

Global Fiber Bragg Grating (FBG) Market Professional Survey Report 2018

<https://marketpublishers.com/r/GEEE7B7D874EN.html>

Date: July 2018

Pages: 111

Price: US\$ 3,500.00 (Single User License)

ID: GEEE7B7D874EN

Abstracts

This report studies the global Fiber Bragg Grating (FBG) market status and forecast, categorizes the global Fiber Bragg Grating (FBG) market size (value & volume) by manufacturers, type, application, and region. This report focuses on the top manufacturers in North America, Europe, Japan, China, India, Southeast Asia and other regions (Central & South America, and Middle East & Africa).

A fiber Bragg grating (FBG) is a type of distributed Bragg reflector constructed in a short segment of optical fiber that reflects particular wavelengths of light and transmits all others. This is achieved by adding a periodic variation to the refractive index of the fiber core, which generates a wavelength specific dielectric mirror. An FBG is an invisible reflector inside the core of the fiber that is set to a specific wavelength of light. When the fiber where the FBG is located is exposed to strain or temperature, the FBG's "center wavelength" shifts to a higher or lower wavelength. The direction and magnitude of the shift is proportional to the change in strain or temperature.

A fiber Bragg grating can therefore be used as an inline optical filter to block certain wavelengths, or as a wavelength-specific reflector. Fiber Bragg Gratings are made by laterally exposing the core of a single-mode fiber to a periodic pattern of intense ultraviolet light. The exposure produces a permanent increase in the refractive index of the fiber's core, creating a fixed index modulation according to the exposure pattern. This fixed index modulation is called a grating. At each periodic refraction change a small amount of light is reflected. All the reflected light signals combine coherently to one large reflection at a particular wavelength when the grating period is approximately half the input light's wavelength. This is referred to as the Bragg condition, and the wavelength at which this reflection occurs is called the Bragg wavelength. In a FBG, the refractive index of the core is periodically modulated along the fiber's main axis. The period of the modulation ranges typically from a few hundred nanometers to a few microns. When light is launched into a FBG, it experiences a certain amount of

scattering at each grating plane. Most of the scattered light becomes more and more out-of-phase and eventually decays due to deconstructive interference. If the Bragg condition is satisfied for one of the colors of the input light, then a sharp reflected peak is observed in the backward direction with a center wavelength determined by the grating's parameters.

The industry is not very high concentration, the key brand include Micron Optics, Proximion AB, HBM FiberSensing, ITF Technologies Inc, FBGS Technologies GmbH, Technica, iXFiber, Smart Fibres Limited, fos4x, Advanced Optics Solutions GmbH, Wuhan Ligong Guangke, TeraXion, FBG Korea, GEOPTEx bvba(FOS&S), Alnair Labs Corporation and so on.

The global Fiber Bragg Grating (FBG) market segmentation on the basis of type includes Fiber Bragg Grating Filter, Fiber Bragg Grating Sensors and Others. Fiber Bragg Grating Sensors are dominating the market with about 75% share in 2016. Significant and lasting barriers make entry into this market difficult. These barriers include, but are not limited to: (i) product development costs; (ii) capital requirements; (iii) intellectual property rights; (iv) regulatory requirement; and (v) Transitions' unfair methods of competition.

Despite the presence of competition problems, due to the global recovery trend is clear, investors are still optimistic about this area, the future will still have more new investment enter the field. Even so, the market is intensely competitive. The study group recommends the new entrants just having money but without technical advantage and upstream and downstream support do not to enter into this field.

The global Fiber Bragg Grating (FBG) market is valued at 670 million US\$ in 2017 and will reach 3070 million US\$ by the end of 2025, growing at a CAGR of 24.3% during 2018-2025.

