Global and China Photovoltaic Glass Industry Report, 2016-2020

Description: Photovoltaic glass (PV glass) is directly used for solar PV power generation and solar thermal power generation system components and plays a role in transmission and sunlight control, or conduction. It mainly includes ultra-clear patterned glass, TCO glass and PV anti-reflective glass.

The global PV industry has developed steadily in recent years. In 2010-2015, the global cumulative PV installed capacity registered a CAGR of 41.6%, which brought rapid growth of PV glass consumption. In 2015, the global PV glass consumption attained 580 million square meters, up 44.4% year on year. The CAGR is expected to stay above 20% in 2016-2020.

China as the world's largest PV glass producer accounts for roughly 75% of total capacity. In 2015, China produced 310 million square meters of PV glass, up 14.1% year on year. The output is expected to reach 350 million square meters in 2016 and exceed 500 million square meters in 2020.

The Chinese PV glass market enjoys a high concentration ratio, with CR5 of 66.3% in 2015. Among them, Xinyi Solar Holding Ltd. occupied the first place with a 26% share. In the future, following the capacity expansion of major PV glass manufacturers, the market concentration will be further improved.

Xinyi Solar upgraded a 500 t/d PV raw glass production line to 600 t/d in 2015. In 2016, it is engaged in building a 900 t/d solar glass production line in Malaysia; two 1 kt/d solar glass production lines in Anhui Province, which are planned to go into operation in Q4 2016 and Q1 2017 respectively.

In December 2015, Flat Glass Group invested roughly RMB550 million in the construction of a PV glass manufacturing base in Vietnam, mainly offering services to Southeast Asian, Indian, European, South Korean and Japanese customers. The factory is designed to have an annual capacity of 27 million square meters.

In October 2015, China Glass Holdings Limited and Magnificent Vision Group co-invested RMB1.3 billion in building a solar PV glass production line (1 kt/d) in Yumen City.

In May 2016, the 650 t/d ultra-clear high-transmittance PV glass production line of CNBM (Hefei) New Energy Co., Ltd. was completed and put into production. This marked a full success of the biggest oxygen-fuel combustion ultra-clear high-transmittance PV glass production line construction in China. As the project starts to run formally, 24 million square meters of raw sheets and 18 million square meters of coated sheets will be produced each year.

The report highlights the following:
- Development environment, market size, etc. of global PV glass;
- Policy environment, market size, import & export, market price, etc. of Chinese PV glass industry;
- Overview, scale, competition pattern, etc. of major PV glass market segments (ultra-clear patterned glass, TCO glass, PV anti-reflective glass);
- Overview, market size, market structure, competition pattern, etc. of main upstream sectors (silicon dioxide, sodium carbonate, limestone, aluminum oxide) and downstream application (solar cell module) of PV glass;
- Operation, layout in China, revenue structure, PV glass business of 5 global and 18 Chinese PV glass companies.

Contents:
1. Overview of PV Glass
   1.1 Definition and Classification
   1.2 Application
   1.3 Characteristics
   1.4 Manufacturing Technology
   1.5 Industry Chain

2. Status Quo of Global PV Glass Industry
2.1 Policy Environment
2.1.1 Policy Environment
2.1.2 Industry Environment
2.2 Market Size
2.2.1 PV
2.2.2 PV glass

3. Status Quo of China PV Glass Industry
3.1 Policy Environment
3.2 Market Status
3.2.1 PV
3.2.2 PV Glass
3.2.3 Market Price

4. Main PV Glass Products
4.1 Ultra-clear Patterned Glass
4.1.1 Profile
4.1.2 Global Market Demand
4.1.3 Status Quo of Chinese Market
4.1.4 Competition Pattern
4.2 TCO Glass
4.2.1 Profile
4.2.2 Global Market Demand
4.2.3 Status Quo of Chinese Market
4.2.4 Competition Pattern
4.3 PV Anti-reflective Glass
4.3.1 Profile
4.3.2 Status Quo of Chinese Market
4.3.3 Competition Pattern

5. Main Upstream Sectors
5.1 Silicon Dioxide
5.1.1 Overview
5.1.2 Market Size
5.2 Sodium Carbonate
5.2.1 Overview
5.2.2 Market Size
5.3 Limestone (Calcium Carbonate)
5.3.1 Overview
5.3.2 Market Size
5.3.3 Market Structure
5.4 Aluminum Oxide
5.4.1 Overview
5.4.2 Market Size
5.4.3 Market Structure
5.4.4 Market Price
5.5 Other
5.5.1 Carbon
5.5.2 Mirabilite

6. Main Downstream Applications
6.1 Solar Cell
6.1.1 Global
6.1.2 China
6.2 Solar Cell Module
6.2.1 Market Size
6.2.2 Competition Pattern

7. Major PV Glass Companies Worldwide
7.1 AGC
8.7 China Glass Holdings Limited
8.7.1 Profile
8.7.2 Operation
8.7.3 Revenue Structure
8.7.4 Gross Margin
8.7.5 PV Glass Business
8.8 Shandong Jinjing Science & Technology
8.8.1 Profile
8.8.2 Operation
8.8.3 Revenue Structure
8.8.4 PV Glass Business
8.9 Zhuzhou Kibing Group.
8.9.1 Profile
8.9.2 Operation
8.9.3 Revenue Structure
8.9.4 Glass Business
8.10 Henan Ancai Hi-tech
8.10.1 Profile
8.10.2 Operation
8.10.3 Revenue Structure
8.10.4 PV Glass Business
8.11 IRICO Electronics
8.11.1 Profile
8.11.2 Operation
8.11.3 PV Glass Business
8.12 Guangdong Golden Glass Technologies Limited
8.12.1 Profile
8.12.2 Operation
8.12.3 Revenue Structure
8.12.4 PV Glass Business
8.13 Luoyang Glass
8.13.1 Profile
8.13.2 Operation
8.14 Shanghai Yaohua Pilkington Glass Group
8.14.1 Profile
8.14.2 Operation
8.14.3 Revenue Structure
8.14.4 Gross Margin
8.14.5 PV Glass Business
8.15 Flat Glass Group
8.15.1 Profile
8.15.2 Operation
8.15.3 Revenue Structure
8.15.4 PV Glass Business
8.16 Others
8.16.1 Henan Yuhua PV New Materials
8.16.2 Henan Succeed Photovoltaic Materials
8.16.3 Zhejiang Hehe Photovoltaic Glass Technology

