

Global Short Wave Infrared (SWIR) Market by Size, by Type, by Application, by Region, History and Forecast 2019-2030

<https://marketpublishers.com/r/G7AA006F3897EN.html>

Date: April 2024

Pages: 131

Price: US\$ 3,950.00 (Single User License)

ID: G7AA006F3897EN

Abstracts

Sensing in the shortwave infrared (SWIR) range (wavelengths from 0.9 to 1.7 microns) has only recently been made practical by the development of Indium Gallium Arsenide (InGaAs) sensors.

Short-wave infrared (SWIR) light is typically defined as light in the 0.9 – 1.7 μ m wavelength range, but can also be classified from 0.7 – 2.5 μ m. Since silicon sensors have an upper limit of approximately 1.0 μ m, SWIR imaging requires unique optical and electronic components capable of performing in the specific SWIR range. Sensing in the shortwave infrared (SWIR) range (wavelengths from 0.9 to 1.7 microns) has only recently been made practical by the development of Indium Gallium Arsenide (InGaAs) sensors.

Unlike Mid-Wave Infrared (MWIR) and Long-Wave Infrared (LWIR) light, which is emitted from the object itself, SWIR is similar to visible light in that photons are reflected or absorbed by an object, providing the strong contrast needed for high resolution imaging. Ambient star light and background radiance (nightglow) are natural emitters of SWIR and provide excellent illumination for outdoor, nighttime imaging.

It is essential to use a lens that is designed, optimized, and coated for the SWIR wavelength range. Using a lens designed for the visible spectrum will result in lower resolution images and higher optical aberrations. Since SWIR wavelengths transmit through glass, lenses, and other optical components (optical filters, windows, etc.) designed for SWIR can be manufactured using the same techniques used for visible components, decreasing manufacturing cost and enabling the use of protective windows and filters within a system.

A large number of applications that are difficult or impossible to perform using visible light are possible using SWIR. When imaging in SWIR, water vapor, fog, and certain materials such as silicon are transparent. Additionally, colors that appear almost identical in the visible may be easily differentiated using SWIR.

SWIR imaging is used in a variety of applications including electronic board inspection, solar cell inspection, produce inspection, identifying and sorting, surveillance, anti-counterfeiting, process quality control, and much more. To understand the benefits of SWIR imaging, consider some visual examples of common, everyday products imaged with visible light and with SWIR.

According to APO Research, The global Short Wave Infrared (SWIR) market is projected to grow from US\$ million in 2024 to US\$ million by 2030, at a Compound Annual Growth Rate (CAGR) of % during the forecast period.

In the global Short Wave Infrared (SWIR) market, the key players are like Teledyne Technologies, Hamamatsu Photonics, Xenics, First Light, Fluxdata, etc. Top five players hold a share about 54%. In terms of consumption of Short Wave Infrared (SWIR), North America is the largest consumption market, with a share about 35%. In terms of product, SWIR Area Scan Camera is the largest segment, with a share about 75%. And in terms of application, the largest application is Industrial Application and Military and Defense, both with a share about 25%.

In terms of production side, this report researches the Short Wave Infrared (SWIR) production, growth rate, market share by manufacturers and by region (region level and country level), from 2019 to 2024, and forecast to 2030.

In terms of consumption side, this report focuses on the sales of Short Wave Infrared (SWIR) by region (region level and country level), by company, by type and by application. from 2019 to 2024 and forecast to 2030.

This report presents an overview of global market for Short Wave Infrared (SWIR), capacity, output, revenue and price. Analyses of the global market trends, with historic market revenue or sales data for 2019 - 2023, estimates for 2024, and projections of CAGR through 2030.

This report researches the key producers of Short Wave Infrared (SWIR), also provides the consumption of main regions and countries. Of the upcoming market potential for

Short Wave Infrared (SWIR), and key regions or countries of focus to forecast this market into various segments and sub-segments. Country specific data and market value analysis for the U.S., Canada, Mexico, Brazil, China, Japan, South Korea, Southeast Asia, India, Germany, the U.K., Italy, Middle East, Africa, and Other Countries.

