Global and China 3D Glass Industry Chain Report, 2018-2023

September 2018

ResearchInChina
www.researchinchina.com

ResearchInChina

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 cost-effective 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.

Room 801, B1, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080
Phone: +86 10 82600828 ● Fax: +86 10 82601570 ● www.researchinchina.com ● report@researchinchina.com

Abstract

The rise of curved screen conduces to the growth of 3D glass industry. Global 3D glass market size was approximately USD1.38 billion in 2017, soaring by 55.2% from a year earlier, a figure projected to surge to USD2.13 billion in 2018 and USD5.0 billion in 2023 in the wake of higher penetration of 3D glass (about 16.2% in 2017).

In China, 3D glass penetration remains well below the global average and market size is small, leaving much room for growth. China's 3D glass market was worth roughly RMB1.52 billion (around USD220 million by an exchange rate of 1: 6.75) in 2017, and is expected to show an AAGR of over 20% between 2018 and 2023.

In the downstream markets, 3D glass is often used in smartphones and wearable devices and also finds small application in head-mounted VR devices, vehicle console display, portable dashboard, etc..

In particular, smartphones consume 3D glass most for the moment, in 2017 making up over 70% of total 3D glass demand worldwide, and even a higher proportion, above 90%, in China. Over the past two years, 3D glass was not only applied to high-end cellphone models of Apple and Samsung but employed by low- and mid-end smartphone brands like Xiaomi, Vivo and OPPO. Global penetration of 3D glass into smartphones rocketed to 8.1% in 2017 from 0.5% in 2015, and is predicted to outstrip 30.0% in 2023.

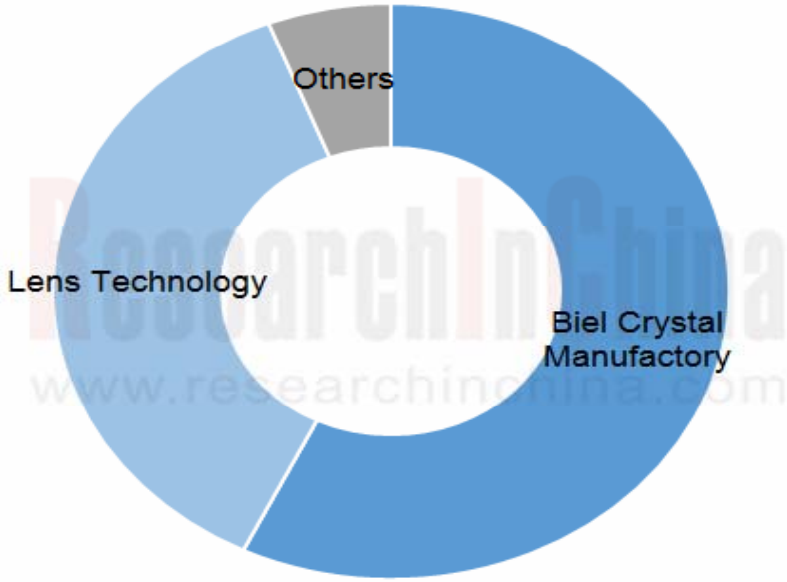
As wearable device market has grown mature over the years, its demand for 3D glass keeps rising. The world's demand for 3D glass from wearable devices reached about 38 million pieces in 2017, with an estimated AAGR of over 35.0% during 2018-2023.

As concerns competition, Biel Crystal Manufactory and Lens Technology now seize a combined over 90% share in the Chinese 3D glass market, of which the former alone grabs 50% at least. O-Film Tech, BYD Electronics and Jiangxi Lianchuang Electronics however worked hard on 3D glass layout in recent years. The monopoly in the market is to be broken and competition will prick up in the coming years.

The 3D glass industry in China will be facilitated by the following:
1. The Ministry of Industry and Information Technology of China (MIIT) announced the commercial use of 5G system in late 2017, so metal smartphone case becomes more detrimental to signal receiving while non-metallic materials like glass begin to emerge.
2. AMOLED screen is used more widely. In 2017, its penetration in Samsung stood at over 80%, OPPO and Vivo above 50%. Use of such display needs 3D glass.

