

The Vertical Portal for China Business Intelligence

STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- To establish a comprehensive, factual, annually updated and costeffective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

Copyright 2012 ResearchInChina

The Vertical Portal for China Business Intelligence

Abstract

Global 3D glass market size reached USD874 million in 2016, and is expected to surge to USD1.426 billion in 2017 and USD3.582 billion in 2021 spurred by application of new technologies like wireless charging and 5G communications and massive use of OLED screen.

3D glass finds its largest application in smartphone. Global demand for smartphone 3D glass was worth about USD700 million in 2016, accounting for 80%. Mobile phone vendors like Samsung, Huawei, Vivo, Coolpad, Xiaomi and Gionee have launched mid and high-end cellphones using 3D cover glass since 2016; Apple launched iPhone8, iPhone8 Plus and iPhone X in Sept 2017 whose OLED+3D dual-curved glass is the spotlight and gives new impetus to 3D cover glass industry. It is predicted that global smartphone 3D cover glass market will usher in a period of rapid development from 2017 on and hit USD3.201 billion in 2021.

China, a major 3D glass market in the world, made up around 15% (RMB842 million) of global market in 2016. As a large number of smartphones adopting 3D cover and back glass are launched, the Chinese 3D glass market is anticipated to exceed RMB5 billion in 2020 and approximately RMB6.2 billion in 2021.

Chinese enterprises dominate the supply pattern of global 3D glass processing market with over 90% market share together occupied by Biel Crystal Manufactory and Lens Technology in 2016. A rising demand for smartphone 3D glass has stimulated Shenzhen O-film Tech, Triumph Science & Technology, Suzhou Victory Precision Manufacture and BYD Electronic to speed up their presence in 3D curved glass field. BYD Electronic began construction of the 3D glass project in Shantou in May and of the 3D glass project in Huizhou in July 2017. Total capacity will exceed 200 million pcs/a when the two projects go into production. Suzhou Victory Precision Manufacture announced in August 2017 that it planned to build 3D cover glass production lines in Shucheng County (Anhui) with Phase-I 15 million pcs/a estimated to go into operation in 2018 and Phase II adding 60 million pcs/a.

Glass substrate, a core raw material of 3D glass, accounts for around 50% of the costs. Global demand for LCD glass substrate grew by 6% from a year ago to 470 million square meters in 2016 and will reach 490 million square meters or so in 2017 and 600 million square meters in 2021. Roughly 90% of the high-barrier market is in the hands of several international giants including Corning, Samsung Corning, Asahi Glass and Nippon Electric Glass. Among Chinese enterprises, Caihong Display Devices and Dongxu Optoelectronic Technology are capable of producing glass substrate but primarily the products below 6th generation, and are preparing production lines for the G8.5 glass substrate which is most demanded. As technology advances and demand changes, high generation and being light and thin will be the direction where glass substrate will be headed.

Copyright 2012ResearchInChina

The Vertical Portal for China Business Intelligence

Global and China 3D Glass Industry Chain Report, 2017-2021 focuses on the followings:

- ◆Global 3D glass industry (supply, demand, market/regional structure, etc.);
- ◆Chinese 3D glass market (size, structure, patent, prices, competitive landscape, drivers, etc.);
- ◆3D glass production materials (glass substrate, polishing materials, coating materials, ink) (market size, competitive landscape, etc.);
- ♦3D glass processing equipment (hot bending machine, CNC engraving machine, flat grinding machine) (market size, competition, processing technology, etc.);
- ◆Applications (smartphone, wearable device, and VR) (market status, demand for 3D glass, etc.);
- ♦16 global and Chinese 3D glass manufacturers (operation, 3D glass business, etc.)