This report focuses on the Short Wave Infrared (SWIR) sales, revenue, market share and industry ranking of main manufacturers, data from 2019 to 2024. Identification of the major stakeholders in the global Short Wave Infrared (SWIR) market, and analysis of their competitive landscape and market positioning based on recent developments and segmental revenues. This report will help stakeholders to understand the competitive landscape and gain more insights and position their businesses and market strategies in a better way.

This report analyzes the segments data by type and by application, sales, revenue, and price, from 2019 to 2030. Evaluation and forecast the market size for Short Wave Infrared (SWIR) sales, projected growth trends, production technology, application and end-user industry.

Descriptive company profiles of the major global players, including FLIR Systems, Hamamatsu Photonics, Sensors Unlimited, Teledyne Technologies, Xenics, Allied Vision Technologies, Raptor Photonics, IRCameras and New Imaging Technologies, etc.

Short Wave Infrared (SWIR) segment by Company

FLIR Systems

Hamamatsu Photonics

Sensors Unlimited

Teledyne Technologies

Xenics

Allied Vision Technologies

Raptor Photonics

IRCameras

New Imaging Technologies

First Light

GuoHui OPTO-electronic

Infiniti Electro-Optics

SWIR Vision Systems

Photonic Science

Short Wave Infrared (SWIR) segment by Type

SWIR Area Scan Camera

SWIR Line Scan Camera

Short Wave Infrared (SWIR) segment by Application

Industrial Application

Military and Defense

Scientific Research

Others

Short Wave Infrared (SWIR) segment by Region

North America

United States

Canada

Europe

Germany

France

U.K.

Italy

Russia

Asia-Pacific

China

Japan

South Korea

India

Australia

China Taiwan

Indonesia

Thailand

Malaysia

Latin America

Mexico

Brazil

Argentina

Colombia

Middle East & Africa

Turkey

Saudi Arabia

UAE

Study Objectives

1. To analyze and research the global status and future forecast, involving, production, value, consumption, growth rate (CAGR), market share, historical and forecast.
2. To present the key manufacturers, capacity, production, revenue, market share, and Recent Developments.
3. To split the breakdown data by regions, type, manufacturers, and Application.
4. To analyze the global and key regions market potential and advantage, opportunity and challenge, restraints, and risks.
5. To identify significant trends, drivers, influence factors in global and regions.
6. To analyze competitive developments such as expansions, agreements, new product launches, and acquisitions in the market.

Reasons to Buy This Report

1. This report will help the readers to understand the competition within the industries and strategies for the competitive environment to enhance the potential profit. The report also focuses on the competitive landscape of the global Short Wave Infrared (SWIR) market, and introduces in detail the market share, industry ranking, competitor

ecosystem, market performance, new product development, operation situation, expansion, and acquisition. etc. of the main players, which helps the readers to identify the main competitors and deeply understand the competition pattern of the market.

2. This report will help stakeholders to understand the global industry status and trends of Short Wave Infrared (SWIR) and provides them with information on key market drivers, restraints, challenges, and opportunities.

3. This report will help stakeholders to understand competitors better and gain more insights to strengthen their position in their businesses. The competitive landscape section includes the market share and rank (in volume and value), competitor ecosystem, new product development, expansion, and acquisition.

4. This report stays updated with novel technology integration, features, and the latest developments in the market.

5. This report helps stakeholders to gain insights into which regions to target globally.

6. This report helps stakeholders to gain insights into the end-user perception concerning the adoption of Short Wave Infrared (SWIR).

7. This report helps stakeholders to identify some of the key players in the market and understand their valuable contribution.