The major manufacturers covered in this report

Micron Optics

Proximion AB

HBM FiberSensing

ITF Technologies Inc

FBGS Technologies GmbH

Technica

iXFiber

Smart Fibres Limited

fos4x

Advanced Optics Solutions GmbH

Wuhan Ligong Guangke

TeraXion

FBG Korea

GEOPTEX bvba (FOS&S)

Alnair Labs Corporation

Geographically, this report studies the top producers and consumers, focuses on product capacity, production, value, consumption, market share and growth opportunity in these key regions, covering

North America

Europe

China

Japan

India

Southeast Asia

Other regions (Central & South America, Middle East & Africa)

We can also provide the customized separate regional or country-level reports, for the following regions:

North America

United States

Canada

Mexico

Asia-Pacific

China

India

Japan

South Korea

Australia

Indonesia

Singapore

Rest of Asia-Pacific

Europe

Germany

France

UK

Italy

Spain

Russia

Rest of Europe

Central & South America

Brazil

Argentina

Rest of South America

Middle East & Africa

Saudi Arabia

Turkey

Rest of Middle East & Africa

On the basis of product, this report displays the production, revenue, price, market share and growth rate of each type, primarily split into

Fiber Bragg Grating Filter

Fiber Bragg Grating Sensors

Other

By Application, the market can be split into

Optical Communication

Aerospace Applications

Energy industry

Transportation

Geo-Technical & Civil Engineering

Other

The study objectives of this report are:

To analyze and study the global Fiber Bragg Grating (FBG) capacity, production, value, consumption, status (2013-2017) and forecast (2018-2025);

Focuses on the key Fiber Bragg Grating (FBG) manufacturers, to study the capacity, production, value, market share and development plans in future.

Focuses on the global key manufacturers, to define, describe and analyze the market competition landscape, SWOT analysis.

To define, describe and forecast the market by type, application and region.

To analyze the global and key regions market potential and advantage, opportunity and challenge, restraints and risks.

To identify significant trends and factors driving or inhibiting the market growth.

To analyze the opportunities in the market for stakeholders by identifying the high growth segments.

To strategically analyze each submarket with respect to individual growth trend and their contribution to the market.

To analyze competitive developments such as expansions, agreements, new product launches, and acquisitions in the market.

To strategically profile the key players and comprehensively analyze their

growth strategies.

In this study, the years considered to estimate the market size of Fiber Bragg Grating (FBG) are as follows:

History Year: 2013-2017

Base Year: 2017

Estimated Year: 2018

Forecast Year 2018 to 2025

For the data information by region, company, type and application, 2017 is considered as the base year. Whenever data information was unavailable for the base year, the prior year has been considered.

Key Stakeholders

Fiber Bragg Grating (FBG) Manufacturers

Fiber Bragg Grating (FBG) Distributors/Traders/Wholesalers

Fiber Bragg Grating (FBG) Subcomponent Manufacturers

Industry Association

Downstream Vendors

Available Customizations

With the given market data, QYResearch offers customizations according to the company's specific needs. The following customization options are available for the report:

Regional and country-level analysis of the Fiber Bragg Grating (FBG) market, by end-use.

Detailed analysis and profiles of additional market players.

Contents

Global Fiber Bragg Grating (FBG) Market Professional Survey Report 2018

1 INDUSTRY OVERVIEW OF FIBER BRAGG GRATING (FBG)

1.1 Definition and Specifications of Fiber Bragg Grating (FBG)

- 1.1.1 Definition of Fiber Bragg Grating (FBG)
- 1.1.2 Specifications of Fiber Bragg Grating (FBG)

1.2 Classification of Fiber Bragg Grating (FBG)

- 1.2.1 Fiber Bragg Grating Filter
- 1.2.2 Fiber Bragg Grating Sensors
- 1.2.3 Other

1.3 Applications of Fiber Bragg Grating (FBG)

- 1.3.1 Optical Communication
- 1.3.2 Aerospace Applications
- 1.3.3 Energy industry
- 1.3.4 Transportation
- 1.3.5 Geo-Technical & Civil Engineering
- 1.3.6 Other

1.4 Market Segment by Regions

- 1.4.1 North America
- 1.4.2 Europe
- 1.4.3 China
- 1.4.4 Japan
- 1.4.5 Southeast Asia
- 1.4.6 India

2 MANUFACTURING COST STRUCTURE ANALYSIS OF FIBER BRAGG GRATING (FBG)

2.1 Raw Material and Suppliers

2.2 Manufacturing Cost Structure Analysis of Fiber Bragg Grating (FBG)

2.3 Manufacturing Process Analysis of Fiber Bragg Grating (FBG)

2.4 Industry Chain Structure of Fiber Bragg Grating (FBG)

3 TECHNICAL DATA AND MANUFACTURING PLANTS ANALYSIS OF FIBER BRAGG GRATING (FBG)

3.1 Capacity and Commercial Production Date of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017

3.2 Manufacturing Plants Distribution of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017

3.3 R&D Status and Technology Source of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017

3.4 Raw Materials Sources Analysis of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017

4 GLOBAL FIBER BRAGG GRATING (FBG) OVERALL MARKET OVERVIEW

4.1 2013-2018E Overall Market Analysis

4.2 Capacity Analysis

4.2.1 2013-2018E Global Fiber Bragg Grating (FBG) Capacity and Growth Rate Analysis

4.2.2 2017 Fiber Bragg Grating (FBG) Capacity Analysis (Company Segment)

4.3 Sales Analysis

4.3.1 2013-2018E Global Fiber Bragg Grating (FBG) Sales and Growth Rate Analysis

4.3.2 2017 Fiber Bragg Grating (FBG) Sales Analysis (Company Segment)

4.4 Sales Price Analysis

4.4.1 2013-2018E Global Fiber Bragg Grating (FBG) Sales Price

4.4.2 2017 Fiber Bragg Grating (FBG) Sales Price Analysis (Company Segment)

5 FIBER BRAGG GRATING (FBG) REGIONAL MARKET ANALYSIS

5.1 North America Fiber Bragg Grating (FBG) Market Analysis

5.1.1 North America Fiber Bragg Grating (FBG) Market Overview

5.1.2 North America 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.1.3 North America 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.1.4 North America 2017 Fiber Bragg Grating (FBG) Market Share Analysis

5.2 Europe Fiber Bragg Grating (FBG) Market Analysis

5.2.1 Europe Fiber Bragg Grating (FBG) Market Overview

5.2.2 Europe 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.2.3 Europe 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.2.4 Europe 2017 Fiber Bragg Grating (FBG) Market Share Analysis

5.3 China Fiber Bragg Grating (FBG) Market Analysis

5.3.1 China Fiber Bragg Grating (FBG) Market Overview

5.3.2 China 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.3.3 China 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.3.4 China 2017 Fiber Bragg Grating (FBG) Market Share Analysis

5.4 Japan Fiber Bragg Grating (FBG) Market Analysis

5.4.1 Japan Fiber Bragg Grating (FBG) Market Overview

5.4.2 Japan 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.4.3 Japan 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.4.4 Japan 2017 Fiber Bragg Grating (FBG) Market Share Analysis

5.5 Southeast Asia Fiber Bragg Grating (FBG) Market Analysis

5.5.1 Southeast Asia Fiber Bragg Grating (FBG) Market Overview

5.5.2 Southeast Asia 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.5.3 Southeast Asia 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.5.4 Southeast Asia 2017 Fiber Bragg Grating (FBG) Market Share Analysis

5.6 India Fiber Bragg Grating (FBG) Market Analysis

5.6.1 India Fiber Bragg Grating (FBG) Market Overview

5.6.2 India 2013-2018E Fiber Bragg Grating (FBG) Local Supply, Import, Export, Local Consumption Analysis

5.6.3 India 2013-2018E Fiber Bragg Grating (FBG) Sales Price Analysis

5.6.4 India 2017 Fiber Bragg Grating (FBG) Market Share Analysis

6 GLOBAL 2013-2018E FIBER BRAGG GRATING (FBG) SEGMENT MARKET ANALYSIS (BY TYPE)

6.1 Global 2013-2018E Fiber Bragg Grating (FBG) Sales by Type

6.2 Different Types of Fiber Bragg Grating (FBG) Product Interview Price Analysis

6.3 Different Types of Fiber Bragg Grating (FBG) Product Driving Factors Analysis

6.3.1 Fiber Bragg Grating Filter Growth Driving Factor Analysis

6.3.2 Fiber Bragg Grating Sensors Growth Driving Factor Analysis

6.3.3 Other Growth Driving Factor Analysis

7 GLOBAL 2013-2018E FIBER BRAGG GRATING (FBG) SEGMENT MARKET ANALYSIS (BY APPLICATION)

7.1 Global 2013-2018E Fiber Bragg Grating (FBG) Consumption by Application

7.2 Different Application of Fiber Bragg Grating (FBG) Product Interview Price Analysis

7.3 Different Application of Fiber Bragg Grating (FBG) Product Driving Factors Analysis

7.3.1 Optical Communication of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

7.3.2 Aerospace Applications of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

7.3.3 Energy industry of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

7.3.4 Transportation of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

7.3.5 Geo-Technical & Civil Engineering of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

7.3.6 Other of Fiber Bragg Grating (FBG) Growth Driving Factor Analysis

8 MAJOR MANUFACTURERS ANALYSIS OF FIBER BRAGG GRATING (FBG)

8.1 Micron Optics

8.1.1 Company Profile

8.1.2 Product Picture and Specifications

8.1.2.1 Product A

8.1.2.2 Product B

8.1.3 Micron Optics 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.1.4 Micron Optics 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.2 Proximion AB

