

# Global and China 3D Glass Industry Chain Report, 2019-2025

June 2019

## 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.

## Abstract

The evolution of AMOLED conduces to the steady development of 3D curved glass market. In 2018, the global 3D glass market expanded 37.7% on an annualized basis and reached \$1.9 billion, a figure projected to soar to \$2.7 billion in 2019 and more than \$8.0 billion in 2025. It is notable that the Chinese 3D glass market size was approximately RMB2.4 billion (or \$360 million by the exchange rate 1:6.6174) in 2018, surging by 59.1% from a year ago and a 19.2% share of the global total, with an expected AAGR of 20%-30% between 2019 and 2025.

In 2018, at least 30 million pieces of 3D glass were needed in China, growing at a pace of above 60%, over 94% of which was from smart phones and the remaining 6% from wearable devices, VR, dashboard, among others. Till 2025, the demand for 3D glass will outnumber 170 million pieces as it gets used widely, largely due to the following:

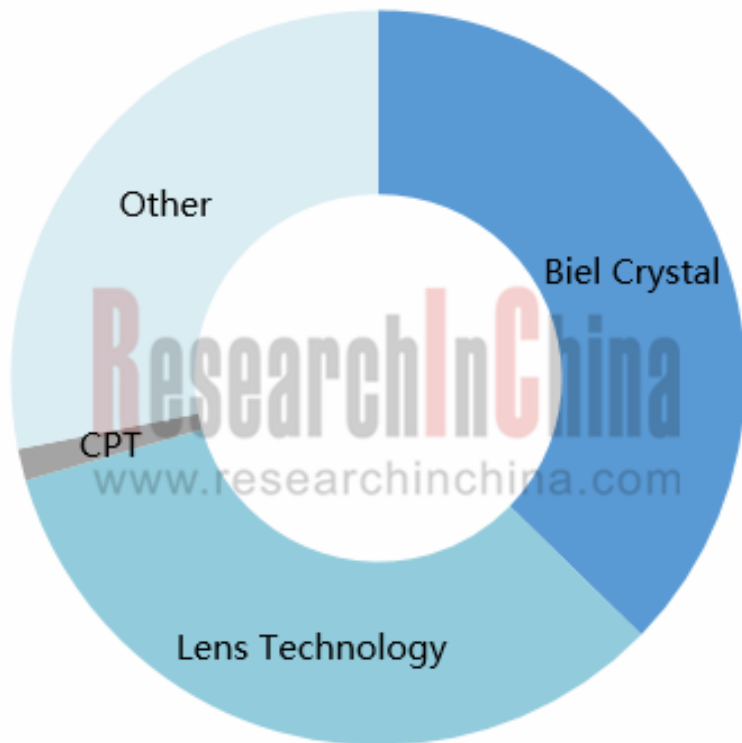
Firstly, AMOLED screen finds wider application in smart phones, spurring the need for 3D cover glass. In 2018, AMOLED screen enjoys a penetration rate of a critical 20% in smart phones and has been the standard configuration of the top five cellphone brands' flagship models. AMOLED screen is commonly seen in Huawei and Xiaomi handsets.

Secondly, the advances in 5G are pushing forward a change in handset housings to glass and ceramic materials. As 5G signals are vulnerable to interference and the wireless charging feature relies on the non-metal materials like 3D glass and ceramics to be exerted better, 3D glass/ceramic will be the mainstream selection for the cellphone back cover.

Lastly, the in-vehicle market will be the next blue ocean. While cars are becoming digitalized and intelligent, the onboard display is gearing to the large-size and human-based design, with which 3D glass can be connected seamlessly. The large-size 3D glass, therefore, embraces bright prospects in the automotive display modules.

As concerns the manufacturing technology, hot bending is one of the key procedures in production of 3D curved glass. Japanese and South Korean companies lead the pack in the 3D glass hot bending machine market, while the Chinese counterparts are sparing no efforts in research and development of technologies, and Aurora Optoelectronics, for instance, rolled out China's first large-sized automotive 3D glass hot bending machine in 2018. With the maturity of 3D hot bending machine in China, 3D glass production costs will be reduced.