9. Summary and Forecast
9.1 Market
9.2 Company

List of Charts
- Classification of PV Glass
- Application of PV Glass in Crystalline Silicon Battery Module
- Application of PV Glass in Thin-film Battery Module
- Application of PV Glass in BIPV
- Manufacturing Technology of PV Glass
- PV Glass Industry Chain
- PV Industry Policies in Major Countries, 2015-2016
- PV Subsidy Policies in Japan, 2015
- Global Solar Cell Output Structure (by Product), 2003-2016
- China's Solar Cell Output and Growth Rate, 2011-2020E
- China's Solar Cell Output Structure (by Region), 2015
- China's Solar Cell Export Value Structure (by Country), 2015
- China's Solar Cell Export Volume Structure (by Country), 2015
- Global Solar Cell Module Capacity and Output, 2008-2020E
- Global Solar Cell Module Output Structure (by Product), 2015
- New PV Cell Module Capacity of Major Global Vendors, 2015
- New PV Cell Module Capacity of Major Chinese Vendors, 2015
- Glass Production Lines of Asahi Glass by Region
- Revenue and Operating Income of Asahi Glass, 2008-2016
- Revenue Breakdown of Asahi Glass by Business, 2010-2016
- Revenue Breakdown of Asahi Glass by Region, 2011-2015
- Major Subsidiaries of Asahi Glass in China
- Marketing Network of Asahi Glass in China
- Revenue and Net Income of Saint-Gobain, 2009-2015
- Revenue Breakdown of Saint-Gobain by Business, 2009-2016
- Revenue Breakdown of Saint-Gobain by Region, 2009-2016
- Revenue and YoY of Saint-Gobain in China, 2002-2015
- Layout of Saint-Gobain in China
- Major Companies of Saint-Gobain in China Involved in Glass Business
- Revenue and Net Income of NSG, FY2009-FY2016
- Revenue Breakdown of NSG by Business, FY2009-FY2016
- Revenue Breakdown of NSG by Region, FY2013-FY2015
- Revenue Breakdown of NSG's Major Products by Region, FY2016
- Subsidiaries of NSG in China
- Factory Distribution of PPG by Region, as of February 18, 2016
- Revenue and Net Income of PPG, 2008-2016
- Revenue Breakdown of PPG by Business, 2009-2016
- Revenue Breakdown of PPG by Region, 2011-2015
- PPG's Cooperation in Glass Business in China
- AR Glass Transmission Rates of SUNARC (by Field)
- Revenue and Net Income of Xinyi Glass, 2007-2015
- Revenue Breakdown of Xinyi Glass by Product, 2007-2015
- Revenue Breakdown of Xinyi Glass by Region, 2007-2015
- Marketing Network of Xinyi Solar in China
- Revenue Breakdown of Xinyi Solar by Product, 2012-2015
- Solar Glass Revenue Structure of Xinyi Solar (by Region), 2012-2015
- PV Glass Production Lines of Xinyi Solar, 2016
- Global Marketing Network of CSG Holding
- Revenue and Net Income of CSG Holding, 2007-2016
- Revenue Breakdown of CSG Holding by Product, 2008-2015
- Revenue Breakdown of CSG Holding by Region, 2008-2015
- Gross Margin of CSG Holding by Product, 2008-2015
- PV Glass Subsidiaries of CSG Holding
- Revenue and Net Income of Shenzhen Topraysolar, 2008-2016
- Revenue Breakdown of Shenzhen Topraysolar by Product, 2009-2015
- Three Overseas Marketing Companies of Shenzhen Topraysolar
- Revenue Breakdown of Shenzhen Topraysolar by Region, 2009-2015
- Gross Margin of Shenzhen Topraysolar by Product, 2009-2015
- Three Major Production Bases of Shenzhen Topraysolar
- Revenue from PV Glass Business of Shenzhen Topraysolar, 2010-2015
- Financials of Major PV Glass Subsidiaries of Shenzhen Topraysolar, 2014-2015
- Industrial Structure of Aviation Sanxin
- Revenue and Net Income of Aviation Sanxin, 2007-2016
- Revenue Breakdown of Aviation Sanxin by Product, 2008-2015
- Revenue Breakdown of Aviation Sanxin by Region, 2008-2015
- Gross Margin of Aviation Sanxin by Product, 2008-2015
- Specialty Glass Production Bases of Aviation Sanxin
- Production Bases of Aviation Sanxin
- Revenue and Net Income of Changzhou Almaden, 2008-2016
- Revenue Breakdown of Changzhou Almaden by Product, 2012-2015
- Revenue Breakdown of Changzhou Almaden by Region, 2009-2015
- Production and Sales Volume of PV Glass of Changzhou Almaden, 2012-2015
- Marketing Network of Jiangsu Xiuqiang Glasswork Worldwide
- Revenue and Net Income of Jiangsu Xiuqiang Glasswork, 2008-2016
- Revenue Breakdown of Jiangsu Xiuqiang Glasswork by Product, 2009-2015
- Revenue Breakdown of Jiangsu Xiuqiang Glasswork by Region, 2010-2015
- Solar Glass Products of Jiangsu Xiuqiang Glasswork
- Marketing Network of Solar Glass of Jiangsu Xiuqiang Glasswork in China
- Production and Sales Volume of PV Glass of Jiangsu Xiuqiang Glasswork, 2012-2015
- Revenue of Solar Glass Business of Jiangsu Xiuqiang Glasswork, 2009-2015
- Leading Products of China Glass Holdings Limited
- Revenue Breakdown of China Glass Holdings Limited by Product, 2010-2015
- Revenue Breakdown of China Glass Holdings Limited by Region, 2008-2015
- Gross Margin of China Glass Holdings Limited by Product, 2010-2015
- Main PV Production Lines of China Glass Holdings Limited
- Revenue Breakdown of Shandong Jinjing Science & Technology by Region, 2008-2015
- Glass Production Lines of Shandong Jinjing Science & Technology
- Global Marketing Network of Zhuzhou Kibing Group
- Revenue and Net Income of Zhuzhou Kibing Group, 2008-2016
- Revenue Breakdown of Zhuzhou Kibing Group by Product, 2008-2015
- Revenue Breakdown of Zhuzhou Kibing Group by Region, 2008-2015
- Production Bases of Zhuzhou Kibing Group
- PV Glass Production Lines of Zhuzhou Kibing Group
- Revenue and Net Income of Henan Ancai Hi-tech, 2008-2016
- Revenue Breakdown of Henan Ancai Hi-tech by Product, 2012-2015
- Revenue Breakdown of Henan Ancai Hi-tech by Product, 2012-2015
- Revenue and Gross Margin of PV Glass Business of Henan Ancai Hi-tech, 2010-2015
- Revenue and Gross Profit of IRICO Group Electronics, 2008-2015
- PV Glass Production Lines of IRICO Group Electronics
- Revenue of PV Glass Business of IRICO Group Electronics, 2010-2015
- Revenue and Net Income of Luoyang Glass, 2008-2016
- Marketing Network of Shanghai Yaohua Pilkington Glass Group
- Subsidiaries of Shanghai Yaohua Pilkington Glass Group
- Revenue and Net Income of Shanghai Yaohua Pilkington Glass Group, 2007-2016
- Revenue Breakdown of Shanghai Yaohua Pilkington Glass Group by Product, 2015
- Revenue Breakdown of Shanghai Yaohua Pilkington Glass Group by Region, 2008-2015
- Gross Margin of Shanghai Yaohua Pilkington Glass Group, 2006-2015
- Revenue and Net Income of Flat Glass, 2012-2015
- Revenue Breakdown and Structure of Flat Glass Group (by Product), 2014-2015
- Revenue Breakdown and Structure of Flat Glass Group (by Region), 2014-2015
- Major PV Glass Production Bases of Flat Glass Group
- Industrial Chains of Henan Succeed Photovoltaic Materials Corporation
- Global and China’s New PV Installed Capacity Growth Rates, 2006-2020E
- Global Major PV Glass Consumption, 2007-2016
- Revenue Growth Rates of Major Global PV Glass Companies, 2007-2015
- Competition Pattern of China PV Glass Market, 2015

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: Global and China Photovoltaic Glass Industry Report, 2016-2020
Web Address: http://www.researchandmarkets.com/reports/3783612/
Office Code: SCBR4T7T

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Product Format</th>
<th>Quantity</th>
<th>Unit Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User</td>
<td></td>
<td>USD 2400</td>
</tr>
<tr>
<td>Hard Copy</td>
<td></td>
<td>USD 2600 + USD 58 Shipping/Handling</td>
</tr>
<tr>
<td>Electronic (PDF) - Enterprise Wide</td>
<td></td>
<td>USD 3800</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title:                  Mr ☐ Mrs ☐ Dr ☐ Miss ☐ Ms ☐ Prof ☐
First Name:             ____________________________  Last Name: ____________________________
Email Address: *         ____________________________
Job Title:              ____________________________
Organisation:           ____________________________
Address:                ____________________________
City:                   ____________________________
Postal / Zip Code:      ____________________________
Country:                ____________________________
Phone Number:           ____________________________
Fax Number:             ____________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account number</td>
<td>833 130 83</td>
</tr>
<tr>
<td>Sort code</td>
<td>98-53-30</td>
</tr>
<tr>
<td>Swift code</td>
<td>ULSBIE2D</td>
</tr>
<tr>
<td>IBAN number</td>
<td>IE78ULSB98533083313083</td>
</tr>
</tbody>
</table>
| Bank Address      | Ulster Bank,
                    | 27-35 Main Street, |
                    | Blackrock,         |
                    | Co. Dublin,        |
                    | Ireland.           |

If you have a Marketing Code please enter it below:

Marketing Code: ____________________________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World