Chapter Outline

Chapter 1: Provides an overview of the Short Wave Infrared (SWIR) market, including product definition, global market growth prospects, production value, capacity, and average price forecasts (2019-2030).

Chapter 2: Analysis key trends, drivers, challenges, and opportunities within the global Short Wave Infrared (SWIR) industry.

Chapter 3: Detailed analysis of Short Wave Infrared (SWIR) market competition landscape. Including Short Wave Infrared (SWIR) manufacturers' output value, output and average price from 2019 to 2024, as well as competition analysis indicators such as origin, product type, application, merger and acquisition information, etc.

Chapter 4: Provides the analysis of various market segments by type, covering the

market size and development potential of each market segment, to help readers find the blue ocean market in different market segments.

Chapter 5: Provides the analysis of various market segments by application, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different downstream markets.

Chapter 6: Provides profiles of key players, introducing the basic situation of the main companies in the market in detail, including product production/output, value, price, gross margin, product introduction, recent development, etc.

Chapter 7: Production/Production Value of Short Wave Infrared (SWIR) by region. It provides a quantitative analysis of the market size and development potential of each region in the next six years.

Chapter 8: Consumption of Short Wave Infrared (SWIR) in regional level and country level. It provides a quantitative analysis of the market size and development potential of each region and its main countries and introduces the market development, future development prospects, market space, and production of each country in the world.

Chapter 9: Analysis of industrial chain, including the upstream and downstream of the industry.

Chapter 10: Concluding Insights of the report.

Contents

1 MARKET OVERVIEW

- 1.1 Product Definition
- 1.2 Global Market Growth Prospects
 - 1.2.1 Global Short Wave Infrared (SWIR) Production Value Estimates and Forecasts (2019-2030)
 - 1.2.2 Global Short Wave Infrared (SWIR) Production Capacity Estimates and Forecasts (2019-2030)
 - 1.2.3 Global Short Wave Infrared (SWIR) Production Estimates and Forecasts (2019-2030)
 - 1.2.4 Global Short Wave Infrared (SWIR) Market Average Price (2019-2030)
- 1.3 Assumptions and Limitations
- 1.4 Study Goals and Objectives

2 GLOBAL SHORT WAVE INFRARED (SWIR) MARKET DYNAMICS

- 2.1 Short Wave Infrared (SWIR) Industry Trends
- 2.2 Short Wave Infrared (SWIR) Industry Drivers
- 2.3 Short Wave Infrared (SWIR) Industry Opportunities and Challenges
- 2.4 Short Wave Infrared (SWIR) Industry Restraints

3 SHORT WAVE INFRARED (SWIR) MARKET BY MANUFACTURERS

- 3.1 Global Short Wave Infrared (SWIR) Production Value by Manufacturers (2019-2024)
- 3.2 Global Short Wave Infrared (SWIR) Production by Manufacturers (2019-2024)
- 3.3 Global Short Wave Infrared (SWIR) Average Price by Manufacturers (2019-2024)
- 3.4 Global Short Wave Infrared (SWIR) Industry Manufacturers Ranking, 2022 VS 2023 VS 2024
- 3.5 Global Short Wave Infrared (SWIR) Key Manufacturers Manufacturing Sites & Headquarters
- 3.6 Global Short Wave Infrared (SWIR) Manufacturers, Product Type & Application
- 3.7 Global Short Wave Infrared (SWIR) Manufacturers Commercialization Time
- 3.8 Market Competitive Analysis
 - 3.8.1 Global Short Wave Infrared (SWIR) Market CR5 and HHI
 - 3.8.2 Global Top 5 and 10 Short Wave Infrared (SWIR) Players Market Share by Production Value in 2023
 - 3.8.3 2023 Short Wave Infrared (SWIR) Tier 1, Tier 2, and Tier