### Competitive Pattern of Chinese 3D Glass Market, 2018



Source: Global and China 3D Glass Chain Report, 2019-2025 by ResearchInChina

There are now over twenty producers of curved cover glass in China, and most of them produce 2.5D glass. Only a few players like Lens Technology, Biel Crystal, Zhejiang Firststar Panel Technology, BYD Electronics and Kornerstone Materials Technology Co., Ltd. (KMTC) can spawn 3D glass, among which Lens Technology and Biel Crystal stay ahead in Chinese 3D glass industry, each holding at least 30% market shares in 2018.

Many manufacturers are rushing to foray in the promising 3D glass sector, causing a visible fall in the market concentration in the future with the release of new capacities.

The report highlights the followings:

- Global 3D glass market (supply, demand, market structure, etc.);
- Chinese 3D glass market (size, structure, patents, market price, competitive landscape, market drivers, etc.);
- 3D glass production materials like glass substrate, polishing material, bonding material, ink, etc. (market size, competitive pattern, etc.);
- 3D glass processing equipment such as hot bending machine, CNC engraving and milling machine and flat grinding machine (market size, current competition, processing technology, etc.);
- Downstream markets like smart phone, wearable devices and VR and the demand for 3D glass;
- World's 18 manufacturers of 3D glass (operation, 3D glass business, etc.)

### **1. Overview of 3D Glass**

- 1.1 Definition
- 1.2 Advantage
- 1.3 Production Process
- 1.4 Industry Chain
- 1.5 Industry Characteristics
  - 1.5.1 Periodicity
  - 1.5.2 Seasonality
  - 1.5.3 Regionality
  - 1.5.4 High Processing Barrier

### **2. Global 3D Glass Industry**

- 2.1 Market Size
  - 2.1.1 Supply
  - 2.1.2 Demand
- 2.2 Market Structure
- 2.3 Regional Structure

### **3. 3D Glass Industry in China**

- 3.1 Market
  - 3.1.1 Market Size
  - 3.1.2 Market Structure
- 3.2 Patent
  - 3.2.1 Total Quantity
  - 3.2.2 Pattern
- 3.3 Competitive Landscape
- 3.4 Market Price
- 3.5 Market Drivers

### **4. 3D Glass Production Materials**

- 4.1 Glass Substrate
  - 4.1.1 Production Technology
  - 4.1.1 Production Technology
  - 4.1.2 Market Size
  - 4.1.3 Competitive Landscape
- 4.2 Polishing Material
  - 4.2.1 Market Status
  - 4.2.2 Competitive Landscape
- 4.3 Other
  - 4.3.1 Coating Materials
  - 4.3.2 Ink

### **5. 3D Glass Processing Equipment**

- 5.1 Hot Bending Machine
  - 5.1.1 Market Size
  - 5.1.2 Competition
- 5.2 CNC Engraving Machine
  - 5.2.1 Market Size
  - 5.2.2 Competition
  - 5.2.3 Processing Technology
  - 5.2.4 Core Technology
  - 5.2.5 Development Trend
- 5.3 Flat Grinding Machine
  - 5.3.1 Overview
  - 5.3.2 Competitive Landscape

### 6. Main Applications

- 6.1 Smartphone
  - 6.1.1 Market Size
  - 6.1.2 Advantages of 3D Glass Phone Screen
  - 6.1.3 Trends of Phone Screen
  - 6.1.4 Mobile Phone Brands Adopting 3D Glass
- 6.2 Wearable Device
  - 6.2.1 Market Size
  - 6.2.2 3D Glass Application
- 6.3 VR
  - 6.3.1 Market Size
  - 6.3.2 3D Glass Application
- 6.4 Dashboard