Global and China 3D Glass Industry Chain Report, 2018-2023 highlights the following:
◆Global 3D glass industry (supply, demand, market structure, etc.);
◆Chinese 3D glass market (size, structure, patents, prices, competitive pattern, drivers, etc.);
◆3D glass production materials (glass substrate, polishing materials, coating materials, ink, etc.) (market size, competitive pattern, etc.);
◆3D glass processing equipment (hot bending machine, CNC engraving machine, flat grinding machine, etc.) (market size, competition, processing technology, etc.);
◆Downstream applications (smartphone, wearable device, VR, etc.) (market status, demand for 3D glass, etc.);
◆17 global and Chinese 3D glass manufacturers (operation, 3D glass business, etc.)

Competitive Pattern of 3D Glass Market in China, 2017



Source: ResearchInChina

ResearchInChina

The Vertical Portal for China Business Intelligence

Table of contents

Room 801, B1, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080
Phone: +86 10 82600828 ● Fax: +86 10 82601570 ● www.researchinchina.com ● report@researchinchina.com

Selected Charts

- 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, 2016-2023E
- Global 3D Glass Market Size, 2016-2023E
- Global 3D Glass Penetration Rate, 2015-2023E
- Global 3D Glass Demand, 2015-2023E
- Global 3D Glass Market Size Structure (by Application), 2016-2023E
- Global 3D Glass Production Structure (by Region), 2017
- China's 3D Glass Market Size, 2016-2023E
- China's 3D Glass Penetration Rate, 2016-2023E
- China's 3D Glass Market Size Structure (by Application), 2017-2023E
- Applications for 3D Glass Patents in China, 2010-2023E
- Applications of Major Manufacturers for 3D Glass Patents in China, 2017
- 3D Glass Technical Roadmap of Major Manufacturers
- Shipments of Major Cover Glass Manufacturers in China, 2017-2018
- Customers Supported by Chinese Cover Glass Manufacturers
- Competitive Landscape of Chinese 3D Glass Market, 2017
- 3D Glass Layout of Major Manufacturers in China, 2017

Selected Charts

- Leading 3D Glass Manufacturers and Their Capacity in China by 2017
- Market Prices of Different Mobile Phone Glass in China, 2017
- Market Prices of 3D Mobile Phone Cover Glass in China, 2016-2023E
- Global Wireless Charging Market Size, 2012-2023E
- 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 2017
- 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, 2017
- Global Glass Substrate Capacity, 2013-2018E
- Global Glass Substrate Demand, 2014-2023E
- China's Glass Substrate Demand, 2013-2023E
- China's Glass Substrate Supply, 2013-2023E
- Competitive Landscape of Chinese Glass Substrate Market, 2017
- 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

Selected Charts

- Major Applications of Rare-earth Polishing Powder in China, 2017
- Capacity of Major Polishing Material Enterprises in China, 2017
- China's Ink Output, 2013-2023E
- TOP15 Ink Companies in the World, 2016
- Top 20 Ink Companies in China, 2016
- 3D Glass Process Flow
- Hot Bending Process
- Global Capacity and Prices of Hot Bending Machines, 2016-2023E
- Global Demand for 3D Glass-use Hot Bending Machine, 2016-2023E
- Global 3D Glass-use Hot Bending Machine Market Size, 2016-2023E
- China's Demand for 3D Glass-use Hot Bending Machine, 2016-2023E
- Global Share of China's Demand for 3D Glass-use Hot Bending Machine, 2016-2023E
- 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, 2016-2023E
- Global 3D Glass-use Five-axis CNC Engraving Machine Market Size, 2016-2023E
- China's Demand for 3D Glass-use Five-axis CNC Engraving Machine, 2016-2023E
- 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, 2017
- 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

Selected Charts

- Optical Glass Grinding and Polishing Process
- 2D Glass Grinding and Polishing Machine
- 2.5D/3D Glass Grinding and Polishing Machine
- Top 22 Manufacturers of 3D Glass Polishing Machine in China
- Global Smartphone Shipments and Growth Rate, 2011-2023E
- Global Shipments and Market Share of Smart Phone Suppliers, 2016-2017
- Global Shipments and Market Share of Smart Phone Suppliers, 2018Q1-Q2
- Global Smartphone Shipments Structure (by Screen Size), 2015-2021E
- Global Smartphone Display Shipment Structure, 2015-2020E
- Types of Display Adopted by Major Smartphone Vendors, 2017
- Ranking of Smartphone Panel Shipments Worldwide, 2017
- Global Market Share of AMOLED Mobile Phones by Brand, 2018H1
- Smartphone Shipments in China, 2009-2018
- Shares of Smartphone Shipment by Price in China, 2013-2017
- Assembly Rate of AMOLED Screen in Smart Phone in China, 2014-2023E
- Chinese Market Share of AMOLED Mobile Phones by Brand, 2018H1
- Mobile Phone Glass Cover Market Size in China, 2011-2018
- 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, 2015-2023E
- Quantity of Top 50 Best-selling Cellphones Using Glass Cover in China, 2017
- Development Trends of Cellphones with 3D Glass and Ceramic Cases, 2014-2017
- Structure of Galaxy S7 with Metal Frame + Glass Body
- Motorola’s Shatter Shield Structure

Selected Charts

- Mobile Phone Brands Using 3D Glass, 2016-2018
- Development Trend of Mobile Phone Cover Glass
- OLED Penetration of Leading Mobile Phone Vendors Worldwide, 2016-2021E
- Global Shipments of OLED Panel, 2015-2023E
- Global Demand and Demand Scale for Smartphone-use 3D Glass, 2015-2023E
- China's Demand for Smartphone-use 3D Glass, 2016-2023E
- China's Demand Scale for Smartphone-use 3D Glass, 2016-2023E
- Global Wearable Device Shipments, 2016-2023E
- Global Wearable Device Shipments (by Product), 2016-2021E
- Competitive Landscape of Global Wearable Device Market, 2017-2018
- China's Wearable Device Market Size, 2012-2023E
- Ranking of Major Wearable Device Vendors in China by Shipment, 2017-2018
- Global Wearable Device Panel Shipments and Growth Rate, 2014-2024E
- Penetration Rate of AMOLED in Global Wearable Devices, 2015-2023E
- Global Shipment of OLED Panels for Wearable Devices, 2015-2023E
- Global Demand of 3D Glass for Wearable Devices, 2016-2023E
- Structure of VR System
- Global VR/AR Market Size, 2015-2023E
- Global VR Hardware Shipments, 2016-2023E
- Applications of VR
- Market Share of VR by Brand, 2017
- Financing in Global VR Industry, 2017-2018
- Financing in China VR Industry, 2017-2018
- China VR Market Size, 2016-2023E
- Chinese Market Size of VR Head-mounted Devices, 2016-2023E

Selected Charts

- Shipment of VR Head-mounted Devices in China, 2016-2023E
- Competitive Landscape of Major VR Products in China
- Mainstream VR Products Using AMOLED Screens
- Penetration Rate of AMOLED in Headset VR Field, 2016-2023E
- Equity Structure of Lens Technology, 2018
- Distribution of Lens Technology's Bases
- Revenue and Net Income of Lens Technology, 2012-2018
- Revenue Structure of Lens Technology (by Product), 2012-2017
- Curved-glass Cover Output of Lens Technology, 2016-2018
- Lens Technology's Layout in Glass Cover
- Equity Structure of CPT Technology, 2018
- Revenue and Net Income of CPT Technology, 2012-2018
- Revenue Structure of CPT Technology (by Business), 2014-2018
- Revenue Structure of CPT Technology (by Region), 2014-2018
- CPT Technology's Revenue from Major Customers and % of Total Revenue, 2016-2017
- KMTC's Revenue and Net Income, 2014-2018
- 3D Glass Capacity of CPT Technology, 2015-2018
- Equity Structure of Firstar Panel Technology, 2018
- Revenue and Net Income of Firstar Panel Technology, 2013-2017
- Revenue Structure of Firstar Panel Technology (by Product), 2014-2017
- Revenue Structure of Firstar Panel Technology (by Sales Mode), 2014-2017
- Firstar Panel Technology's Layout in Display Module Products and the Tendency
- Equity Structure of O-Film Tech, 2018
- Main Business Distribution of O-Film Tech
- Revenue and Net Income of O-Film Tech, 2012-2018

Selected Charts

- Revenue Structure of O-Film Tech (by Product), 2014-2018
- Revenue Structure of O-Film Tech (by Region), 2014-2018
- Touch Display Revenue and Growth Rate of O-Film Tech, 2013-2018
- Equity Structure of Triumph Science & Technology, 2018
- Main Business and Capacity of Triumph Science & Technology, 2018
- Revenue and Net Income of Triumph Science & Technology, 2013-2018
- Production and Sales of Triumph Science & Technology (by Product), 2017
- Revenue Structure of Triumph Science & Technology (by Product), 2014-2017
- Revenue Structure of Triumph Science & Technology (by Region), 2014-2017
- Revenue and Net Income of Anhui Bengbu Huayi Conducive Film Glass Co., Ltd., 2010-2017
- Equity Structure of Holitech Technology, 2018
- Business Layout of Holitech Technology
- Development Course of Holitech Technology
- Revenue and Net Income of Holitech Technology, 2013-2018
- Revenue Structure of Holitech Technology (by Product), 2016-2017
- Revenue Structure of Holitech Technology (by Region), 2014-2017
- Output and Sales Volume of Holitech Technology's Touch Display Products, 2015-2017
- Revenue and Net Income of G-Tech Optoelectronics, 2012-2018
- Revenue Structure of G-Tech Optoelectronics (by Region), 2012-2017
- Revenue and Net Income of Corning, 2013-2018
- Revenue Structure of Corning (by Business), 2015-2017
- Revenue Structure of Corning (by Region), 2015-2017
- Corning's GorillaGlass4 Drop Tests
- Corning's Revenue from Gorilla Glass Products, 2014-2017
- Revenue and Net Income of RLD, 2013-2017

Selected Charts

- Revenue Structure of RLD (by Product), 2014-2017
- Name List and Revenue Contribution of RLD's Top 5 Customers, 2016-2017
- Milestones of Biel Crystal Manufactory since 2000
- Curved Glass Cover Output of Biel Crystal Manufactory, 2016
- Revenue and Net Income of Wuhu Token Sciences, 2013-2018
- Revenue and Net Income of Truly, 2014-2018
- Revenue Structure of Truly (by Product), 2016-2017
- Revenue Structure of Truly (by Region), 2016-2017
- JANUS Intelligent Group's Layout in 3C Electronic Structures Industry Chains
- Main Products of JANUS (Dongguan) Precision Components
- Revenue and Net Income of JANUS (Dongguan) Precision Components, 2011-2018
- 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), 2016-2017
- Name List and Revenue Contribution of BYD Electronic's Major Phone Case Customers, 2017
- BYD Electronic's Revenue from Cellphone Glass Case and Growth Rate, 2013-2018
- 3D Glass Production Capacity of BYD Electronic, 2017-2018

ResearchInChina

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

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

Party B:			
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)		
Address:	Room 801, B1, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080		
Contact Person:	Liao Yan	Phone:	86-10-82600828
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 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) ……..3,000 USD

Hard copy …… 3,200 USD

PDF (Enterprisewide license)…..... 4,500 USD

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

ResearchInChina

www.researchinchina.com

ResearchInChina

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:

Room 801, B1, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080
Phone: +86 10 82600828 ● Fax: +86 10 82601570 ● www.researchinchina.com ● report@researchinchina.com