4 SHORT WAVE INFRARED (SWIR) MARKET BY TYPE

4.1 Short Wave Infrared (SWIR) Type Introduction

4.1.1 SWIR Area Scan Camera

4.1.2 SWIR Line Scan Camera

4.2 Global Short Wave Infrared (SWIR) Production by Type

4.2.1 Global Short Wave Infrared (SWIR) Production by Type (2019 VS 2023 VS 2030)

4.2.2 Global Short Wave Infrared (SWIR) Production by Type (2019-2030)

4.2.3 Global Short Wave Infrared (SWIR) Production Market Share by Type (2019-2030)

4.3 Global Short Wave Infrared (SWIR) Production Value by Type

4.3.1 Global Short Wave Infrared (SWIR) Production Value by Type (2019 VS 2023 VS 2030)

4.3.2 Global Short Wave Infrared (SWIR) Production Value by Type (2019-2030)

4.3.3 Global Short Wave Infrared (SWIR) Production Value Market Share by Type (2019-2030)

5 SHORT WAVE INFRARED (SWIR) MARKET BY APPLICATION

5.1 Short Wave Infrared (SWIR) Application Introduction

5.1.1 Industrial Application

5.1.2 Military and Defense

5.1.3 Scientific Research

5.1.4 Others

5.2 Global Short Wave Infrared (SWIR) Production by Application

5.2.1 Global Short Wave Infrared (SWIR) Production by Application (2019 VS 2023 VS 2030)

5.2.2 Global Short Wave Infrared (SWIR) Production by Application (2019-2030)

5.2.3 Global Short Wave Infrared (SWIR) Production Market Share by Application (2019-2030)

5.3 Global Short Wave Infrared (SWIR) Production Value by Application

5.3.1 Global Short Wave Infrared (SWIR) Production Value by Application (2019 VS 2023 VS 2030)

5.3.2 Global Short Wave Infrared (SWIR) Production Value by Application (2019-2030)

5.3.3 Global Short Wave Infrared (SWIR) Production Value Market Share by Application (2019-2030)

6 COMPANY PROFILES

6.1 FLIR Systems

6.1.1 FLIR Systems Company Information

6.1.2 FLIR Systems Business Overview

6.1.3 FLIR Systems Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)

6.1.4 FLIR Systems Short Wave Infrared (SWIR) Product Portfolio

6.1.5 FLIR Systems Recent Developments

6.2 Hamamatsu Photonics

6.2.1 Hamamatsu Photonics Company Information

6.2.2 Hamamatsu Photonics Business Overview

6.2.3 Hamamatsu Photonics Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)

6.2.4 Hamamatsu Photonics Short Wave Infrared (SWIR) Product Portfolio

6.2.5 Hamamatsu Photonics Recent Developments

6.3 Sensors Unlimited

6.3.1 Sensors Unlimited Company Information

6.3.2 Sensors Unlimited Business Overview

6.3.3 Sensors Unlimited Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)

6.3.4 Sensors Unlimited Short Wave Infrared (SWIR) Product Portfolio

6.3.5 Sensors Unlimited Recent Developments

6.4 Teledyne Technologies

6.4.1 Teledyne Technologies Company Information

6.4.2 Teledyne Technologies Business Overview

6.4.3 Teledyne Technologies Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)

6.4.4 Teledyne Technologies Short Wave Infrared (SWIR) Product Portfolio

6.4.5 Teledyne Technologies Recent Developments

6.5 Xenics

6.5.1 Xenics Company Information

6.5.2 Xenics Business Overview

6.5.3 Xenics Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)

6.5.4 Xenics Short Wave Infrared (SWIR) Product Portfolio

6.5.5 Xenics Recent Developments

6.6 Allied Vision Technologies

6.6.1 Allied Vision Technologies Company Information

- 6.6.2 Allied Vision Technologies Business Overview
- 6.6.3 Allied Vision Technologies Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
- 6.6.4 Allied Vision Technologies Short Wave Infrared (SWIR) Product Portfolio
- 6.6.5 Allied Vision Technologies Recent Developments
- 6.7 Raptor Photonics
 - 6.7.1 Raptor Photonics Company Information
 - 6.7.2 Raptor Photonics Business Overview