### 7. Key 3D Glass Manufacturers

- 7.1 Lens Technology
  - 7.1.1 Profile
  - 7.1.2 Operation
  - 7.1.3 3D Glass Business
- 7.2 CPT Technology
  - 7.2.1 Profile
  - 7.2.2 Operation
  - 7.2.3 3D Glass Business
- 7.3 Firstar Panel Technology
  - 7.3.1 Profile
  - 7.3.2 Operation
  - 7.3.3 3D Glass Business

- 7.4 O-Film Tech
  - 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
- 7.9 RLD Cover Glass Technology
- 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
  - 7.10.9 Tunghsu Optoelectronic Technology

- 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, 2016-2025E
- Global 3D Glass Market Size, 2016-2025E
- Global 3D Glass Demand, 2015-2025E
- Global 3D Glass Market Size Structure (by Application), 2016-2025E
- Global 3D Glass Production Structure (by Region), 2018
- China's 3D Glass Market Size, 2016-2025E
- China's Demand for 3D Glass, 2017-2025E
- China's 3D Glass Market Size Structure (by Application), 2017-2023E
- Applications for 3D Glass Patents in China, 2010-2025E
- Applications of Major Manufacturers for 3D Glass Patents in China, 2018
- 3D Glass Technical Roadmap of Major Manufacturers
- Shipments of Major 3D Cover Glass Manufacturers in China, 2018
- Customers of Chinese Cover Glass Manufacturers
- Competitive Landscape of Chinese 3D Glass Market, 2018
- 3D Glass Layout of Major Manufacturers in China, 2019
- Leading 3D Glass Manufacturers and Their Capacity in China by 2019
- Market Prices of Different Mobile Phone Glass in China, 2018
- Market Prices of 3D Mobile Phone Cover Glass in China, 2016-2025E



- Operators and Cellphone Brands with which Qualcomm Cooperated
- Global Wireless Charging Market Size, 2012-2025E
- Growth Rate of Cellphone Wireless Charging, 2009-2019
- Mobile Terminals (by Model) Using Wireless Charging in Recent Years
- Mobile Phone Appearance Revolution by AMOLED+3D Glass
- Cost Structure of 3D Glass, 2018
- Cost Structure of Raw Materials for 3D Glass in 2018
- 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
- Cutting and Splitting Glass Substrates Process of TFT-LCD
- Global Market Pattern of Glass Substrate (by Technology) for Cellphone Cover, 2018
- Global Glass Substrate Capacity, 2013-2018
- Global Glass Substrate Demand, 2014-2025E
- AMOLED Glass Substrate Manufacturing Capacity and Growth Rate in China, 2018-2023E
- China's Glass Substrate Demand, 2013-2025E
- Competitive Landscape of Chinese Glass Substrate Market, 2018
- World's Leading Suppliers of Glass Cover Substrate
- Production Bases and Major Customers of World's Leading Glass Substrate Manufacturers
- Sources of Glass Substrates for Key LCD Production Lines in China
- Chinese Manufacturers' Layout in Glass Substrate Manufacturing Line
- Distribution of Leading Glass Substrate Manufacturers in China
- Application Proportion of Rare-earth Elements in Rare-earth Polishing Materials
- Chinese Demand of Rare-earth Polishing Materials, 2015-2019E

- Major Applications of Rare-earth Polishing Powder in China, 2018
- Capacity of Major Polishing Material Enterprises in China, 2018
- Global OCA Optical Adhesive Market Size, 2017-2025E
- China's Ink Output, 2013-2025E
- TOP15 Ink Companies in the World, 2018
- Major Companies in China
- 3D Glass Process Flow
- Hot Bending Process
- Hot Bending Process
- Global Capacity and Prices of Hot Bending Machines, 2016-2025E
- Global Demand for 3D Glass-use Hot Bending Machine, 2016-2025E
- Global 3D Glass-use Hot Bending Machine Market Size, 2016-2025E
- China's Demand for 3D Glass-use Hot Bending Machine, 2016-2025E
- Global Share of China's Demand for 3D Glass-use Hot Bending Machine, 2016-2025E
- Hot Bending Machine Ownership of Major Manufacturers in China
- Major Suppliers of 3D Glass Hot Bending Machine in China
- Global Demand for 3D Glass-use Five-axis CNC Engraving Machine, 2016-2025E
- Global 3D Glass-use Five-axis CNC Engraving Machine Market Size, 2016-2025E
- China's Demand for 3D Glass-use Five-axis CNC Engraving Machine, 2016-2025E
- China 3D Glass-use Five-axis CNC Engraving Machine Market Size, 2016-2025E
- 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, 2018
- 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
- Production and Output Value of CNC Grinder in China, 2009-2025E