Copyright 2012ResearchInChina

3.2.2 Pattern

3.4 Market Price

3.3 Competitive Landscape

The Vertical Portal for China Business Intelligence

Table of contents

7.3.2 Operation

7.4 O-Film Tech

7.3.3 3D Glass Business

1. Overview of 3D Glass 3.5 Market Drivers 6. Main Applications 1.1 Definition 6.1 Smartphone 4. 3D Glass Production Materials 6.1.1 Market Size 1.2 Advantage 1.3 Production Process 4.1 Glass Substrate 6.1.2 Advantages of 3D Glass Phone Screen 6.1.3 Trends of Phone Screen 1.4 Industry Chain 4.1.1 Production Technology 1.5 Industry Characteristics 4.1.2 Market Size 6.1.4 Mobile Phone Brands Adopting 3D Glass 1.5.1 Periodicity 4.1.3 Competitive Landscape 6.2 Wearable Device 1.5.2 Seasonality 4.2 Polishing Material 6.2.1 Market Size 1.5.3 Regionality 4.2.1 Market Status 6.2.2 3D Glass Application 4.2.2 Competitive Landscape 1.5.4 High Processing Barrier 6.3 VR 4.3 Other 6.3.1 Market Size 2. Global 3D Glass Industry 4.3.1 Coating Materials 6.3.2 3D Glass Application 2.1 Market Size 4.3.2 lnk **2.1.1 Supply** 7. Key Players 2.1.2 Demand 5. 3D Glass Processing Equipment 7.1 Lens Technology 2.2 Market Structure 5.1 Hot Bending Machine 7.1.1 Profile 5.1.1 Market Size 2.3 Regional Structure 7.1.2 Operation 5.1.2 Competition 7.1.3 3D Glass Business 5.2 CNC Engraving Machine 3. 3D Glass Industry in China 7.2 CPT Technology 3.1 Market 5.2.1 Market Size 7.2.1 Profile 3.1.1 Market Size 5.2.2 Competition 7.2.2 Operation 5.2.3 Processing Technology 3.1.2 Market Structure 7.2.3 3D Glass Business 3.2 Patent 5.2.4 Core Technology 7.3 Firstar Panel Technology 5.2.5 Development Trend 3.2.1 Total Quantity 7.3.1 Profile

5.3 Flat Grinding Machine

5.3.2 Competitive Landscape

5.3.1 Overview

The Vertical Portal for China Business Intelligence

Table of contents

- 7.4.1 Profile
- 7.4.2 Operation
- 7.4.3 3D Glass Business
- 7.5 Triumph Science & Technology
- 7.5.1 Profile
- 7.5.2 Operation
- 7.5.3 3D Glass Business
- 7.6 Holitech Technology
- 7.6.1 Profile
- 7.6.2 Operation
- 7.6.3 3D Glass Business
- 7.7 G-Tech Optoelectronics
- 7.7.1 Profile
- 7.7.2 Operation
- 7.7.3 3D Glass Business
- 7.8 Corning
- 7.8.1 Profile
- 7.8.2 Operation
- 7.8.3 3D Glass Business
- 7.9 RBD Technology
- 7.9.1 Profile
- 7.9.2 Operation
- 7.10 Other
- 7.10.1 Biel Crystal Manufactory
- 7.10.2 Samsung Corning Precision Glass
- 7.10.3 Wuhu Token Sciences

- 7.10.4 Truly International
- 7.10.5 Shenzhen DJN Optronics
- 7.10.6 Henan Comyoung Electronics
- 7.10.7 JANUS (Dongguan) Precision Components
- 7.10.8 BYD Electronics

The Vertical Portal for China Business Intelligence

- Shape Difference between 2D/2.5D/3D Glass
- Performance Comparison between 2D Glass and 3D Glass
- Glass Processing Technology
- 2.5D Glass Processing Technology
- 3D Glass Molding Process
- Comparison of 2D, 2.5D and 3D Glass Production Technologies
- 3D Glass Industry Chain
- Competitive Landscape of 3D Glass Industry Chain
- Main 3D Glass Processing Barriers
- Global 3D Glass Shipments, 2016-2021E
- Global 3D Glass Market Size, 2015-2021E
- Global 3D Glass Penetration Rate, 2015-2021E
- Global 3D Glass Demand, 2015-2021E
- Global 3D Glass Market Size Structure (by Application), 2015-2021E
- Global 3D Glass Production Structure (by Region), 2016
- China's 3D Glass Market Size, 2016-2021E
- China's 3D Glass Penetration Rate, 2016-2021E
- China's 3D Glass Market Size Structure (by Application), 2016-2021E
- Applications for 3D Glass Patents in China, 2010-2021E
- Applications of Major Manufacturers for 3D Glass Patents in China, by Jun 2016
- 3D Glass Technical Roadmap of Major Manufacturers
- Shipments of Major Cover Glass Manufacturers in China, 2017
- Competitive Landscape of Chinese 3D Glass Market, 2016
- 3D Glass Layout of Major Manufacturers in China, 2017
- Leading 3D Glass Manufacturers and Their Capacity in China by End-October 2017