 - 6.7.3 Raptor Photonics Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.7.4 Raptor Photonics Short Wave Infrared (SWIR) Product Portfolio
 - 6.7.5 Raptor Photonics Recent Developments
- 6.8 IRCameras
 - 6.8.1 IRCameras Company Information
 - 6.8.2 IRCameras Business Overview
 - 6.8.3 IRCameras Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.8.4 IRCameras Short Wave Infrared (SWIR) Product Portfolio
 - 6.8.5 IRCameras Recent Developments
- 6.9 New Imaging Technologies
 - 6.9.1 New Imaging Technologies Company Information
 - 6.9.2 New Imaging Technologies Business Overview
 - 6.9.3 New Imaging Technologies Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.9.4 New Imaging Technologies Short Wave Infrared (SWIR) Product Portfolio
 - 6.9.5 New Imaging Technologies Recent Developments
- 6.10 First Light
 - 6.10.1 First Light Company Information
 - 6.10.2 First Light Business Overview
 - 6.10.3 First Light Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.10.4 First Light Short Wave Infrared (SWIR) Product Portfolio
 - 6.10.5 First Light Recent Developments
- 6.11 GuoHui OPTO-electronic
 - 6.11.1 GuoHui OPTO-electronic Company Information
 - 6.11.2 GuoHui OPTO-electronic Business Overview
 - 6.11.3 GuoHui OPTO-electronic Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.11.4 GuoHui OPTO-electronic Short Wave Infrared (SWIR) Product Portfolio

- 6.11.5 GuoHui OPTO-electronic Recent Developments
- 6.12 Infiniti Electro-Optics
 - 6.12.1 Infiniti Electro-Optics Company Information
 - 6.12.2 Infiniti Electro-Optics Business Overview
 - 6.12.3 Infiniti Electro-Optics Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.12.4 Infiniti Electro-Optics Short Wave Infrared (SWIR) Product Portfolio
 - 6.12.5 Infiniti Electro-Optics Recent Developments
- 6.13 SWIR Vision Systems
 - 6.13.1 SWIR Vision Systems Company Information
 - 6.13.2 SWIR Vision Systems Business Overview
 - 6.13.3 SWIR Vision Systems Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.13.4 SWIR Vision Systems Short Wave Infrared (SWIR) Product Portfolio
 - 6.13.5 SWIR Vision Systems Recent Developments
- 6.14 Photonic Science
 - 6.14.1 Photonic Science Company Information
 - 6.14.2 Photonic Science Business Overview
 - 6.14.3 Photonic Science Short Wave Infrared (SWIR) Production, Value and Gross Margin (2019-2024)
 - 6.14.4 Photonic Science Short Wave Infrared (SWIR) Product Portfolio
 - 6.14.5 Photonic Science Recent Developments

7 GLOBAL SHORT WAVE INFRARED (SWIR) PRODUCTION BY REGION

- 7.1 Global Short Wave Infrared (SWIR) Production by Region: 2019 VS 2023 VS 2030
- 7.2 Global Short Wave Infrared (SWIR) Production by Region (2019-2030)
 - 7.2.1 Global Short Wave Infrared (SWIR) Production by Region: 2019-2024
 - 7.2.2 Global Short Wave Infrared (SWIR) Production by Region (2025-2030)
- 7.3 Global Short Wave Infrared (SWIR) Production by Region: 2019 VS 2023 VS 2030
- 7.4 Global Short Wave Infrared (SWIR) Production Value by Region (2019-2030)
 - 7.4.1 Global Short Wave Infrared (SWIR) Production Value by Region: 2019-2024
 - 7.4.2 Global Short Wave Infrared (SWIR) Production Value by Region (2025-2030)
- 7.5 Global Short Wave Infrared (SWIR) Market Price Analysis by Region (2019-2024)
- 7.6 Regional Production Value Trends (2019-2030)
 - 7.6.1 North America Short Wave Infrared (SWIR) Production Value (2019-2030)
 - 7.6.2 Europe Short Wave Infrared (SWIR) Production Value (2019-2030)
 - 7.6.3 Asia-Pacific Short Wave Infrared (SWIR) Production Value (2019-2030)
 - 7.6.4 Latin America Short Wave Infrared (SWIR) Production Value (2019-2030)

7.6.5 Middle East & Africa Short Wave Infrared (SWIR) Production Value (2019-2030)

8 GLOBAL SHORT WAVE INFRARED (SWIR) CONSUMPTION BY REGION

8.1 Global Short Wave Infrared (SWIR) Consumption by Region: 2019 VS 2023 VS 2030

8.2 Global Short Wave Infrared (SWIR) Consumption by Region (2019-2030)

8.2.1 Global Short Wave Infrared (SWIR) Consumption by Region (2019-2024)

8.2.2 Global Short Wave Infrared (SWIR) Consumption by Region (2025-2030)

8.3 North America

8.3.1 North America Short Wave Infrared (SWIR) Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

8.3.2 North America Short Wave Infrared (SWIR) Consumption by Country (2019-2030)

8.3.3 U.S.

8.3.4 Canada

8.4 Europe

8.4.1 Europe Short Wave Infrared (SWIR) Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

8.4.2 Europe Short Wave Infrared (SWIR) Consumption by Country (2019-2030)

8.4.3 Germany

8.4.4 France

8.4.5 U.K.

8.4.6 Italy

8.4.7 Netherlands

8.5 Asia Pacific

8.5.1 Asia Pacific Short Wave Infrared (SWIR) Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

8.5.2 Asia Pacific Short Wave Infrared (SWIR) Consumption by Country (2019-2030)

8.5.3 China

8.5.4 Japan

8.5.5 South Korea

8.5.6 Southeast Asia

8.5.7 India

8.5.8 Australia

8.6 LAMEA

8.6.1 LAMEA Short Wave Infrared (SWIR) Consumption Growth Rate by Country: 2019 VS 2023 VS 2030

8.6.2 LAMEA Short Wave Infrared (SWIR) Consumption by Country (2019-2030)

- 8.6.3 Mexico
- 8.6.4 Brazil
- 8.6.5 Turkey
- 8.6.6 GCC Countries

9 VALUE CHAIN AND SALES CHANNELS ANALYSIS

- 9.1 Short Wave Infrared (SWIR) Value Chain Analysis
 - 9.1.1 Short Wave Infrared (SWIR) Key Raw Materials
 - 9.1.2 Raw Materials Key Suppliers
 - 9.1.3 Manufacturing Cost Structure
 - 9.1.4 Short Wave Infrared (SWIR) Production Mode & Process
- 9.2 Short Wave Infrared (SWIR) Sales Channels Analysis
 - 9.2.1 Direct Comparison with Distribution Share
 - 9.2.2 Short Wave Infrared (SWIR) Distributors
 - 9.2.3 Short Wave Infrared (SWIR) Customers

10 CONCLUDING INSIGHTS

11 APPENDIX

- 11.1 Reasons for Doing This Study
- 11.2 Research Methodology
- 11.3 Research Process
- 11.4 Authors List of This Report
- 11.5 Data Source
 - 11.5.1 Secondary Sources
 - 11.5.2 Primary Sources
- 11.6 Disclaimer

I would like to order

Product name: Global Short Wave Infrared (SWIR) Market by Size, by Type, by Application, by Region, History and Forecast 2019-2030

Product link: <https://marketpublishers.com/r/G7AA006F3897EN.html>

Price: US\$ 3,950.00 (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/G7AA006F3897EN.html>

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

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer 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