- Apparent Consumption of CNC Grinder in China, 2011-2025E
- 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, 2015-2025E
- Global Shipments and Market Share of Smart Phone Suppliers, 2017-2018
- Global Smartphone Shipments Structure (by Screen Size), 2018
- OLED Penetration in Cellphone Brands, 2018
- Global Smartphone Display Shipment Structure, 2015-2020E
- Types of Display Adopted by Major Smartphone Vendors, 2018-2019E
- Ranking of Smartphone Panel Shipments Worldwide, 2018
- Global Market Share of AMOLED Mobile Phones by Brand, 2018
- Smartphone Shipments in China, 2009-2019
- Shares of Smartphone Shipment by Price in China, 2018
- Assembly Rate of AMOLED Screen in Smart Phone in China, 2014-2025E
- Production Capacity of AMOLED Glass Substrates, 2018-2025E
- Chinese Market Share of AMOLED Mobile Phones by Brand, 2018
- Mobile Phone Glass Cover Market Size in China, 2011-2019
- Main Types of Curved-screen Mobile Phones
- Smartphone Front and Back Cover Combination Design Modes
- Smartphone Front and Back Cover Design Trends
- Smartphone Front and Back Cover Design Trends
- Penetration Rate of 3D Cover Glass in Global Smartphone Field, 2015-2025E
- Structure of Top 50 Best-selling Cellphones Using Glass Cover in China, 2018
- Development Trends of Cellphones with 3D Glass and Ceramic Cases, 2014-2019
- Structure of Galaxy S7 with Metal Frame + Glass Body
- Motorola's Shatter Shield Structure

- Multi-camera 3D Glass Phone Models
- Mobile Phone Brands Using 3D Glass, 2016-2019
- Development Trend of Mobile Phone Cover Glass
- OLED Use as a Percentage in Major Cellphone Brands, 2018
- Global Shipments of OLED Panel, 2015-2025E
- Global Demand and Demand Scale for Smartphone-use 3D Glass, 2017-2025E
- China's Demand for Smartphone-use 3D Glass, 2016-2025E
- China's Demand Scale for Smartphone-use 3D Glass, 2016-2025E
- 3D Cover Glass Suppliers of Major Cellphone Brands
- Global Wearable Device Shipments, 2017-2025E
- Global Wearable Device Shipments (by Product), 2017-2022E
- Competitive Landscape of Global Wearable Device Market, 2018-2019
- China's Wearable Device Market Size, 2015-2025E
- Ranking of Major Wearable Device Vendors in China by Shipment, 2017-2018
- Competitive Landscape of the Global Market of AMOLED for Smart Watch
- Global Wearable Device Panel Shipments and Growth Rate, 2014-2024E
- Penetration Rate of AMOLED in Global Wearable Devices, 2015-2025E
- Global Shipment of OLED Panels for Wearable Devices, 2015-2025E
- Global Demand of 3D Glass for Wearable Devices, 2016-2025E
- Structure of VR System
- Global VR/AR Market Size, 2015-2025E
- Global VR Hardware Shipments, 2016-2025E
- Market Share of VR by Brand, 2018
- Applications of VR
- Financing in Global VR Industry, 2017-2018
- Structure of Global Financing for VR/AR/XR, 2018
- Financing in China VR Industry, 2017-2018
- China VR Market Size, 2016-2025E