The Vertical Portal for China Business Intelligence

- Market Prices of Different Mobile Phone Glass in China, 2017
- Market Prices of 3D Mobile Phone Cover Glass in China, 2016-2021E
- Global Wireless Charging Market Size, 2014-2025E
- Mobile Terminals (by Model) Using Wireless Charging in Recent Years
- Mobile Phone Appearance Revolution by AMOLED+3D Glass
- Cost Structure of 3D Glass, 2016
- Cost Structure of Raw Materials for 3D Glass in 2016
- Structure of Glass Substrate
- Properties of Glass Substrate
- Dimensions and Applications of Glass Substrate
- Floating Process for Glass Substrate
- Orifice-flow Pulling-down Process of Glass Substrate
- Overflow Fusion Process of Glass Substrate
- Three Technologies for Manufacturing Glass Substrate
- Global Market Pattern of Glass Substrate (by Technology) for Cellphone Cover, 2016
- Global Glass Substrate Capacity, 2013-2018E
- Global Glass Substrate Demand, 2014-2021E
- China's Glass Substrate Demand, 2013-2021E
- China's Glass Substrate Supply, 2013-2021E
- Competitive Landscape of Chinese Glass Substrate Market, 2016
- World's Leading Suppliers of Glass Cover Substrate
- Production Bases and Major Customers of World's Leading Glass Substrate Manufacturers
- Chinese Manufacturers' Layout in Glass Substrate Manufacturing Line
- Application Proportion of Rare-earth Elements in Rare-earth Polishing Materials
- Major Applications of Rare-earth Polishing Powder in China, 2016

The Vertical Portal for China Business Intelligence

- Capacity of Major Polishing Material Enterprises in China, 2016
- China's Ink Output, 2010-2021E
- Top 20 Ink Companies in China, 2016
- Hot Bending Process
- Global Capacity and Prices of Hot Bending Machines, 2016-2021E
- Global Demand for 3D Glass-use Hot Bending Machine, 2016-2021E
- Global 3D Glass-use Hot Bending Machine Market Size, 2015-2020E
- China's Demand for 3D Glass-use Hot Bending Machine, 2016-2021E
- Global Share of China's Demand for 3D Glass-use Hot Bending Machine, 2016-2021E
- Hot Bending Machine Ownership of Major Manufacturers in China
- Major Suppliers of 3D Glass Hot Bending Machine in China, 2017
- Global Demand for 3D Glass-use Five-axis CNC Engraving Machine, 2016-2021E
- Global 3D Glass-use Five-axis CNC Engraving Machine Market Size, 2016-2021E
- China's Demand for 3D Glass-use Five-axis CNC Engraving Machine, 2016-2021E
- China 3D Glass-use Five-axis CNC Engraving Machine Market Size, 2016-2021E
- Major Manufacturers of CNC Engraving Machine and Related Parts in China
- Processing Time of Bi-metal Die-casting
- Global Major CNC System Suppliers
- Competitive Landscape of Chinese CNC System Market, 2016
- Product Lines of Major CNC System Manufacturers
- Domestic and Foreign Major CNC Machine Tool Electric Spindle Manufacturers
- Development History and Trend of CNC Engraving Machine
- Optical Glass Grinding and Polishing Process
- 2D Glass Grinding and Polishing Machine
- 2.5D/3D Glass Grinding and Polishing Machine

The Vertical Portal for China Business Intelligence

- Top 22 Manufacturers of 3D Glass Polishing Machine in China
- Global Smartphone Shipments and Growth Rate, 2009-2021E
- Global Shipments and Market Share of Smart Phone Suppliers, 2015-2016
- Global Shipments and Market Share of Smart Phone Suppliers, 2017Q1
- Global Smartphone Shipments Structure (by Screen Size), 2015-2021E
- Global Smartphone Display Shipment Structure, 2015-2020E
- Types of Display Adopted by Major Smartphone Vendors, 2016
- Global Market Share of AMOLED Mobile Phones by Brand, 2016
- Shipments of Global Major Smartphone Panel Vendors, 2017H1
- Shares of Smartphone Shipment by Price in China, 2013-2017
- Assembly Rate of AMOLED Screen in Smart Phone in China, 2014-2021E
- AMOLED Cellphone Shipments by Brand in China, 2016
- Structure of Top 10 Cellphone Brands by Panel Technology in China, 2015-2016
- Main Types of Curved-screen Mobile Phones
- Smartphone Front and Back Cover Combination Design Modes
- Smartphone Front and Back Cover Design Trends
- Penetration Rate of 3D Cover Glass in Global Smartphone Field, 2015-2021E
- Structure of Galaxy S7 with Metal Frame + Glass Body
- Motorola's Shatter Shield Structure
- Mobile Phone Brands Using 3D Glass, 2016-2017
- Development Trend of Mobile Phone Cover Glass
- OLED Penetration of Leading Mobile Phone Vendors Worldwide, 2016-2021E
- Global Shipments of OLED Panel, 2015-2021E
- Global Demand and Demand Scale for Smartphone-use 3D Glass, 2015-2021E
- China's Demand for Smartphone-use 3D Glass, 2016-2021E

