

# **Photonic Sensors and Detectors: Market Research Report**

https://marketpublishers.com/r/P5798F4F126EN.html

Date: January 2015

Pages: 228

Price: US\$ 4,500.00 (Single User License)

ID: P5798F4F126EN

# **Abstracts**

This report analyzes the worldwide markets for Photonic Sensors and Detectors in US\$ Million. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, Latin America, and Rest of World. Annual estimates and forecasts are provided for the period 2014 through 2020. Also, a seven-year historic analysis is provided for these markets. Market data and analytics are derived from primary and secondary research. Company profiles are primarily based on public domain information including company URLs. The report profiles 97 companies including many key and niche players such as -

Avago Technologies

Banner Engineering Corp.

Banpil Photonics, Inc.

Baumer Holdings AG

BaySpec, Inc.



# **Contents**

# I. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS

Study Reliability and Reporting Limitations
Disclaimers
Data Interpretation & Reporting Level
Quantitative Techniques & Analytics
Product Definitions and Scope of Study

## II. EXECUTIVE SUMMARY

## 1. INDUSTRY OVERVIEW

Photonics Technology – A Background
Photonic Sensors & Detectors - A Prelude
Photonic Sensors & Detectors – A Market Review

**Table 1.** Combined Market for Photonic Sensors & Detectors - Percentage Share Breakdown of Dollar Sales by Product Segment for Years 2015(E) & 2020(P) (includes corresponding Graph/Chart)

**Table 2.** Compounded Annual Growth Rate (%) of Dollar Sales for Photonic Sensors & Photonic Detectors for Years 2015 through 2020 (includes corresponding Graph/Chart)

Photonic Sensors & Detectors Market – Fairly Resilient Against Periods of Economic Slowdown

Stabilizing Growth Ahead for Photonic Sensors & Detectors Market Outlook

# 2. MARKET TRENDS & GROWTH DRIVERS

Growing Investments in Advanced & Disruptive Technologies Augur Well for the Market US & Europe Lead in Photonic Sensor Adoption But Developing Markets to Drive Future Growth

Fiber Optic Sensors – The Largest Product Segment
Expanding End-Use Applications of Fiber Optic Sensors
Biophotonic Sensors Set to Gain Significant Traction Over the Next Few Years

Photonic Sensors and Detectors: Market Research Report



Need for Better Safety and Security to Drive Demand for Photonic Sensors Military & Homeland Security – A Major End-Use Market for Photonic Sensors Review of Defense Budgets & Implications on Demand for Photonic Sensors this Segment

**Table 3.** With Over 12% Annual Growth in Military Spending, China & India Offer Robust Opportunities for Photonic Sensors in Military Sector: Breakdown of Military Spending (In US\$ Billion) in Select Countries for the Year 2013 & 2014 (includes corresponding Graph/Chart)

Growing Focus on Factory Automation to Drive Demand for Photonic Sensors in Industrial/ Manufacturing Sector
Photonic Sensors Adds Value to Industrial Process Control
Soft Recovery in Global Manufacturing PMI to Encourage a Gentle Uplift in Sales in Industrial Sector

**Table 4.** Global Manufacturing PMI: Breakdown of Monthly Index Points for the Period September 2014 to March 2015 (includes corresponding Graph/Chart)

Biomedical Applications to be a Key Focus Areas for Photonic Sensors in Coming Years

Robust Opportunities on Cards for FOS in Bio Medical Applications – A Case in Point List of Select Commercial Fiber-Optic Biomedical Sensors Improving Healthcare Expenditure to Drive Adoption of Photonic Sensors in Biomedical Applications

**Table 5.** With Relatively Higher Healthcare Spending as a Percentage of GDP, North America & Western Europe to Present Strong Opportunities for Photonics in Biomedical Applications: Breakdown of Healthcare Spending as a Percentage of GDP for Select Regions (2015E) (includes corresponding Graph/Chart)