- Shipments of AR/VR Head-mounted Devices in China, 2018-2023E
- Shipment of VR Head-mounted Devices in China, 2017-2018
- Shipment of AR Head-mounted Devices in China, 2017-2018
- Competitive Landscape of Major VR Products in China
- Mainstream VR Products Using AMOLED Screens
- Penetration Rate of AMOLED in Headset VR Field, 2016-2025E
- In-vehicle Glass Screen
- Equity Structure of Lens Technology, 2019
- Distribution of Lens Technology's Bases
- Revenue and Net Income of Lens Technology, 2012-2019
- Revenue Structure of Lens Technology (by Product), 2012-2018
- 3D Curved-glass Cover Output of Lens Technology, 2016-2019
- Lens Technology's Layout in Glass Cover
- Construction Projects of Lens Technology
- Equity Structure of CPT Technology, 2019
- Revenue and Net Income of CPT Technology, 2012-2019
- 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, 2016-2018
- KMTC's Revenue and Net Income, 2014-2018
- 3D Glass Capacity of CPT Technology, 2015-2019
- Equity Structure of Firstar Panel Technology, 2019
- Revenue and Net Income of Firstar Panel Technology, 2013-2019
- Revenue Structure of Firstar Panel Technology (by Product), 2014-2018
- Revenue Structure of Firstar Panel Technology (by Sales Mode), 2014-2018
- Firstar Panel Technology's Layout in Display Module Products and the Tendency
- Equity Structure of O-Film Tech, 2019
- Main Business Distribution of O-Film Tech

- Revenue and Net Income of O-Film Tech, 2012-2019
- 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, 2013-2019
- Equity Structure of Triumph Science & Technology, 2019
- Main Business and Capacity of Triumph Science & Technology, 2018
- Revenue and Net Income of Triumph Science & Technology, 2013-2019
- Production and Sales of Triumph Science & Technology (by Product), 2018
- Revenue Structure of Triumph Science & Technology (by Product), 2014-2018
- Revenue Structure of Triumph Science & Technology (by Region), 2014-2018
- Revenue and Net Income of Anhui Bengbu Huayi Conductive Film Glass Co., Ltd., 2010-2018
- Equity Structure of Holitech Technology, 2019
- Business Layout of Holitech Technology
- Development Course of Holitech Technology
- Revenue and Net Income of Holitech Technology, 2013-2019
- Revenue Structure of Holitech Technology (by Product), 2016-2018
- Revenue Structure of Holitech Technology (by Region), 2014-2018
- Output and Sales Volume of Holitech Technology's Touch Display Products, 2015-2018
- Revenue and Net Income of G-Tech Optoelectronics, 2012-2019
- Revenue Structure of G-Tech Optoelectronics (by Region), 2012-2018
- Revenue and Net Income of Corning, 2013-2018
- Revenue Structure of Corning (by Business), 2016-2018
- Revenue Structure of Corning (by Region), 2016-2018
- Corning's GorillaGlass4 Drop Tests
- Corning's Revenue from Gorilla Glass Products, 2014-2018
- Revenue and Net Income of RLD, 2013-2018
- Revenue Structure of RLD (by Product), 2014-2018
- Name List and Revenue Contribution of RLD's Top 5 Customers, 2016-2018



- Milestones of Biel Crystal Manufactory since 2000
- Glass Cover Products of Biel Crystal
- Revenue and Net Income of Wuhu Token Sciences, 2013-2019
- Revenue and Net Income of Truly, 2014-2018
- Revenue Structure of Truly (by Product), 2017-2018
- Revenue Structure of Truly (by Region), 2017-2018
- 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, 2011-2019
- Revenue from Consumer Electronics Precision Structural Parts of JANUS (Dongguan) Precision Components, 2012-2018
- Revenue and Net Income of BYD Electronic, 2012-2018
- Revenue Structure of BYD Electronic (by Region), 2017-2018
- Name List and Revenue Contribution of BYD Electronic's Major Phone Case Customers, 2018
- BYD Electronic's Revenue from Cellphone Glass Case and Growth Rate, 2013-2018
- 3D Glass Production Capacity of BYD Electronic, 2017-2019
- Operation of Sichuan Xuhong Opto-electronics Technical, 2018

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