The Vertical Portal for China Business Intelligence

- China's Demand Scale for Smartphone-use 3D Glass, 2016-2021E
- Global Wearable Device Shipments, 2016-2021E
- Global Wearable Device Shipments (by Product), 2016-2021E
- Competitive Landscape of Global Wearable Device Market, 2016-2017
- China's Wearable Device Market Size, 2012-2021E
- Ranking of Major Wearable Device Vendors in China by Shipment, 2016-2017
- Global Wearable Device Panel Shipments and Growth Rate, 2014-2024E
- Penetration Rate of AMOLED in Global Wearable Devices, 2015-2021E
- Global Shipment of OLED Panels for Wearable Devices, 2015-2021E
- Global Demand of 3D Glass for Wearable Devices, 2016-2021E
- Structure of VR System
- Global VR/AR Market Size, 2016-2021E
- Global VR Hardware Shipments, 2016-2021E
- Market Share of VR by Brand, 2016
- Applications of VR
- Financing in Global VR Industry, 2015-2016
- Financing Structure in Global VR Industry, 2015-2016
- Financing in Domestic VR Industry, 2017
- China VR Market Size, 2016-2021E
- China VR Market Size by Segment, 2016
- Chinese Market Size of VR Head-mounted Devices, 2016-2021E
- Shipment of VR Head-mounted Devices in China, 2016-2021E
- Competitive Landscape of Major VR Products in China
- Mainstream VR Products Using AMOLED Screens
- Penetration Rate of AMOLED in Headset VR Field, 2016-2021E

The Vertical Portal for China Business Intelligence

- Equity Structure of Lens Technology, 2017
- Distribution of Lens Technology's Bases
- Revenue and Net Income of Lens Technology, 2012-2017
- Revenue Structure of Lens Technology (by Product), 2012-2017
- Curved-glass Cover Output of Lens Technology, 2016
- Lens Technology's Layout in Glass Cover
- Equity Structure of CPT Technology, 2017H1
- Revenue and Net Income of CPT Technology, 2013-2017
- Revenue Structure of CPT Technology (by Business), 2014-2017
- Revenue Structure of CPT Technology (by Region), 2014-2017
- CPT Technology's Revenue from Major Customers and % of Total Revenue, 2016
- KMTC's Revenue and Net Income, 2014-2017
- 3D Glass Capacity of CPT Technology, 2015-2018
- Equity Structure of Firstar Panel Technology, 2017H1
- Revenue and Net Income of Firstar Panel Technology, 2013-2017
- Revenue Structure of Firstar Panel Technology (by Product), 2014-2016
- Revenue Structure of Firstar Panel Technology (by Sales Mode), 2014-2016
- Firstar Panel Technology's Layout in Display Module Products and the Tendency
- Equity Structure of O-Film Tech, 2017H1
- Main Business Distribution of O-Film Tech
- Revenue and Net Income of O-Film Tech, 2012-2017
- Revenue Structure of O-Film Tech (by Product), 2014-2017
- Revenue Structure of O-Film Tech (by Region), 2014-2017
- Touch Display Revenue and Growth Rate of O-Film Tech, 2013-2017
- Equity Structure of Triumph Science & Technology, 2017Q3