**Table 6.** Per-Capita Healthcare Expenditure in Select Regions (2014) (includes corresponding Graph/Chart)

Ageing Population to Spruce Up Photonics Development for Biomedical Applications Demographic Statistics - Opportunity Indicators for Photonics in Biomedical Applications



**Table 7.** Global Population Statistics for the 65+ Age Group (2013) (includes corresponding Graph/Chart)

**Table 8.** Elderly Population (60+ Years) as a Percentage of the Total Population (2012 & 2050) (includes corresponding Graph/Chart)

Oil & Gas Sector Presents Broad Range of Application Scenarios for Photonic Sensors
Oil & Gas Sector to Overcome Recent Slowdown in Oil Prices & Exploration
Investments to Provide Healthy Growth Opportunities in Coming years

**Table 9.** Recent Disruptions in Oil Prices: Breakdown of World Crude Oil (Petroleum) Prices (In US\$) for 2013 to 2015 (includes corresponding Graph/Chart)

Structural Health Monitoring in Smart Structures – Building Opportunities for FOS in Civil Engineering Sector

Steady Pace of Infrastructure Development in Developing Countries to Boost Demand for Fiber Optic Sensors in Smart Structures Segment

Expanding End-Use Applications of Photonic Sensors Bodes Well for Market Future Dedicated Industry Efforts to Drive Market Prospects

Increasing Merger & Acquisition Deals Aimed at Product Development

R&D Geared towards Product Innovation – Key for Constant Growth

Emergence of Wireless Sensing Technologies to Drive New Opportunities

Standardization and Miniaturization – Key Focus Areas of Product Development Efforts

Reducing Costs – A Key Focus Area for Photonic Sensor R&D

Developments in Silicon Photonics to Bring More Value to Photonic Sensors

Challenges to Reckon With

Lack of Appropriate Industrial/Regulatory Standards

Lack of Awareness

**High Initial Costs** 

Inadequate Resource Pool

Barriers for Biophotonic Sensors in Homeland Security

Competition

# 3. PRODUCT OVERVIEW

Photonics - An Introduction



Photonic Sensors – A Generic Definition
Types of Photonic Sensors
Fiber Optic Sensors
Image Sensors
Biophotonic Sensors
Photonic Detectors

# 4. PRODUCT INTRODUCTIONS/INNOVATIONS

Marktech to Launch New Range of Photodetectors
Farsens Releases New UHF RF Field Detector
ID QUANTIQUE Introduces Free-Running Single-Photon Detector
DECTRIS Launches Enhanced HPC Detection Technology
Headwall Photonics Releases Nano-Hyperspec Sensor
U2t Photonics Releases Fast Balanced Photo Detector
Laser Components Releases New Count Single-Photon Detector
Hamamatsu Photonics Introduces new 128 x 128 Pixel Two Dimensional InGaAs image sensor

# 5. RECENT INDUSTRY ACTIVITY

Laser 2000 Inks Distribution Agreement with Headwall Photonics
ON Semiconductor Acquires Truesense
Finisar to Take Over u2t Photonics
Zecotek Imaging Systems Inks Joint Collaboration Partnership Agreement with Hamamatsu Photonics
Lionix, VLC Photonics and PhoeniX Ink Strategic Collaboration Agreement
Open Photonics Inks Pact with VTT Technical Research Centre

## 6. FOCUS ON SELECT PLAYERS

Avago Technologies (US)
Banner Engineering Corp. (US)
Banpil Photonics, Inc. (US)
Baumer Holdings AG (Switzerland)
BaySpec, Inc. (US)
Brandywine Photonics LLC (US)
Dongbu HiTek Co. Ltd. (Korea)
FUJIFILM Holdings Corporation (Japan)



Hamamatsu Photonics K. K. (Japan)

Honeywell International Inc. (US)

Ibsen Photonics A/S (Denmark)

Mitsubishi Electric Corporation (Japan)

NTT Electronics (Japan)

OMRON Corporation (Japan)

ON Semiconductor Corporation (US)

Prime Photonics, LC (US)

Samsung Electronics Co. Ltd. (South Korea)

Smart Fibres Limited (UK)

Toshiba Corporation (Japan)

# 7. GLOBAL MARKET PERSPECTIVE

**Table 10.** World Recent Past, Current & Future Analysis for Photonic Sensors and Detectors by Geographic Region - US, Canada, Japan, Europe, Asia-Pacific (Excluding Japan), Latin America and Rest of World Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 11.** World Historic Review for Photonic Sensors and Detectors by Geographic Region - US, Canada, Japan, Europe, Asia-Pacific (Excluding Japan), Latin America and Rest of World Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

**Table 12.** World 14-Year Perspective for Photonic Sensors and Detectors by Geographic Region - Percentage Breakdown of Dollar Sales for US, Canada, Japan, Europe, Asia-Pacific (Excluding Japan), Latin America and Rest of World Markets for Years 2007, 2015 & 2020 (includes corresponding Graph/Chart)

# III. MARKET

# 1. THE UNITED STATES

A. Market Analysis

Outlook

Overview

US Military/Defense Sector Supports Growth in Photonic Sensors

Photonic Sensors and Detectors: Market Research Report



Improving Industrial Activity Bodes Well for Photonic Sensors
Booming Shale Gas Exploration to Drive Growth in Photonic Sensors Market
Fiber Optic Sensors - Market Overview
Product Introductions/Innovations
Strategic Corporate Development
Select Players
B. Market Analytics

**Table 13.** US Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 14.** US Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

#### 2. CANADA

A. Market AnalysisOutlookOverviewB. Market Analytics

**Table 15.** Canadian Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 16.** Canadian Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

# 3. JAPAN

A. Market Analysis

Outlook

Role of Government and Authorities in Strengthening Sensor Technology Product Introductions/Innovation

Photonic Sensors and Detectors: Market Research Report



Strategic Corporate Development Select Players B. Market Analytics

**Table 17.** Japanese Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 18.** Japanese Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

## 4. EUROPE

A. Market Analysis

Outlook

Overview

Stable Industrial/Manufacturing Outlook Augurs Well for Photonic Sensors & Detectors Market

B. Market Analytics

**Table 19.** European Recent Past, Current & Future Analysis for Photonic Sensors and Detectors by Geographic Region - France, Germany, Italy, United Kingdom, Spain, Russia and Rest of Europe Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 20.** European Historic Review for Photonic Sensors and Detectors by Geographic Region - France, Germany, Italy, United Kingdom, Spain, Russia and Rest of Europe Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

**Table 21.** European 14-Year Perspective for Photonic Sensors and Detectors by Geographic Region - Percentage Breakdown of Dollar Sales for France, Germany, Italy, United Kingdom, Spain, Russia and Rest of Europe Markets for Years 2007, 2015 & 2020 (includes corresponding Graph/Chart)

#### **4A. FRANCE**



A. Market Analysis

Outlook

B. Market Analytics

**Table 22.** French Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 23.** French Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

#### **4B. GERMANY**

A. Market Analysis
Outlook
German Sensor Market – An Overview
Product Introductions/Innovation
Strategic Corporate Developments
B. Market Analytics

**Table 24.** German Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 25.** German Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

#### 4C. ITALY

A. Market AnalysisOutlookB. Market Analytics



**Table 26.** Italian Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 27.** Italian Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

# **4D. THE UNITED KINGDOM**

A. Market AnalysisOutlookSmart Fibres Limited – A Key PlayerB. Market Analytics

**Table 28.** UK Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 29.** UK Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

## **4E. SPAIN**

A. Market AnalysisOutlookProduct Introductions/InnovationB. Market Analytics

**Table 30.** Spanish Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 31.** Spanish Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)



#### 4F. RUSSIA

A. Market AnalysisOutlookB. Market Analytics

**Table 32.** Russian Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 33.** Russian Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

## **4G. REST OF EUROPE**

A. Market Analysis
Outlook
Product Introductions/Innovations
Strategic Corporate Developments
Select Players
B. Market Analytics

**Table 34.** Rest of Europe Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 35.** Rest of Europe Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

## 5. ASIA-PACIFIC

A. Market AnalysisOutlookOverview of Sensors MarketB. Market Analytics



**Table 36.** Asia-Pacific Recent Past, Current & Future Analysis for Photonic Sensors and Detectors by Geographic Region - China, South Korea and Rest of Asia-Pacific Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 37.** Asia-Pacific Historic Review for Photonic Sensors and Detectors by Geographic Region - China, South Korea and Rest of Asia-Pacific Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

**Table 38.** Asia-Pacific 14-Year Perspective for Photonic Sensors and Detectors by Geographic Region - Percentage Breakdown of Dollar Sales for China, South Korea and Rest of Asia-Pacific Markets for Years 2007, 2015 & 2020 (includes corresponding Graph/Chart)

#### 5A. CHINA

A. Market Analysis
Outlook
A Look into the Chinese Sensors Market
Fiber Optic Sensors Market in China - Overview
B. Market Analytics

**Table 39.** Chinese Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 40.** Chinese Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

## **5B. SOUTH KOREA**

A. Market AnalysisOutlookKey Players



# B. Market Analytics

**Table 41.** South Korean Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 42.** South Korean Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

#### **5C. REST OF ASIA-PACIFIC**

A. Market AnalysisOutlookB. Market Analytics

**Table 43.** Rest of Asia-Pacific Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 44.** Rest of Asia-Pacific Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

# **6. LATIN AMERICA**

A. Market AnalysisOutlookB. Market Analytics

b. Market Arialytics

**Table 45.** Latin American Recent Past, Current & Future Analysis for Photonic Sensors and Detectors by Geographic Region - Brazil and Rest of Latin American Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 46.** Latin American Historic Review for Photonic Sensors and Detectors by



Geographic Region - Brazil and Rest of Latin American Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

**Table 47.** Latin American 14-Year Perspective for Photonic Sensors and Detectors by Geographic Region - Percentage Breakdown of Dollar Sales for Brazil and Rest of Latin American Markets for Years 2007, 2015 & 2020 (includes corresponding Graph/Chart)

#### 6A. BRAZIL

A. Market AnalysisOutlookB. Market Analytics

**Table 48.** Brazilian Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 49.** Brazilian Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

# **6B. REST OF LATIN AMERICA**

A. Market AnalysisOutlookB. Market Analytics

**Table 50.** Rest of Latin America Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 51.** Rest of Latin America Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

#### 7. REST OF WORLD



A. Market Analysis

Outlook

B. Market Analytics

**Table 52.** Rest of World Recent Past, Current & Future Analysis for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2014 through 2020 (includes corresponding Graph/Chart)

**Table 53.** Rest of World Historic Review for Photonic Sensors and Detectors Market Analyzed with Annual Sales Figures in US\$ Million for Years 2007 through 2013 (includes corresponding Graph/Chart)

# IV. COMPETITIVE LANDSCAPE

Total Companies Profiled: 97 (including Divisions/Subsidiaries - 105)

The United States (35)

Canada (7)

Japan (10)

Europe (35)

France (1)

Germany (15)

The United Kingdom (2)

Italy (2)

Spain (2)

Rest of Europe (13)

Asia-Pacific (Excluding Japan) (18)



# I would like to order

Product name: Photonic Sensors and Detectors: Market Research Report

Product link: https://marketpublishers.com/r/P5798F4F126EN.html

Price: US\$ 4,500.00 (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 <a href="https://marketpublishers.com/r/P5798F4F126EN.html">https://marketpublishers.com/r/P5798F4F126EN.html</a>

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
	Custumer signature

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

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