

# Global IR-cut Glass Market Professional Survey Report 2017

<https://marketpublishers.com/r/G379285E7FAWEN.html>

Date: October 2017

Pages: 110

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

ID: G379285E7FAWEN

## Abstracts

This report studies IR-cut Glass in Global market, especially in North America, China, Europe, Southeast Asia, Japan and India, with production, revenue, consumption, import and export in these regions, from 2012 to 2016, and forecast to 2022.

This report focuses on top manufacturers in global market, with production, price, revenue and market share for each manufacturer, covering

Matsunami Glass Ind.,Ltd.

Nippon Electric Glass Co., Ltd.

HOYA?

Asahi Glass Co., Ltd

Corning?

Toa Optical Technologies Ltd

SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD

Giant Nano Technology Co., Ltd.

SKIER

Diffraction Limited

## Central Glass

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

Absorbent Type

Reflective Type

By Application, the market can be split into

Digital Cameras

DVD Players

Copiers

Automotive

Others

By Regions, this report covers (we can add the regions/countries as you want)

North America

China

Europe

Southeast Asia

Japan

India

If you have any special requirements, please let us know and we will offer you the report as you want.

## Contents

### Global IR-cut Glass Market Professional Survey Report 2017

#### **1 INDUSTRY OVERVIEW OF IR-CUT GLASS**

##### 1.1 Definition and Specifications of IR-cut Glass

###### 1.1.1 Definition of IR-cut Glass

###### 1.1.2 Specifications of IR-cut Glass

##### 1.2 Classification of IR-cut Glass

###### 1.2.1 Absorbent Type

###### 1.2.2 Reflective Type

##### 1.3 Applications of IR-cut Glass

###### 1.3.1 Digital Cameras

###### 1.3.2 DVD Players

###### 1.3.3 Copiers

###### 1.3.4 Automotive

###### 1.3.5 Others

##### 1.4 Market Segment by Regions

###### 1.4.1 North America

###### 1.4.2 China

###### 1.4.3 Europe

###### 1.4.4 Southeast Asia

###### 1.4.5 Japan

###### 1.4.6 India

#### **2 MANUFACTURING COST STRUCTURE ANALYSIS OF IR-CUT GLASS**

##### 2.1 Raw Material and Suppliers

##### 2.2 Manufacturing Cost Structure Analysis of IR-cut Glass

##### 2.3 Manufacturing Process Analysis of IR-cut Glass

##### 2.4 Industry Chain Structure of IR-cut Glass

#### **3 TECHNICAL DATA AND MANUFACTURING PLANTS ANALYSIS OF IR-CUT GLASS**

##### 3.1 Capacity and Commercial Production Date of Global IR-cut Glass Major Manufacturers in 2016

##### 3.2 Manufacturing Plants Distribution of Global IR-cut Glass Major Manufacturers in

2016

3.3 R&D Status and Technology Source of Global IR-cut Glass Major Manufacturers in 2016

3.4 Raw Materials Sources Analysis of Global IR-cut Glass Major Manufacturers in 2016

## **4 GLOBAL IR-CUT GLASS OVERALL MARKET OVERVIEW**

4.1 2012-2017E Overall Market Analysis

4.2 Capacity Analysis

4.2.1 2012-2017E Global IR-cut Glass Capacity and Growth Rate Analysis

4.2.2 2016 IR-cut Glass Capacity Analysis (Company Segment)

4.3 Sales Analysis

4.3.1 2012-2017E Global IR-cut Glass Sales and Growth Rate Analysis

4.3.2 2016 IR-cut Glass Sales Analysis (Company Segment)

4.4 Sales Price Analysis

4.4.1 2012-2017E Global IR-cut Glass Sales Price

4.4.2 2016 IR-cut Glass Sales Price Analysis (Company Segment)

## **5 IR-CUT GLASS REGIONAL MARKET ANALYSIS**

5.1 North America IR-cut Glass Market Analysis

5.1.1 North America IR-cut Glass Market Overview

5.1.2 North America 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

5.1.3 North America 2012-2017E IR-cut Glass Sales Price Analysis

5.1.4 North America 2016 IR-cut Glass Market Share Analysis

5.2 China IR-cut Glass Market Analysis

5.2.1 China IR-cut Glass Market Overview

5.2.2 China 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

5.2.3 China 2012-2017E IR-cut Glass Sales Price Analysis

5.2.4 China 2016 IR-cut Glass Market Share Analysis

5.3 Europe IR-cut Glass Market Analysis

5.3.1 Europe IR-cut Glass Market Overview

5.3.2 Europe 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

5.3.3 Europe 2012-2017E IR-cut Glass Sales Price Analysis

5.3.4 Europe 2016 IR-cut Glass Market Share Analysis

## 5.4 Southeast Asia IR-cut Glass Market Analysis

### 5.4.1 Southeast Asia IR-cut Glass Market Overview

### 5.4.2 Southeast Asia 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

### 5.4.3 Southeast Asia 2012-2017E IR-cut Glass Sales Price Analysis

### 5.4.4 Southeast Asia 2016 IR-cut Glass Market Share Analysis

## 5.5 Japan IR-cut Glass Market Analysis

### 5.5.1 Japan IR-cut Glass Market Overview

### 5.5.2 Japan 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

### 5.5.3 Japan 2012-2017E IR-cut Glass Sales Price Analysis

### 5.5.4 Japan 2016 IR-cut Glass Market Share Analysis

## 5.6 India IR-cut Glass Market Analysis

### 5.6.1 India IR-cut Glass Market Overview

### 5.6.2 India 2012-2017E IR-cut Glass Local Supply, Import, Export, Local Consumption Analysis

### 5.6.3 India 2012-2017E IR-cut Glass Sales Price Analysis

### 5.6.4 India 2016 IR-cut Glass Market Share Analysis

## **6 GLOBAL 2012-2017E IR-CUT GLASS SEGMENT MARKET ANALYSIS (BY TYPE)**

### 6.1 Global 2012-2017E IR-cut Glass Sales by Type

### 6.2 Different Types of IR-cut Glass Product Interview Price Analysis

### 6.3 Different Types of IR-cut Glass Product Driving Factors Analysis

#### 6.3.1 Absorbent Type of IR-cut Glass Growth Driving Factor Analysis

#### 6.3.2 Reflective Type of IR-cut Glass Growth Driving Factor Analysis

## **7 GLOBAL 2012-2017E IR-CUT GLASS SEGMENT MARKET ANALYSIS (BY APPLICATION)**

### 7.1 Global 2012-2017E IR-cut Glass Consumption by Application

### 7.2 Different Application of IR-cut Glass Product Interview Price Analysis

### 7.3 Different Application of IR-cut Glass Product Driving Factors Analysis

#### 7.3.1 Digital Cameras of IR-cut Glass Growth Driving Factor Analysis

#### 7.3.2 DVD Players of IR-cut Glass Growth Driving Factor Analysis

#### 7.3.3 Copiers of IR-cut Glass Growth Driving Factor Analysis

#### 7.3.4 Automotive of IR-cut Glass Growth Driving Factor Analysis

#### 7.3.5 Others of IR-cut Glass Growth Driving Factor Analysis

## **8 MAJOR MANUFACTURERS ANALYSIS OF IR-CUT GLASS**

### **8.1 Matsunami Glass Ind.,Ltd.**

#### **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 Matsunami Glass Ind.,Ltd. 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis**

#### **8.1.4 Matsunami Glass Ind.,Ltd. 2016 IR-cut Glass Business Region Distribution Analysis**

### **8.2 Nippon Electric Glass Co., Ltd.**

#### **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 Nippon Electric Glass Co., Ltd. 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis**

#### **8.2.4 Nippon Electric Glass Co., Ltd. 2016 IR-cut Glass Business Region Distribution Analysis**

### **8.3 HOYA?**

#### **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 HOYA? 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis**

#### **8.3.4 HOYA? 2016 IR-cut Glass Business Region Distribution Analysis**

### **8.4 Asahi Glass Co., Ltd**

#### **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 Asahi Glass Co., Ltd 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis**

#### **8.4.4 Asahi Glass Co., Ltd 2016 IR-cut Glass Business Region Distribution Analysis**

### **8.5 Corning?**

#### **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 Corning? 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.5.4 Corning? 2016 IR-cut Glass Business Region Distribution Analysis

8.6 Toa Optical Technologies Ltd

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 Toa Optical Technologies Ltd 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.6.4 Toa Optical Technologies Ltd 2016 IR-cut Glass Business Region Distribution Analysis

8.7 SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD

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 SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.7.4 SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD 2016 IR-cut Glass Business Region Distribution Analysis

8.8 Giant Nano Technology Co., Ltd.

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 Giant Nano Technology Co., Ltd. 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis

8.8.4 Giant Nano Technology Co., Ltd. 2016 IR-cut Glass Business Region Distribution Analysis

8.9 SKIER

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 SKIER 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis



- 8.9.4 SKIER 2016 IR-cut Glass Business Region Distribution Analysis
- 8.10 Diffraction Limited
  - 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 Diffraction Limited 2016 IR-cut Glass Sales, Ex-factory Price, Revenue, Gross Margin Analysis
  - 8.10.4 Diffraction Limited 2016 IR-cut Glass Business Region Distribution Analysis
- 8.11 Central Glass

## **9 DEVELOPMENT TREND OF ANALYSIS OF IR-CUT GLASS MARKET**

- 9.1 Global IR-cut Glass Market Trend Analysis
  - 9.1.1 Global 2017-2022 IR-cut Glass Market Size (Volume and Value) Forecast
  - 9.1.2 Global 2017-2022 IR-cut Glass Sales Price Forecast
- 9.2 IR-cut Glass Regional Market Trend
  - 9.2.1 North America 2017-2022 IR-cut Glass Consumption Forecast
  - 9.2.2 China 2017-2022 IR-cut Glass Consumption Forecast
  - 9.2.3 Europe 2017-2022 IR-cut Glass Consumption Forecast
  - 9.2.4 Southeast Asia 2017-2022 IR-cut Glass Consumption Forecast
  - 9.2.5 Japan 2017-2022 IR-cut Glass Consumption Forecast
  - 9.2.6 India 2017-2022 IR-cut Glass Consumption Forecast
- 9.3 IR-cut Glass Market Trend (Product Type)
- 9.4 IR-cut Glass Market Trend (Application)

## **10 IR-CUT GLASS MARKETING TYPE ANALYSIS**

- 10.1 IR-cut Glass Regional Marketing Type Analysis
- 10.2 IR-cut Glass International Trade Type Analysis
- 10.3 Traders or Distributors with Contact Information of IR-cut Glass by Region
- 10.4 IR-cut Glass Supply Chain Analysis

## **11 CONSUMERS ANALYSIS OF IR-CUT GLASS**

- 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 IR-CUT GLASS 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 IR-cut Glass  
Table Product Specifications of IR-cut Glass  
Table Classification of IR-cut Glass  
Figure Global Production Market Share of IR-cut Glass by Type in 2016  
Figure Absorbent Type Picture  
Table Major Manufacturers of Absorbent Type  
Figure Reflective Type Picture  
Table Major Manufacturers of Reflective Type  
Table Applications of IR-cut Glass  
Figure Global Consumption Volume Market Share of IR-cut Glass by Application in 2016  
Figure Digital Cameras Examples  
Table Major Consumers in Digital Cameras  
Figure DVD Players Examples  
Table Major Consumers in DVD Players  
Figure Copiers Examples  
Table Major Consumers in Copiers  
Figure Automotive Examples  
Table Major Consumers in Automotive  
Figure Others Examples  
Table Major Consumers in Others  
Figure Market Share of IR-cut Glass by Regions  
Figure North America IR-cut Glass Market Size (Million USD) (2012-2022)  
Figure China IR-cut Glass Market Size (Million USD) (2012-2022)  
Figure Europe IR-cut Glass Market Size (Million USD) (2012-2022)  
Figure Southeast Asia IR-cut Glass Market Size (Million USD) (2012-2022)  
Figure Japan IR-cut Glass Market Size (Million USD) (2012-2022)  
Figure India IR-cut Glass Market Size (Million USD) (2012-2022)  
Table IR-cut Glass Raw Material and Suppliers  
Table Manufacturing Cost Structure Analysis of IR-cut Glass in 2016  
Figure Manufacturing Process Analysis of IR-cut Glass  
Figure Industry Chain Structure of IR-cut Glass  
Table Capacity and Commercial Production Date of Global IR-cut Glass Major Manufacturers in 2016  
Table Manufacturing Plants Distribution of Global IR-cut Glass Major Manufacturers in

2016

Table R&D Status and Technology Source of Global IR-cut Glass Major Manufacturers in 2016

Table Raw Materials Sources Analysis of Global IR-cut Glass Major Manufacturers in 2016

Table Global Capacity, Sales, Price, Cost, Sales Revenue (M USD) and Gross Margin of IR-cut Glass 2012-2017

Figure Global 2012-2017E IR-cut Glass Market Size (Volume) and Growth Rate

Figure Global 2012-2017E IR-cut Glass Market Size (Value) and Growth Rate

Table 2012-2017E Global IR-cut Glass Capacity and Growth Rate

Table 2016 Global IR-cut Glass Capacity (K Units) List (Company Segment)

Table 2012-2017E Global IR-cut Glass Sales (K Units) and Growth Rate

Table 2016 Global IR-cut Glass Sales (K Units) List (Company Segment)

Table 2012-2017E Global IR-cut Glass Sales Price (USD/Unit)

Table 2016 Global IR-cut Glass Sales Price (USD/Unit) List (Company Segment)

Figure North America Capacity Overview

Table North America Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E

Figure North America 2012-2017E IR-cut Glass Sales Price (USD/Unit)

Figure North America 2016 IR-cut Glass Sales Market Share

Figure China Capacity Overview

Table China Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E

Figure China 2012-2017E IR-cut Glass Sales Price (USD/Unit)

Figure China 2016 IR-cut Glass Sales Market Share

Figure Europe Capacity Overview

Table Europe Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E

Figure Europe 2012-2017E IR-cut Glass Sales Price (USD/Unit)

Figure Europe 2016 IR-cut Glass Sales Market Share

Figure Southeast Asia Capacity Overview

Table Southeast Asia Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E

Figure Southeast Asia 2012-2017E IR-cut Glass Sales Price (USD/Unit)

Figure Southeast Asia 2016 IR-cut Glass Sales Market Share

Figure Japan Capacity Overview

Table Japan Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E

Figure Japan 2012-2017E IR-cut Glass Sales Price (USD/Unit)

Figure Japan 2016 IR-cut Glass Sales Market Share  
Figure India Capacity Overview  
Table India Supply, Import, Export and Consumption (K Units) of IR-cut Glass 2012-2017E  
Figure India 2012-2017E IR-cut Glass Sales Price (USD/Unit)  
Figure India 2016 IR-cut Glass Sales Market Share  
Table Global 2012-2017E IR-cut Glass Sales (K Units) by Type  
Table Different Types IR-cut Glass Product Interview Price  
Table Global 2012-2017E IR-cut Glass Sales (K Units) by Application  
Table Different Application IR-cut Glass Product Interview Price  
Table Matsunami Glass Ind.,Ltd. Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Matsunami Glass Ind.,Ltd. IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Matsunami Glass Ind.,Ltd. IR-cut Glass Business Region Distribution  
Table Nippon Electric Glass Co., Ltd. Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Nippon Electric Glass Co., Ltd. IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Nippon Electric Glass Co., Ltd. IR-cut Glass Business Region Distribution  
Table HOYA? Information List  
Table Product A Overview  
Table Product B Overview  
Table 2015 HOYA? IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 HOYA? IR-cut Glass Business Region Distribution  
Table Asahi Glass Co., Ltd Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Asahi Glass Co., Ltd IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Asahi Glass Co., Ltd IR-cut Glass Business Region Distribution  
Table Corning? Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Corning? IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)

Figure 2016 Corning? IR-cut Glass Business Region Distribution  
Table Toa Optical Technologies Ltd Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Toa Optical Technologies Ltd IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Toa Optical Technologies Ltd IR-cut Glass Business Region Distribution  
Table SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 SUZHOU QIMENG CRYSTAL MATERIAL PRODUCT CO., LTD IR-cut Glass Business Region Distribution  
Table Giant Nano Technology Co., Ltd. Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Giant Nano Technology Co., Ltd. IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Giant Nano Technology Co., Ltd. IR-cut Glass Business Region Distribution  
Table SKIER Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 SKIER IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 SKIER IR-cut Glass Business Region Distribution  
Table Diffraction Limited Information List  
Table Product A Overview  
Table Product B Overview  
Table 2016 Diffraction Limited IR-cut Glass Revenue (Million USD), Sales (K Units), Ex-factory Price (USD/Unit)  
Figure 2016 Diffraction Limited IR-cut Glass Business Region Distribution  
Table Central Glass Information List  
Figure Global 2017-2022 IR-cut Glass Market Size (K Units) and Growth Rate Forecast  
Figure Global 2017-2022 IR-cut Glass Market Size (Million USD) and Growth Rate Forecast  
Figure Global 2017-2022 IR-cut Glass Sales Price (USD/Unit) Forecast  
Figure North America 2017-2022 IR-cut Glass Consumption Volume (K Units) and

Growth Rate Forecast

Figure China 2017-2022 IR-cut Glass Consumption Volume (K Units) and Growth Rate Forecast

Figure Europe 2017-2022 IR-cut Glass Consumption Volume (K Units) and Growth Rate Forecast

Figure Southeast Asia 2017-2022 IR-cut Glass Consumption Volume (K Units) and Growth Rate Forecast

Figure Japan 2017-2022 IR-cut Glass Consumption Volume (K Units) and Growth Rate Forecast

Figure India 2017-2022 IR-cut Glass Consumption Volume (K Units) and Growth Rate Forecast

Table Global Sales Volume (K Units) of IR-cut Glass by Type 2017-2022

Table Global Consumption Volume (K Units) of IR-cut Glass by Application 2017-2022

Table Traders or Distributors with Contact Information of IR-cut Glass by Region

## I would like to order

Product name: Global IR-cut Glass Market Professional Survey Report 2017

Product link: <https://marketpublishers.com/r/G379285E7FAWEN.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](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G379285E7FAWEN.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