The Vertical Portal for China Business Intelligence

- Revenue and Net Income of Triumph Science & Technology, 2013-2017
- Production and Sales of Triumph Science & Technology (by Product), 2016
- Revenue Structure of Triumph Science & Technology (by Product), 2014-2016
- Revenue Structure of Triumph Science & Technology (by Region), 2014-2016
- Revenue and YoY Growth of Anhui Bengbu Huayi Conducive Film Glass Co., Ltd., 2010-2017
- Net Income and YoY Growth of Anhui Bengbu Huayi Conducive Film Glass Co., Ltd., 2010-2017
- Equity Structure of Holitech Technology, 2017Q3
- Business Layout of Holitech Technology
- Development Course of Holitech Technology
- Revenue and Net Income of Holitech Technology, 2013-2017
- Revenue Structure of Holitech Technology (by Product), 2015-2017
- Revenue Structure of Holitech Technology (by Region), 2014-2017
- Output and Sales Volume of Holitech Technology's Touch Display Products, 2015-2016
- Revenue and Net Income of G-Tech Optoelectronics, 2012-2017
- Revenue Structure of G-Tech Optoelectronics (by Region), 2012-2016
- Revenue and Net Income of Corning, 2013-2017
- Revenue Structure of Corning (by Business), 2015-2016
- Revenue Structure of Corning (by Region), 2014-2016
- Corning's GorillaGlass4 Drop Tests
- Corning's Revenue from Gorilla Glass Products, 2014-2016
- Revenue and Net Income of RBD Technology, 2013-2017
- Revenue Structure of RBD Technology (by Product), 2014-2016
- Name List and Revenue Contribution of RBD Technology's Top 5 Customers, 2016
- Milestones of Biel Crystal Manufactory since 2000
- Curved Glass Cover Output of Biel Crystal Manufactory, 2016

The Vertical Portal for China Business Intelligence

- Revenue and Net Income of Wuhu Token Sciences, 2013-2017
- Revenue and Net Income of Truly, 2014-2017
- Revenue Structure of Truly (by Product), 2015-2016
- Revenue Structure of Truly (by Region), 2015-2016
- Main Products of JANUS (Dongguan) Precision Components
- Revenue and Net Income of JANUS (Dongguan) Precision Components, 2011-2017
- Revenue from Consumer Electronics Precision Structural Parts of JANUS (Dongguan) Precision Components, 2012-2017
- Revenue and Net Income of BYD Electronic, 2012-2017
- Revenue Structure of BYD Electronic (by Business), 2016
- Name List and Revenue Contribution of BYD Electronic's Major Phone Case Customers, 2016

The Vertical Portal for China Business Intelligence

How to Buy

You can place your order in the following alternative ways:

- 1.Order online at www.researchinchina.com
- 2.Fax order sheet to us at fax number: +86 10 82601570
- 3. Email your order to: report@researchinchina.com
- 4. Phone us at +86 10 82600828/ 82601561

Party A:			
Name:			
Address:			
Contact Person:		Tel	
E-mail:		Fax	

Party B:				
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)			
Address:	Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18,			
	Suzhou Street, Haidian District, Beijing, China 100080			
Contact	Liao Yan	Phone:	86-10-82600828	
Person:				
E-mail:	report@researchinchina.com	Fax:	86-10-82601570	
Bank details:	Beneficial Name: Beijing Waterwood Technologies Co., Ltd			
	Bank Name: Bank of Communications, Beijing Branch			
<u> </u>	Bank Address: NO.1 jinxiyuan shijicheng,Landianchang,Haidian			
	District, Beijing			
	Bank Account No #: 110060668012015061217			
	Routing No # : 332906			
	Bank SWIFT Code: COMMCNSHBJG			

Title	Format	Cost
Total		

Choose type of format

PDF (Single user license)	.2,800	USD
Hard copy	3,000	USD
PDF (Enterprisewide license)	4.100	USD

※ Reports will be dispatched immediately once full payment has been received.
Payment may be made by wire transfer or credit card via PayPal.



The Vertical Portal for China Business Intelligence

RICDB service

About ResearchInChina

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

Our Major Activities

□ Multi-users	market	reports
---------------	--------	---------

□ Database-RICDB

□ Custom Research

□ Company Search

RICDB (http://www.researchinchina.com/data/database.html), is a visible financial data base presented by map and graph covering global and China macroeconomic data, industry data, and company data. It has included nearly 500,000 indices (based on time series), and is continuing to update and increase. The most significant feature of this base is that the vast majority of indices (about 400,000) can be displayed in map.

After purchase of our report, you will be automatically granted to enjoy 2 weeks trial service of RICDB for free.

After trial, you can decide to become our formal member or not. We will try our best to meet your demand. For more information, please find at www.researchinchina.com

For any problems, please contact our service team at: