Value Market Share by Spectrum Composition (2021-2032)

Figure 43. Global UV-IR Biolighting Module Average Price by Spectrum Composition (2021-2032) & (US\$/Unit)

Figure 44. Global UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 45. Global UV-IR Biolighting Module Revenue Market Share by Application (2021-2032)

Figure 46. Global UV-IR Biolighting Module Average Price by Application (2021-2032) & (US\$/Unit)

Figure 47. North America UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 48. North America UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 49. North America UV-IR Biolighting Module Sales Quantity Market Share by Country (2021-2032)

Figure 50. North America UV-IR Biolighting Module Consumption Value Market Share by Country (2021-2032)

Figure 51. United States UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 52. Canada UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 53. Mexico UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 54. Europe UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 55. Europe UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 56. Europe UV-IR Biolighting Module Sales Quantity Market Share by Country (2021-2032)

Figure 57. Europe UV-IR Biolighting Module Consumption Value Market Share by Country (2021-2032)

Figure 58. Germany UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 59. France UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 60. United Kingdom UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 61. Russia UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 62. Italy UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 63. Asia-Pacific UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 64. Asia-Pacific UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 65. Asia-Pacific UV-IR Biolighting Module Sales Quantity Market Share by Region (2021-2032)

Figure 66. Asia-Pacific UV-IR Biolighting Module Consumption Value Market Share by

Region (2021-2032)

Figure 67. China UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 68. Japan UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 69. South Korea UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 70. India UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 71. Southeast Asia UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 72. Australia UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 73. South America UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 74. South America UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 75. South America UV-IR Biolighting Module Sales Quantity Market Share by Country (2021-2032)

Figure 76. South America UV-IR Biolighting Module Consumption Value Market Share by Country (2021-2032)

Figure 77. Brazil UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 78. Argentina UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 79. Middle East & Africa UV-IR Biolighting Module Sales Quantity Market Share by Spectrum Composition (2021-2032)

Figure 80. Middle East & Africa UV-IR Biolighting Module Sales Quantity Market Share by Application (2021-2032)

Figure 81. Middle East & Africa UV-IR Biolighting Module Sales Quantity Market Share by Country (2021-2032)

Figure 82. Middle East & Africa UV-IR Biolighting Module Consumption Value Market Share by Country (2021-2032)

Figure 83. Turkey UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 84. Egypt UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 85. Saudi Arabia UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 86. South Africa UV-IR Biolighting Module Consumption Value (2021-2032) & (USD Million)

Figure 87. UV-IR Biolighting Module Market Drivers

Figure 88. UV-IR Biolighting Module Market Restraints

Figure 89. UV-IR Biolighting Module Market Trends

Figure 90. Porters Five Forces Analysis

Figure 91. Manufacturing Cost Structure Analysis of UV-IR Biolighting Module in 2025

Figure 92. Manufacturing Process Analysis of UV-IR Biolighting Module

Figure 93. UV-IR Biolighting Module 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

I would like to order

Product name: Global 4G Image Intensifier Tube Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

Product link: <https://marketpublishers.com/r/G00B011D3410EN.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/G00B011D3410EN.html>