8.2.1 Company Profile

8.2.2 Product Picture and Specifications

8.2.2.1 Product A

8.2.2.2 Product B

8.2.3 Proximion AB 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.2.4 Proximion AB 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.3 HBM FiberSensing

8.3.1 Company Profile

8.3.2 Product Picture and Specifications

8.3.2.1 Product A

8.3.2.2 Product B

8.3.3 HBM FiberSensing 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.3.4 HBM FiberSensing 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.4 ITF Technologies Inc

8.4.1 Company Profile

8.4.2 Product Picture and Specifications

8.4.2.1 Product A

8.4.2.2 Product B

8.4.3 ITF Technologies Inc 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.4.4 ITF Technologies Inc 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.5 FBGS Technologies GmbH

8.5.1 Company Profile

8.5.2 Product Picture and Specifications

8.5.2.1 Product A

8.5.2.2 Product B

8.5.3 FBGS Technologies GmbH 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.5.4 FBGS Technologies GmbH 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.6 Technica

8.6.1 Company Profile

8.6.2 Product Picture and Specifications

8.6.2.1 Product A

8.6.2.2 Product B

8.6.3 Technica 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.6.4 Technica 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.7 iXFiber

8.7.1 Company Profile

8.7.2 Product Picture and Specifications

8.7.2.1 Product A

8.7.2.2 Product B

8.7.3 iXFiber 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.7.4 iXFiber 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.8 Smart Fibres Limited

8.8.1 Company Profile

8.8.2 Product Picture and Specifications

8.8.2.1 Product A

8.8.2.2 Product B

8.8.3 Smart Fibres Limited 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.8.4 Smart Fibres Limited 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.9 fos4x

8.9.1 Company Profile

8.9.2 Product Picture and Specifications

8.9.2.1 Product A

8.9.2.2 Product B

8.9.3 fos4x 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.9.4 fos4x 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.10 Advanced Optics Solutions GmbH

8.10.1 Company Profile

8.10.2 Product Picture and Specifications

8.10.2.1 Product A

8.10.2.2 Product B

8.10.3 Advanced Optics Solutions GmbH 2017 Fiber Bragg Grating (FBG) Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.10.4 Advanced Optics Solutions GmbH 2017 Fiber Bragg Grating (FBG) Business Region Distribution Analysis

8.11 Wuhan Ligong Guangke

8.12 TeraXion

8.13 FBG Korea

8.14 GEOPTEX bvba (FOS&S)

8.15 Alnair Labs Corporation

9 DEVELOPMENT TREND OF ANALYSIS OF FIBER BRAGG GRATING (FBG) MARKET

9.1 Global Fiber Bragg Grating (FBG) Market Trend Analysis

9.1.1 Global 2018-2025 Fiber Bragg Grating (FBG) Market Size (Volume and Value) Forecast

9.1.2 Global 2018-2025 Fiber Bragg Grating (FBG) Sales Price Forecast

9.2 Fiber Bragg Grating (FBG) Regional Market Trend

9.2.1 North America 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast

9.2.2 Europe 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast

9.2.3 China 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast

9.2.4 Japan 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast

- 9.2.5 Southeast Asia 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast
- 9.2.6 India 2018-2025 Fiber Bragg Grating (FBG) Consumption Forecast
- 9.3 Fiber Bragg Grating (FBG) Market Trend (Product Type)
- 9.4 Fiber Bragg Grating (FBG) Market Trend (Application)

10 FIBER BRAGG GRATING (FBG) MARKETING TYPE ANALYSIS

- 10.1 Fiber Bragg Grating (FBG) Regional Marketing Type Analysis
- 10.2 Fiber Bragg Grating (FBG) International Trade Type Analysis
- 10.3 Traders or Distributors with Contact Information of Fiber Bragg Grating (FBG) by Region
- 10.4 Fiber Bragg Grating (FBG) Supply Chain Analysis

11 CONSUMERS ANALYSIS OF FIBER BRAGG GRATING (FBG)

- 11.1 Consumer 1 Analysis
- 11.2 Consumer 2 Analysis
- 11.3 Consumer 3 Analysis
- 11.4 Consumer 4 Analysis

12 CONCLUSION OF THE GLOBAL FIBER BRAGG GRATING (FBG) MARKET PROFESSIONAL SURVEY REPORT 2017

Methodology
Analyst Introduction
Data Source

The report requires updating with new data and is sent in 2-3 business days after order is placed.

List Of Tables

LIST OF TABLES AND FIGURES

Figure Picture of Fiber Bragg Grating (FBG)
Table Product Specifications of Fiber Bragg Grating (FBG)
Table Classification of Fiber Bragg Grating (FBG)
Figure Global Production Market Share of Fiber Bragg Grating (FBG) by Type in 2017
Figure Fiber Bragg Grating Filter Picture
Table Major Manufacturers of Fiber Bragg Grating Filter
Figure Fiber Bragg Grating Sensors Picture
Table Major Manufacturers of Fiber Bragg Grating Sensors
Figure Other Picture
Table Major Manufacturers of Other
Table Applications of Fiber Bragg Grating (FBG)
Figure Global Consumption Volume Market Share of Fiber Bragg Grating (FBG) by Application in 2017
Figure Optical Communication Examples
Table Major Consumers in Optical Communication
Figure Aerospace Applications Examples
Table Major Consumers in Aerospace Applications
Figure Energy industry Examples
Table Major Consumers in Energy industry
Figure Transportation Examples
Table Major Consumers in Transportation
Figure Geo-Technical & Civil Engineering Examples
Table Major Consumers in Geo-Technical & Civil Engineering
Figure Other Examples
Table Major Consumers in Other
Figure Market Share of Fiber Bragg Grating (FBG) by Regions
Figure North America Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Figure Europe Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Figure China Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Figure Japan Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Figure Southeast Asia Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Figure India Fiber Bragg Grating (FBG) Market Size (Million USD) (2013-2025)
Table Fiber Bragg Grating (FBG) Raw Material and Suppliers

Table Manufacturing Cost Structure Analysis of Fiber Bragg Grating (FBG) in 2017
Figure Manufacturing Process Analysis of Fiber Bragg Grating (FBG)
Figure Industry Chain Structure of Fiber Bragg Grating (FBG)
Table Capacity and Commercial Production Date of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017
Table Manufacturing Plants Distribution of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017
Table R&D Status and Technology Source of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017
Table Raw Materials Sources Analysis of Global Fiber Bragg Grating (FBG) Major Manufacturers in 2017
Table Global Capacity, Sales, Price, Cost, Sales Revenue (M USD) and Gross Margin of Fiber Bragg Grating (FBG) 2013-2018E
Figure Global 2013-2018E Fiber Bragg Grating (FBG) Market Size (Volume) and Growth Rate
Figure Global 2013-2018E Fiber Bragg Grating (FBG) Market Size (Value) and Growth Rate
Table 2013-2018E Global Fiber Bragg Grating (FBG) Capacity and Growth Rate
Table 2017 Global Fiber Bragg Grating (FBG) Capacity (K Units) List (Company Segment)
Table 2013-2018E Global Fiber Bragg Grating (FBG) Sales (K Units) and Growth Rate
Table 2017 Global Fiber Bragg Grating (FBG) Sales (K Units) List (Company Segment)
Table 2013-2018E Global Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Table 2017 Global Fiber Bragg Grating (FBG) Sales Price (USD/Unit) List (Company Segment)
Figure North America Capacity Overview
Table North America Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure North America 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Figure North America 2017 Fiber Bragg Grating (FBG) Sales Market Share
Figure Europe Capacity Overview
Table Europe Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure Europe 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Figure Europe 2017 Fiber Bragg Grating (FBG) Sales Market Share
Figure China Capacity Overview
Table China Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure China 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)

Figure China 2017 Fiber Bragg Grating (FBG) Sales Market Share
Figure Japan Capacity Overview
Table Japan Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure Japan 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Figure Japan 2017 Fiber Bragg Grating (FBG) Sales Market Share
Figure Southeast Asia Capacity Overview
Table Southeast Asia Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure Southeast Asia 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Figure Southeast Asia 2017 Fiber Bragg Grating (FBG) Sales Market Share
Figure India Capacity Overview
Table India Supply, Import, Export and Consumption (K Units) of Fiber Bragg Grating (FBG) 2013-2018E
Figure India 2013-2018E Fiber Bragg Grating (FBG) Sales Price (USD/Unit)
Figure India 2017 Fiber Bragg Grating (FBG) Sales Market Share
Table Global 2013-2018E Fiber Bragg Grating (FBG) Sales (K Units) by Type
Table Different Types Fiber Bragg Grating (FBG) Product Interview Price
Table Global 2013-2018E Fiber Bragg Grating (FBG) Sales (K Units) by Application
Table Different Application Fiber Bragg Grating (FBG) Product Interview Price
Table Micron Optics Information List
Table Product Overview
Table 2017 Micron Optics Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)
Figure 2017 Micron Optics Fiber Bragg Grating (FBG) Business Region Distribution
Table Proximion AB Information List
Table Product Overview
Table 2017 Proximion AB Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)
Figure 2017 Proximion AB Fiber Bragg Grating (FBG) Business Region Distribution
Table HBM FiberSensing Information List
Table Product Overview
Table 2017 HBM FiberSensing Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)
Figure 2017 HBM FiberSensing Fiber Bragg Grating (FBG) Business Region Distribution
Table ITF Technologies Inc Information List
Table Product Overview
Table 2017 ITF Technologies Inc Fiber Bragg Grating (FBG) Revenue (Million USD),

Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 ITF Technologies Inc Fiber Bragg Grating (FBG) Business Region Distribution

Table FBGS Technologies GmbH Information List

Table Product Overview

Table 2017 FBGS Technologies GmbH Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 FBGS Technologies GmbH Fiber Bragg Grating (FBG) Business Region Distribution

Table Technica Information List

Table Product Overview

Table 2017 Technica Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 Technica Fiber Bragg Grating (FBG) Business Region Distribution

Table iXFiber Information List

Table Product Overview

Table 2017 iXFiber Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 iXFiber Fiber Bragg Grating (FBG) Business Region Distribution

Table Smart Fibres Limited Information List

Table Product Overview

Table 2017 Smart Fibres Limited Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 Smart Fibres Limited Fiber Bragg Grating (FBG) Business Region Distribution

Table fos4x Information List

Table Product Overview

Table 2017 fos4x Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 fos4x Fiber Bragg Grating (FBG) Business Region Distribution

Table Advanced Optics Solutions GmbH Information List

Table Product Overview

Table 2017 Advanced Optics Solutions GmbH Fiber Bragg Grating (FBG) Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2017 Advanced Optics Solutions GmbH Fiber Bragg Grating (FBG) Business Region Distribution

Table Wuhan Ligong Guangke Information List

Table TeraXion Information List

Table FBG Korea Information List

Table GEOPTEX bvba (FOS&S) Information List

Table Alnair Labs Corporation Information List

Figure Global 2018-2025 Fiber Bragg Grating (FBG) Market Size (K Units) and Growth Rate Forecast

Figure Global 2018-2025 Fiber Bragg Grating (FBG) Market Size (Million USD) and Growth Rate Forecast

Figure Global 2018-2025 Fiber Bragg Grating (FBG) Sales Price (USD/Unit) Forecast

Figure North America 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Figure China 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Figure Europe 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Figure Southeast Asia 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Figure Japan 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Figure India 2018-2025 Fiber Bragg Grating (FBG) Consumption Volume (K Units) and Growth Rate Forecast

Table Global Sales Volume (K Units) of Fiber Bragg Grating (FBG) by Type 2018-2025

Table Global Consumption Volume (K Units) of Fiber Bragg Grating (FBG) by Application 2018-2025

Table Traders or Distributors with Contact Information of Fiber Bragg Grating (FBG) by Region

I would like to order

Product name: Global Fiber Bragg Grating (FBG) Market Professional Survey Report 2018

Product link: <https://marketpublishers.com/r/GEEE7B7D874EN.html>

Price: US\$ 3,500.00 (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 <https://marketpublishers.com/r/GEEE7B7D874EN.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