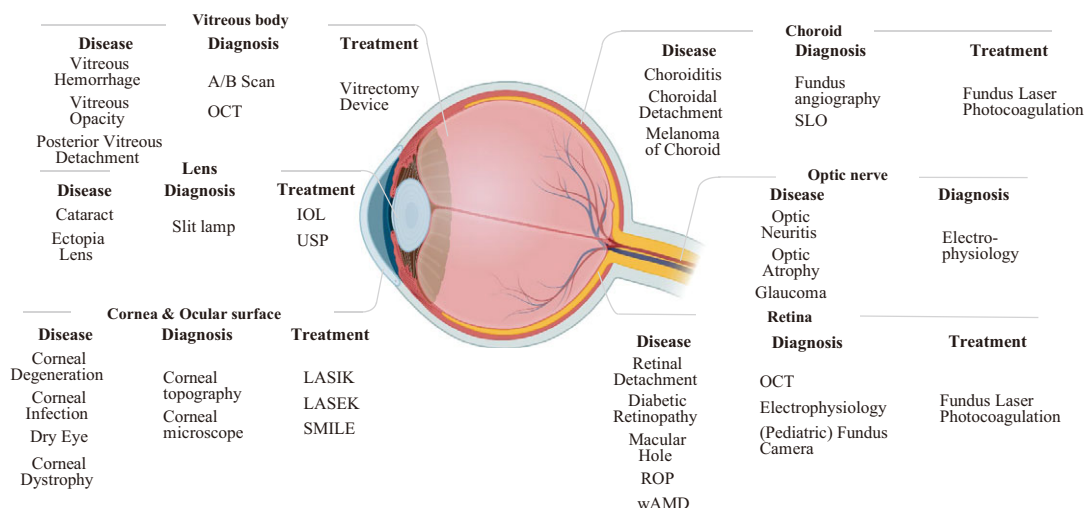


## INDUSTRY OVERVIEW

*The information and statistics set out in this section and other sections of this Document were extracted from materials and filings by other industry participants as well as information from trade associations. In addition, we engaged Frost & Sullivan for preparing the Frost & Sullivan Report, an independent industry report in respect of the [REDACTED]. We believe that the sources of the information in this section and other sections of this Document are appropriate sources for such information, and we have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information from official government sources has not been independently verified by us, the [REDACTED], Joint Sponsors, the [REDACTED], any of the [REDACTED], the [REDACTED], or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy. Accordingly, the information from official government sources contained herein may not be accurate and should not be unduly relied upon. Except as otherwise noted, all of the data and forecasts contained in this section have been derived from the Frost & Sullivan Report.*

### KEY TRENDS IN THE DIAGNOSIS AND TREATMENT OF OPHTHALMIC DISEASES

Ophthalmic diseases refer to the conditions that affect any of the eye components including cornea and ocular surface, lens, vitreous body, retina, choroid and optic nerve in the eye anatomy as illustrated below. The most common ophthalmic diseases include refractive error, dry eye, glaucoma, cataract and vitreoretinal diseases. Diagnosis and treatment of ophthalmic diseases normally require both devices and consumables or at least one of them. Ophthalmic medical device manufacturers have differentiated product portfolios according to their distinctive business strategies and R&D expenditure. However, according to the Frost & Sullivan Report, a product portfolio covering both devices and consumables is a goal pursued by most of the major ophthalmic medical device manufacturers, to maximize their knowledge in each subspecialty of ophthalmology and capture the business opportunities, especially the cross-selling opportunities.



Source: Frost & Sullivan Analysis

Note: As purchasers of ophthalmic medical devices usually require technical support for repair, maintenance and optimization purpose, ophthalmic device related technical service is included in the above market size analysis.

## INDUSTRY OVERVIEW

The major ophthalmic diseases and their corresponding treatment methods are as follows:

- *Vitreoretinal Diseases.* Vitreoretinal diseases develop from the inside of the vitreous body, and the back surface of the eye which is made up of the retina, macula, optic disc, fovea and blood vessels. Vitreoretinal diseases can be very complicated and contain dozens of subtypes, the most representative subtypes of which are wet age-related macular degeneration (wAMD), diabetic macular edema (DME), retinal vein occlusion (RVO) and myopic choroidal neovascularization (mCNV). With the aging of the global population, the patient pool can be expected to increase steadily. For instance, retinopathy has a high prevalence in diabetes patients. In 2021, the number of diabetics in China reached 136.3 million and the age-gender-standardized prevalence of diabetic retinopathy (DR) and sight-threatening diabetic retinopathy (STDR) were 27.9% and 12.6%, respectively. Devices such as angiography, optical coherence tomography (OCT) and scanning laser ophthalmoscope are used to promote the accuracy of the diagnosis of vitreoretinal diseases. Photocoagulation and photodisruption lasers as well as dual-functional cataract/vitreotomy surgical device are applied in the treatment of vitreoretinal diseases.
- *Cataract.* Cataract is the most common cause of vision loss in the elderly. The number of cataract patients aged over 45 increased from 140.8 million in 2017 to 171.2 million in 2021 and is projected to reach 206.9 million by 2025. A cataract can be defined as a clouding of the natural lens due to various reasons, among others, long-term exposure to ultraviolet light, radiation, advanced age, eye injury or trauma and diseases such as diabetes and hypertension. There are no pharmacological treatments known to eliminate existing cataracts or to retard their progression, which makes surgery the only treatment for cataract. In all types of surgical treatments for cataract, intraocular lens (IOL) are implanted in most cases to replace the opacified lens. Devices such as ultrasonic phacoemulsification system and femtosecond laser assisted cataract surgical device are applied in cataract surgeries.
- *Glaucoma.* Glaucoma is a group of eye diseases that are usually characterized by progressive structural and functional changes of the optic nerve, which is caused by fluid building up in the front part of the eye. Glaucoma may cause irreversible vision loss if untreated. Glaucoma is the second leading cause of blindness, after cataracts, affecting approximately 64.3 million individuals worldwide. Both laser and conventional surgeries are performed to treat glaucoma. Tonometer and ultrasonic biomicroscope are widely used in the diagnosis of glaucoma. The treatment of glaucoma is often realized by photocoagulation and photodisruption lasers.
- *Refractive Error.* Refractive errors, which include myopia (shortsightedness), hyperopia (farsightedness), astigmatism and presbyopia, are the most common causes of visual disorders. In 2021, the total number of myopia patients reached 625.6 million, of which children and adolescents account for approximately 18.5% of myopia patients, and adult patients account for approximately 81.5%. As for children and adolescents, orthokeratology lenses are mainly used to slow the progression of myopia. For the treatment of adult myopia patients, refractive surgery utilizing excimer laser and femtosecond laser systems are efficient ways to realize vision correction, among which typical surgeries include SMILE, LASIK and LASEK. In 2021, the total number of presbyopia patients in China reached 433.3 million. Presbyopia is highly correlated with age, which occurs within the proteins in the lens, making the lens harder and less elastic. Multifocal and EDoF IOLs would become ideal solutions for presbyopia patients to re-acquire clear vision.

## INDUSTRY OVERVIEW

### OVERVIEW OF THE OPHTHALMIC MEDICAL DEVICE MARKET

#### Overview

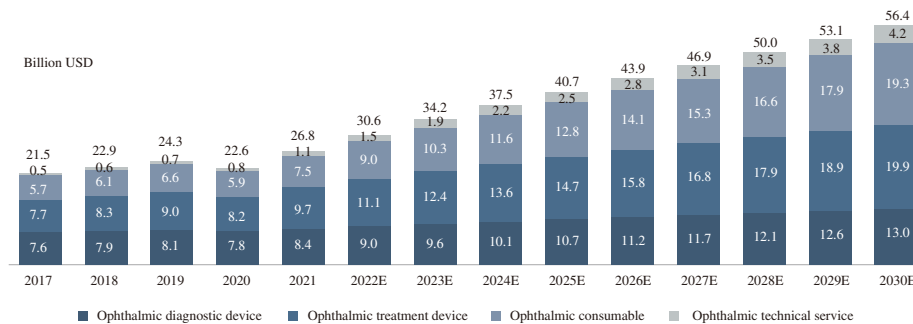
Ophthalmic medical device comprises ophthalmic equipment and related medical instruments, supporting instruments, as well as implantables used in the diagnosis and treatment of ophthalmic diseases, which can be classified into ophthalmic consumables, ophthalmic diagnostic device and ophthalmic treatment device. For the purpose of this Document, the ophthalmic medical device and the ophthalmic medical device market discussed exclude generally contact lens and lens solution.

#### Global Ophthalmic Medical Device Market

From 2017 to 2021, global ophthalmic medical device market has increased from USD21.5 billion to USD26.8 billion, representing a CAGR of 5.6%. With an expanding patient population and development of advanced technology, the global ophthalmic medical device market is expected to generate healthy growth in the future, reaching a market size of USD40.7 billion in 2025 and USD56.4 billion in 2030, with a CAGR of 11.1% from 2021 to 2025 and 6.7% from 2025 to 2030, respectively. The following chart illustrates the growing trend and breakdown of global ophthalmic medical device market from 2017 to 2030:

**Breakdown of Global Ophthalmic Medical Device Market  
(Contact Lens and Lens Solution Excluded)  
by Diagnostic Device/Treatment Device/Consumable/Technical Service, 2017–2030E**

Period	Ophthalmic diagnostic device	Ophthalmic treatment device	Ophthalmic consumable	Technical Service	Total
2017–2021	2.5%	6.0%	7.3%	21.8%	5.6%
2021–2025E	6.2%	10.9%	14.3%	22.4%	11.1%
2025E–2030E	4.0%	6.3%	8.5%	10.6%	6.7%



*Note:* As purchasers of ophthalmic devices usually require technical service providers to educate them as to how to use such equipment and to provide after-sale maintenance and repair services, the ophthalmic device market also includes the provision of related technical services.

*Source:* Frost & Sullivan Analysis

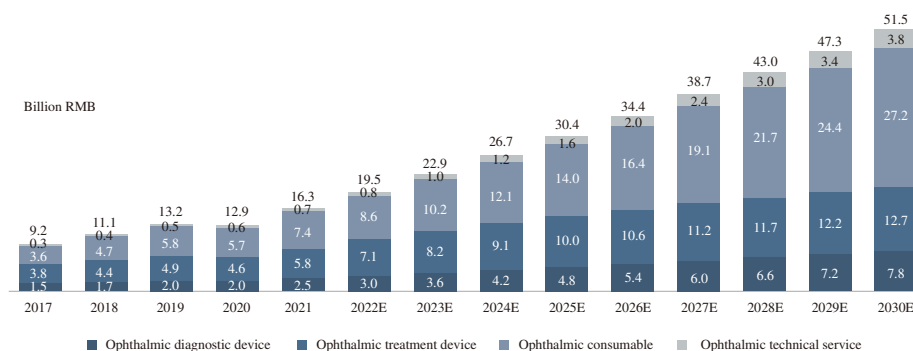
## INDUSTRY OVERVIEW

### Ophthalmic Medical Device Market in China

China’s ophthalmic medical device market increased from RMB9.2 billion in 2017 to RMB16.3 billion in 2021, representing a CAGR of 15.5%, demonstrating faster growth than the global ophthalmic medical device market. It is noted that during 2020, China’s ophthalmic medical device market slightly contracted, decreasing from RMB13.2 billion to RMB12.9 billion. This was primarily because many hospitals in China temporarily suspended the operation of their ophthalmic departments (together with some other medical departments) in response to COVID-19 outbreak in the first quarter of 2020, which substantially reduced their procurement of ophthalmic devices. The market is expected to experience a higher growth in the coming five years and is expected to grow to RMB30.4 billion and RMB51.5 billion in 2025 and 2030, respectively. The following chart illustrates the growing trend and breakdown of ophthalmic device market in China:

**Breakdown of China Ophthalmic Medical Device Market  
(Contact Lens and Lens Solution Excluded), 2017–2030E**

Period	Ophthalmic diagnostic device	Ophthalmic treatment device	Ophthalmic consumable	Ophthalmic technical service	Total
2017–2021	14.0%	11.6%	19.3%	21.1%	15.5%
2021–2025E	18.0%	14.4%	17.5%	24.5%	16.8%
2025E–2030E	10.1%	5.0%	14.1%	19.6%	11.1%



Source: Frost & Sullivan Analysis

### Competitive Landscape

Ophthalmic treatment has seven major sub-specialties, including vitreoretinal disease, cataract, glaucoma, refractive error, optometry, ocular surface and pediatric ophthalmology. Diagnosis and treatment within each sub-specialty normally require either devices or consumables or both. Major market players with product portfolio covering both equipment and consumables within all seven sub-specialties are generally more competitive. The following tables set forth the leading market players and their product coverage in China’s ophthalmic device market in terms of devices and consumables. These market players included both the manufacturers’ respective onshore distributor entities, who sell their own proprietary products, and primary or exclusive distributors, who sell distribution products of their brand partners, as well as the Company as a hybrid player with climbing revenue contribution of its Proprietary Products. Notwithstanding their different brand coverage, these market players are at the pinnacle of China’s distribution network and are often registered as the agents on the certificate of imported medical device for the respective products and they are responsible for the overall management of the products’ distribution network in the PRC. All imported medical devices are sold in China through the same sales network model, comprising both direct sales and distributorship, with no regard to whether the products are proprietary of the market players. According to Frost & Sullivan, such distribution model is the industry norm with respect to ophthalmic medical device industry in China. Also, the sales by the national exclusive distributor are treated as the sales by the manufacturer of the products for the purposes of the “Two-Invoice System” in regions where such system was adopted. According to the breakdown of China’s ophthalmic device market in 2021, the Company ranked fourth among all the ophthalmic medical device providers in China with a market share of 6.7% and ranked first among all the domestic ophthalmic medical device providers in China in terms of total revenue.

## INDUSTRY OVERVIEW

### Competitive Landscape of China Ophthalmic Medical Device Market

Market	Vitreo-retinal Diseases		Cataract		Glaucoma		Refractive Error (Surgical)		Optometry (Non-Surgical)		Ocular Surface		Pediatric Ophthalmology	
	Equipment	Consumable	Equipment	Consumable	Equipment	Consumable	Equipment	Consumable	Equipment	Consumable	Equipment	Consumable	Equipment	Consumable
Function	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis	Diagnosis
Carl Zeiss	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Alcon	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Johnson & Abbott Medical Optics	★	★	★	★	★	★	★	★	★	★	★	★	★	★
<b>GAUSH</b>	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Clinico	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Bausch & Lomb	★	★	★	★	★	★	★	★	★	★	★	★	★	★
NIDEK	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Topcon	★	★	★	★	★	★	★	★	★	★	★	★	★	★

★ Marketed distribution products    ★ Marketed proprietary products    No marketed products

## INDUSTRY OVERVIEW

Source: Frost & Sullivan Analysis

Notes:

1. Contact lens and lens solutions are not included.
2. Optometry treatment does not involve surgical procedures.
3. Optometry diagnosis are commonly performed without consumables.
4. Currently, there is no marketed treatment equipment, diagnostic consumables, or treatment consumable for Pediatric Ophthalmology.
5. The tables showed all seven ophthalmology specialties in which medical devices (including medical equipment and consumables) are utilized for the diagnosis, treatment or surgeries of the diseases. For the product offering of the Company's competitors, the table included their marketed products only and did not include their pipeline products.
6. Carl Zeiss is a German company listed on Deutsche Börse, Frankfurt. It is a medical technology company specializing in the field of ophthalmology and microsurgery. Regarding Ophthalmology, the company provides product portfolio covering diagnosis and treatment of multiple ophthalmic diseases including cataract, glaucoma, vitreoretinal diseases and refractive error. Also, the company provides data connectivity solutions for patient data transfer and archiving. Carl Zeiss, the products of which are sold in the PRC and overseas, held a market share of 22.5% and ranked first in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
7. Alcon is a NYSE-listed medical company based in Switzerland. Its products include surgical products and vision care products. Its surgical products include the devices for cataract, retinal and refractive surgery and advanced technology intraocular lenses (ATIOLs). Its vision care products include contact lenses and comprehensive ocular health products. Alcon, the products of which are sold in the PRC and overseas, held a market share of 13.6% and ranked second in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
8. Johnson & Johnson – Abbott Medical Optics is the subsidiary of a NYSE-listed pharmaceutical company based in the United States. It offers intraocular lenses, products used in cataract and refractive surgery, laser vision correction systems, phacoemulsification systems, viscoelastic and microkeratomes. Johnson & Johnson – Abbott Medical Optics, the products of which are sold in the PRC and overseas, held a market share of 10.3% and ranked third in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
9. Clinico is a medical device distributor based in Taiwan. Clinico provides product portfolio comprising solely of distribution products of its brand partners and covering multiple ophthalmic diseases including vitreoretinal diseases, cataract, glaucoma, refractive error, optometry and ocular surface. Clinico, the products of which are sold in the PRC and overseas, held a market share of 3.4% and ranked sixth in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
10. Bausch & Lomb is a NYSE-listed company based in Canada. It delivers eye health products and services including contact lenses, lens care products, intraocular lenses, other eye surgery products and pharmaceuticals. Bausch & Lomb, the products of which are sold in the PRC and overseas, held a market share of 2.9% and ranked eighth in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
11. NIDEK is a Japanese company specialized in providing eye and optics products and services. It specialized in the combination of optical and electronic engineering to provide eye and optics products and services covering the examination, diagnosis and treatment of ophthalmology and optometry as well as lens edging and coating. NIDEK, the products of which are sold in the PRC and overseas, held a market share of 2.6% and ranked ninth in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
12. Topcon is a Tokyo Stock Exchange listed manufacturer of optical equipment based in Japan. It provides diagnostic solutions with intelligent data technology and advanced imaging capability to eye diseases that occur frequently among the aging population, including glaucoma, cataract and refractive. Topcon, the products of which are sold in the PRC and overseas, held a market share of 2.3% and ranked eleventh in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
13. Each market player above other than the Company and Clinico primarily distributes its own proprietary products and generally does not serve as the national or regional distributor in China of another market player.

## INDUSTRY OVERVIEW

The table below compares the Company's product portfolio with market players which only distributes their brand partners' products in the PRC. Save for Clinico, the market share, coverage of brands and products of the other market players which only distribute brand partners' products are not meaningfully comparable to those of the Company and is not representative of the competitive landscape of the China ophthalmic medical device market.

Ophthalmic Sub-specialty	Vitreoretinal Diseases			Cataract			Glaucoma			Refractive Error (Surgical)			Optometry (Non-Surgical)			Ocular Surface			Pediatric Ophthalmology			
	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	Equipment	Diagnosis	Consumable	
Market	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Function	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
GAUSH	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Clinico	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Taiwan Hwa-in	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Shanghai Scan Optics	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★

★ Marketed distribution products  
 ★ Marketed proprietary products  
 No marketed products



## INDUSTRY OVERVIEW

Source: *Frost & Sullivan Analysis*

Notes:

1. Contact lens and lens solutions are not included.
2. Optometry treatment does not involve surgical procedures.
3. Optometry diagnosis are commonly performed without consumables.
4. Currently, there is no marketed treatment equipment, diagnostic consumables, or treatment consumable for Pediatric Ophthalmology.
5. The tables showed all seven ophthalmology specialties in which medical devices (including medical equipment and consumables) are utilized for the diagnosis, treatment or surgeries of the diseases. For the product offering of the Company’s competitors, the table included their marketed products only and did not include their pipeline products.
6. Clinico is a medical device company distributor based in Taiwan. Clinico provides product portfolio comprising solely of distribution products of its brand partners and covering multiple ophthalmic diseases including vitreoretinal diseases, cataract, glaucoma, refractive error, optometry and ocular surface. Clinico, the products of which are sold in the PRC and overseas, held a market share of 3.4% and ranked sixth in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
7. Taiwan Hwa-in is an ophthalmic device distributor based in Taiwan, mainly engaged in ophthalmic device sales and hospital investment management. Taiwan Hwa-in offers ophthalmic equipment covering multiple diseases including vitreoretinal diseases, cataract, glaucoma, refractive error optometry and ocular surface, all of which are distribution products of its brand partner. Taiwan Hwa-in, the products of which are sold in the PRC and other Asian Pacific Regions, held a market share less than 0.1% in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
8. Shanghai Scan Optics serves as the general distributors of certain ophthalmic surgery microscope and handheld slit lamp products. Shanghai Scan Optics held a negligible market share in China ophthalmic medical device market (contact lens and lens solution excluded) in terms of total revenue in 2021.
9. Each market player above primarily distributes products that are procured from brand partners.



## INDUSTRY OVERVIEW

### Entry Barriers to China’s Ophthalmic Medical Device Market

The entry barriers to China’s ophthalmic medical device market include:

- *Product Portfolio and Distribution Network.* Ophthalmic medical device providers with a product portfolio are more competitive in China’s ophthalmic medical device market because such providers may offer medical institutions one-stop and tailor-made solutions notwithstanding the complexity and variety of ophthalmic diseases. These providers are also in a better position to develop long-term relationship with qualified distributors and KOLs who could contribute to the development of their distribution network. Establishing a product portfolio and distribution network may be costly, time-consuming and challenging for new entrants to compete with established market players.
- *Brand Reputation and Market Share.* Ophthalmic medical device providers normally need to conduct long-term clinical education on their products among the ophthalmic professionals because it takes time for such professionals to fully understand and trust the efficacy of these ophthalmic medical device products. Thus, companies with a longer development history tend to have better reputation among ophthalmic professionals and stronger influence on the market. First movers within the industry can benefit from first-in-post advantage and have a higher market share, while new entrants have to pay more effort to demonstrate the superiority of their products.
- *R&D Capability.* The ever-growing need for precise and minimal invasive ophthalmic treatment drives the market demand for high-end ophthalmic medical devices. Since the structure of human eye is fragile and the categorization of ophthalmic diseases is complicated, ophthalmic diagnostic devices require the support of advanced technologies. For the companies aiming to develop in-house R&D capabilities which would contribute to their long term development, developing and manufacturing advanced ophthalmic medical device demands solid R&D capabilities and significant R&D investment, both of which create a significant barrier for small or start-up companies.

### Growth Drivers and Future Trends of China’s Ophthalmic Medical Device Market

#### *Growth Drivers*

- *Aging population.* According to the Frost & Sullivan Report, persons aged 65 years or over reached 200.6 million in 2021 in China, which accounted for 14.2% of the total population, and is projected to reach 247.1 million in 2025, representing a CAGR of 5.4% from 2021 to 2025. The prevalence of age-related ophthalmic diseases, including cataract, glaucoma and vitreoretinal diseases, will expand the patient population and stimulate the demand of ophthalmic diagnostic and treatment. Thus, the aging population will create a large market for ophthalmic medical services in China.

## INDUSTRY OVERVIEW

- *Strong Government Support.* The Chinese government has dedicated strong effort to increase the accessibility and affordability of healthcare services through the healthcare reform. Huge investment has been made to promote private healthcare services, upgrade healthcare infrastructure and expand medical insurance coverage. The Chinese government has issued supportive policies including “Health China 2030” to promote the development of China medical device market and encourage the establishment of ophthalmic hospitals. From 2016 to 2020, the total number of ophthalmic hospitals significantly increased from 537 to 1,061. Such rapid growth will stimulate the demand for ophthalmic medical devices.
- *Increased Attention to Visual Health.* Vision impairment and associated complications caused by ophthalmic diseases not only affect patients’ quality of life, but also impose burdens on their caregivers and the society as a whole. During the last decade, the Chinese government launched the nationwide charitable cataract programs which significantly contributed to the growth of cataract surgical rate (CSR). In addition, “Comprehensive Prevention and Control of Myopia in Children and Adolescents Implementation Plan” issued in 2018 was aimed to improve myopia prevention and control. Such programs drew public attention to visual health. With the improved living standards in China and increased attention to visual health, the demand for eye healthcare will keep growing in the future and drive the overall growth of China’s ophthalmic medical device market.
- *Continuous Technology Innovation.* Technology innovation of ophthalmic medical device will address the unmet clinical needs of ophthalmic patients. For example, the IOL with EDoF characteristics patients with the possibility of improving their intermediate visual acuity. In addition, the dual-functional cataract/vitreectomy surgical device enables surgeons to perform surgeries for patients who suffer from both vitreoretinal diseases and cataract with one single device. The technology innovations embedded in these cutting-edge medical devices are believed to stimulate massive ophthalmic medical demand.

### *Future Trends*

- *Expanding Market Size.* In China, the implementation of the hierarchical diagnosis and treatment system and the improvement of doctors’ diagnosis and treatment capabilities have increased the demand for ophthalmic equipment in medical institutions outside the first-tier cities. The Chinese ophthalmic medical device providers may also expand its business to overseas markets by promoting Chinese native brands in foreign markets or acquiring foreign brands. Along with the R&D of China based ophthalmic medical device companies, especially for the companies which manufacture high-end IOLs with advanced technology, the trend of domestically developed products being exported to overseas countries and realizing globalization will gradually become more significant in the future. Ophthalmic medical device providers with a product portfolio and a positive brand reputation will be more likely to leverage their existing strengths to establish a leading position in the expanding market.

## INDUSTRY OVERVIEW

- *Increasing Market Demand for High-end Medical Devices.* According to the Frost & Sullivan Report, future ophthalmic disease treatments will be devised for realizing better vision and reducing disease relapse. Ophthalmic medical devices will become more automated to allow more precise control over the surgery. The technology development of computers, software and image storage cloud will facilitate the research and development of high-end medical devices, which will provide ophthalmic professionals with more convenient and powerful tools to analyze and treat ophthalmic diseases.
- *Increasing Market Demand for Technical Service.* Eye care service providers may pay an annual fee to technical service providers for the repair and maintenance of high-end and frequently used ophthalmic diagnostic and treatment equipment. As the technologies applied to ophthalmic equipment are getting more advanced, standardized technical service provided by well-trained and experienced technical service teams would be necessary for ophthalmic equipment users. Ophthalmic equipment providers with technical service team will be able to obtain recurring income from providing technical services. Additionally, high quality technical service would help ophthalmic equipment providers establish strong relationship with ophthalmic equipment users, which can promote the sales of consumables in the long run.

## OPHTHALMIC MEDICAL DIAGNOSTIC DEVICE MARKET

### Overview

Ophthalmic diagnosis starts with collection of demographic information including age, gender and medical record, among others, which is followed by general ophthalmic examinations inspecting vision, visual field and other primary screenings of the patients as well as the examinations of ophthalmic medical diagnostic devices, including auto or manual refractor, perimeter, slit lamp and others. The diagnosis of most ophthalmic diseases needs comprehensive examination through ocular surface to vitreoretinal. Devices for vitreoretinal examination are able to offer more precise resolution and more structural features that can help ophthalmic professionals with diagnosis and preoperative evaluation.

Categorized by source of energy, ophthalmic medical diagnostic devices can be broadly divided into non-laser optical diagnostic devices, laser diagnostic devices, ultrasonic diagnostic devices and visual electrophysiology. Laser diagnostic devices utilize laser as the main source of energy for the diagnosis of ophthalmic diseases. Representative laser diagnostic devices include OCT, retinal angiography, retinal tomography and optical biometry. Apart from optical biometry which is used for the measuring of anatomical structure of the eye, the rest are all widely applied in the diagnosis of vitreoretinal diseases. Vitreoretinal diagnostic devices are a major part in ophthalmic diagnosis, not only because of the complexity of vitreoretinal structure, but also their importance in clinical decision making. Ultrasound is a form of energy transmission, which usually propagates in elastic media in the form of longitudinal waves. In accordance with the principle of sound propagation, ultrasonic diagnostic devices return the soundwaves to the ultrasonic probe, convert them into electrical signals and present them on the monitor in images. These images could help to visualize the detailed eye structure and evaluate the eye diseases, such

## INDUSTRY OVERVIEW

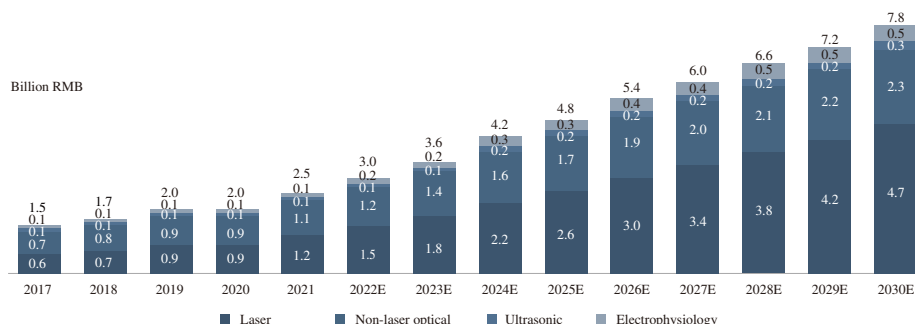
as retroreflective, cataract and glaucoma, which is conducive to improving the safety profile of the surgery. Visual electrophysiology is particularly suitable for the early diagnosis of glaucoma because it can detect tiny physiological changes which always occur before morphological changes. The global visual electrophysiology market increased steadily from USD144.8 million in 2017 to USD169.4 million in 2021, representing a CAGR of 4.0%, which is expected to grow to USD281.6 million and USD365.8 million in 2025 and 2030, with the CAGR of 13.6% and 5.4%, respectively. Non-laser optical diagnostic devices are non-invasive and easy-to-use. Typical non-laser optical diagnostic devices include vitreoretinal camera, slit lamp, corneal topography, perimeter, direct ophthalmoscope and visual tester.

### Market Size

China’s ophthalmic medical diagnostic device market grew from RMB1.5 billion in 2017 to RMB2.5 billion in 2021, representing a CAGR of 14.0%. In the coming decade, the market is projected to grow with higher speed, and is expected to reach RMB4.8 billion and RMB7.8 billion in 2025 and 2030, with a CAGR of 18.0% from 2021 to 2025 and 10.1% from 2025 to 2030, respectively, as shown in the following chart.

**Breakdown of China Ophthalmic Medical Diagnostic Device Market, 2017–2030E**

Period	Laser	Non-laser optical	Ultrasonic	Electro-physiology	Total
2017–2021	18.2%	10.7%	7.6%	15.8%	14.0%
2021–2025E	22.3%	12.3%	12.4%	25.0%	18.0%
2025E–2030E	12.2%	6.5%	8.4%	10.7%	10.1%



Source: Frost & Sullivan Analysis

## INDUSTRY OVERVIEW

### Competitive Landscape

Our Group ranked first among all the ophthalmic diagnostic device providers in China in 2021 in terms of revenue. The chart below illustrates the market share of leading ophthalmic diagnostic device providers in China’s ophthalmic diagnostic device market.

#### Breakdown of China’s Ophthalmic Medical Diagnostic Device Market by Revenue, 2021

		Million RMB
Company	Revenue	Share
Gaush	452.4	18.2%
Carl Zeiss	444.6	17.9%
Topcon	336.3	13.5%
Clinico	305.7	12.3%
NIDEK	229.3	9.2%
Others	716.0	28.8%
Total	2,484.3	100.0%

*Source: Frost & Sullivan Analysis*

1. Clinico is a domestic medical device company based in Taiwan. It provides products relating to the ophthalmic and auditory devices.

### OPHTHALMIC MEDICAL TREATMENT DEVICE MARKET

#### Overview

Ophthalmic medical treatment devices can be divided into surgical devices and non-surgical devices. Ophthalmic surgical devices comprise ophthalmic surgical equipment and surgical supporting instruments. Differentiated by source of energy, ophthalmic surgical equipment can be divided into ultrasonic surgical equipment, including dual functional cataract/vitreotomy surgical device and ultrasonic phacoemulsification equipment, and laser surgical equipment, including laser photocoagulator, laser photodisruptor, excimer laser and femtosecond laser. Surgical supporting instruments principally refer to handpieces, probes and other disposable consumables that are connected to surgical devices or used during ophthalmic surgeries. Non-surgical devices refer to surgical microscope and devices for the treatment of ophthalmic diseases through non-invasive methods such as dry eye machines. Surgical equipment supporting consumables are also within the ophthalmic medical treatment device market because they support the performance of other ophthalmic medical equipment during surgeries. In some ophthalmic surgeries, supporting consumables and the performing device have to be manufactured by the same brand to pass the authentication step before proceeding the surgery.

## INDUSTRY OVERVIEW

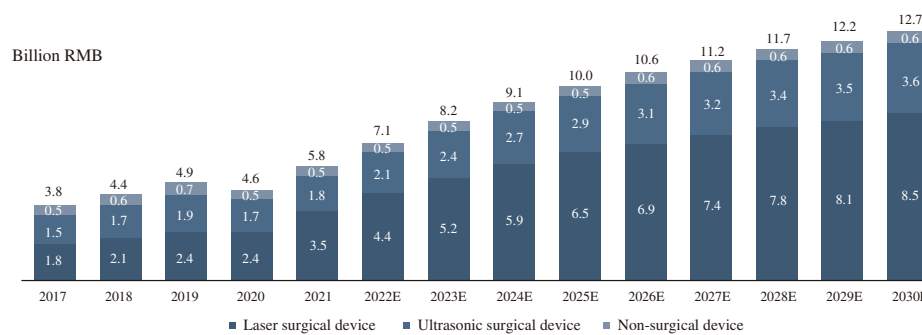
Classified by surgery techniques, laser eye surgery for refractive errors could be mainly divided into surface ablation technique surgery and stromal ablation technique surgery. The representative surface ablation technique surgery includes PRK and LASEK, and the representative stromal ablation technique includes LASIK, Femto-LASIK and SMILE. As for surface ablation technique surgery, corneal epithelium is peeled back to expose the Bowman’s layer of the cornea, and then laser is used to reshape the cornea, which damages the structure of the cornea to a great extent. The severely damaged corneal structure could result in a long vision recovery time and high risk of corneal opacity. These problems could be avoided by stromal ablation technique surgery, especially SMILE, which is characterized by minimal access incision. The penetration rate of SMILE among adults with high myopia remains low. Considering the comparatively shorter operation time and recovery time, less side effects and better vision correction outcomes, the penetration rate of SMILE is expected to grow rapidly.

### Market Size

From 2017 to 2021, the overall China’s ophthalmic medical treatment device market has increased from RMB3.8 billion to RMB5.8 billion, representing a CAGR of 11.6%. With an expanding patient population and increasing clinical need, China’s ophthalmic medical treatment device market is expected to grow rapidly in the future, reaching a market size of RMB10.0 billion in 2025 and RMB12.7 billion in 2030, with CAGR of 14.4% from 2021 to 2025 and 5.0% from 2025 to 2030, respectively.

**Breakdown of China Ophthalmic Medical Treatment Device Market, 2017–2030E**

Period	Laser surgical device	Ultrasonic surgical device	Non-surgical device	Total
2017–2021	18.1%	5.6%	0.5%	11.6%
2021–2025E	16.7%	12.2%	2.9%	14.4%
2025E–2030E	5.5%	4.5%	1.5%	5.0%



Source: Frost & Sullivan Analysis

## INDUSTRY OVERVIEW

### Competitive Landscape

Our Group ranked third among all the ophthalmic treatment device providers in China in 2021 in terms of revenue. The chart below illustrates the market share of leading ophthalmic treatment device providers in China’s ophthalmic treatment device market.

#### Breakdown of China’s Ophthalmic Medical Treatment Device Market by Revenue, 2021

		Million RMB
Company	Revenue	Share
Carl Zeiss	2,575.9	44.2%
Alcon	1,080.3	18.5%
Gaush	397.6	6.8%
Johnson & Johnson – Abbott Medical Optics	334.4	5.7%
Bausch & Lomb	250.4	4.3%
Others	1,188.5	20.4%
Total	5,827.2	100.0%

*Source: Frost & Sullivan Analysis*

### OPHTHALMIC MEDICAL CONSUMABLE MARKET

#### Overview

Ophthalmic medical consumables mainly include IOL, vision error correction lenses, and other consumables, which can be applied in different scenarios. As a representative of surgical implant, IOL, an artificial replacement for the lens of human eye removed during cataract surgery. Vision correction lenses include refractive error correction lenses and artificial iris. Refractive error correction lenses refer to orthokeratology lenses (OK-Lens), Rigid Gas Permeable lenses (RGP) and scleral lenses, which have vision improvement effect towards refractive error treatment, prevent disease like myopia from further progression and reduce pain for patients suffering from dry eye as well. Artificial iris is an implant for the treatment of damage or absence of the iris of the eye. Other consumables include surgical implants (other than IOL) and surgical instrument. Surgical implants other than IOL mainly include perfluorooctane, silicone oil and ophthalmic gases. Surgical instruments include measuring instruments, eye speculum, lid retractors, corneal trephines, iris knives, scissors, scrapers, chisels, etc. Surgical instruments are widely applied in all types of ophthalmic surgeries.

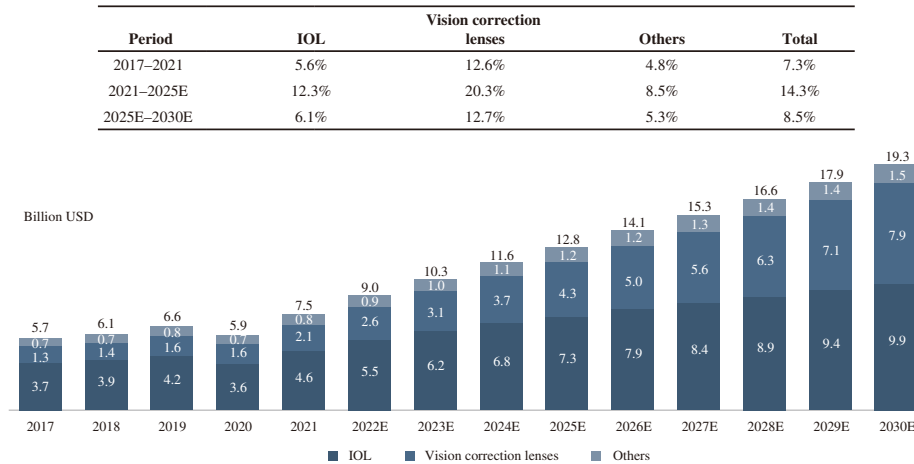


## INDUSTRY OVERVIEW

### Market Size

From 2017 to 2021, total global ophthalmic medical consumable market has increased from USD5.7 billion to USD7.5 billion, representing a CAGR of 7.3%. With the increasing clinical need, global ophthalmic medical consumable market is expected to grow rapidly in the future, reaching a market size of USD12.8 billion in 2025 and USD19.3 billion in 2030, with a CAGR of 14.3% from 2021 to 2025 and 8.5% from 2025 to 2030, respectively. The following chart illustrates the historical trend and forecast of the breakdown of global ophthalmic medical consumable market from 2017 to 2030:

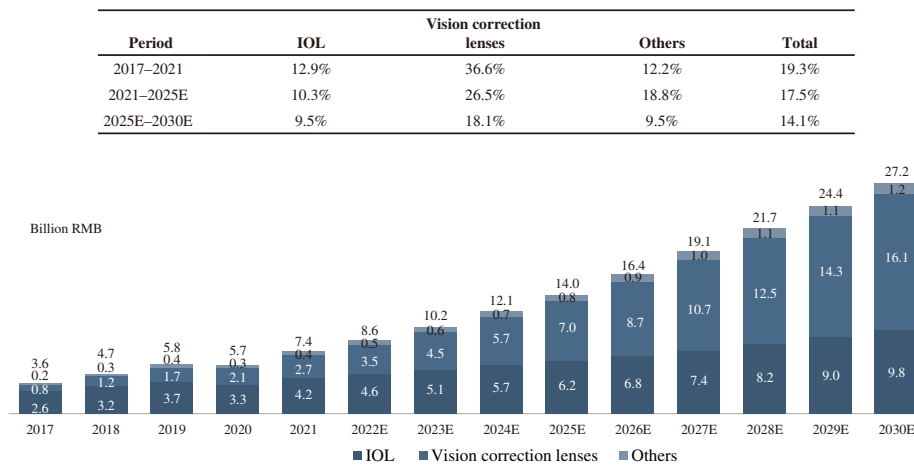
**Breakdown of Global Ophthalmic Medical Consumable Market, 2017–2030E**



Source: Frost & Sullivan Analysis

China’s ophthalmic medical consumable market grew from RMB3.6 billion in 2017 to RMB7.4 billion in 2021, representing a CAGR of 19.3%, which is much higher than that of the global market. In the coming decade, the market is projected to grow with higher speed, and is expected to reach RMB14.0 billion and RMB27.2 billion in 2025 and 2030, respectively, as shown in the following chart:

**Breakdown of China Ophthalmic Medical Consumable Market, 2017–2030E**



Source: Frost & Sullivan Analysis

**INDUSTRY OVERVIEW**

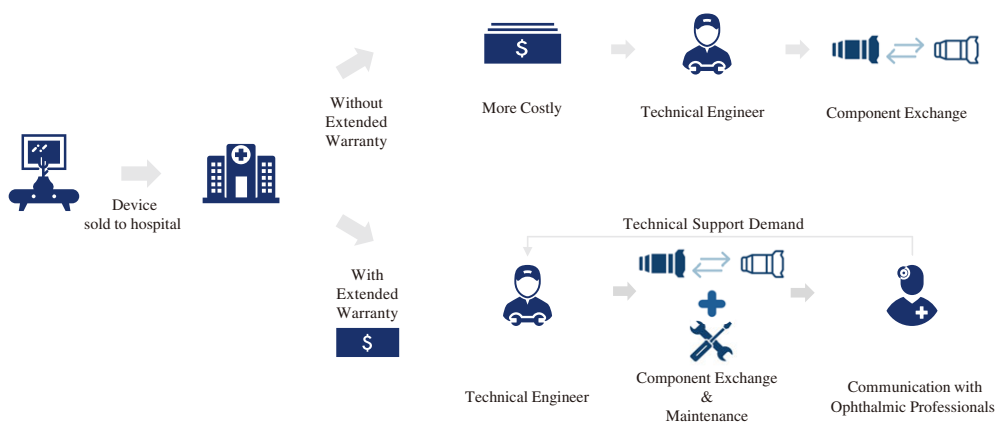
**Competitive Landscape**

The ophthalmic medical consumable market is highly competitive and fragmented. In 2021, the total market size of global intraocular lens is USD4.6 billion where the Company ranked sixth. From 2017 to 2021, China’s intraocular lens market has increased from RMB2.6 billion to RMB4.2 billion, representing a CAGR of 12.9% and is expected to reach the market size of RMB6.2 billion in 2025 and RMB9.8 billion in 2030, at a CAGR of 10.3% from 2021 to 2025 and 9.5% from 2025 to 2030, respectively. Functional IOL includes multifocal IOL, trifocal IOL and EDoF IOL. Compared with monofocal IOLs which provide focus at only one distance, functional IOLs are able to provide vision across varying distances. Thus, functional IOLs will be offering patients with better vision and life quality after surgery, and are expected to be the future trend of IOL market because of their leading technical advantages. IOLs with EDoF characteristic are designed to realize the improvement of intermediate vision through creating an elongated focus. Among IOLs with EDoF characteristic, those designed based on refractive mechanism can reduce side effects like glare, halo and starburst with minimum energy loss. The Company ranked fourth in China’s functional IOL market in 2021.

**OPHTHALMIC MEDICAL DEVICE TECHNICAL SERVICE MARKET**

Ophthalmic medical device technical service mainly refers to the repair, maintenance and optimization service package designed for ophthalmic medical devices. Although devices include manufactures’ warranty upon sales, such coverage is normally limited to one year. Considering the fact that advanced diagnostic and surgical devices can be very expensive, and are used with high frequency for daily diagnosis and surgical treatments, hospitals would prefer paying an additional fee for an extended warranty for repair, maintenance and optimization in order to avoid loss caused by device depreciation.

Core optical components of an ophthalmic medical device can be costly, the maintenance of which needs support from professional engineers. With technical support, ophthalmic medical device purchasers can not only benefit from free or much more affordable core component replacement, but also experience regular maintenance service from professional team trained by medical device manufacturers. For ophthalmic medical device manufacturers, the number of engineers employed is one of the important figures to assess the companies’ competitiveness, as more engineers employed would provide their clients with more comprehensive device solution for better after-sales experience.



Source: Frost & Sullivan Analysis

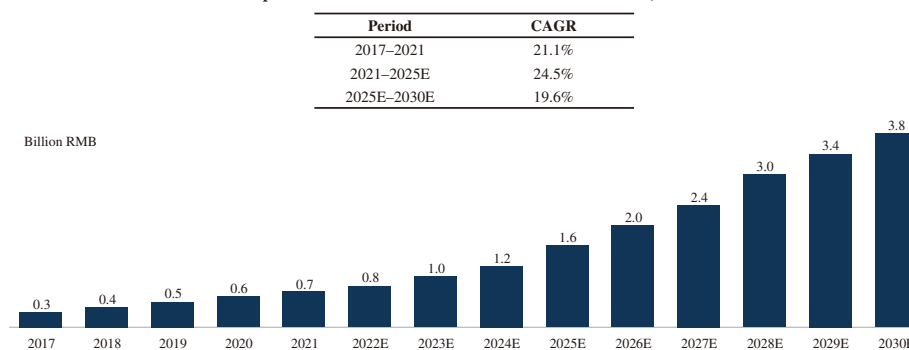
## INDUSTRY OVERVIEW

Medical device suppliers with powerful technical service capabilities may establish strong relationship with their customers through periodic repair, maintenance and optimization after medical devices are sold. Such synergistic interactions between the sales and technical service will not only generate recurring maintenance-related income, but also help establish long-term consumable supply relationships for such medical device suppliers.

### Market Size

China’s ophthalmic medical device technical service market has increased rapidly from RMB0.3 billion in 2017 to RMB0.7 billion in 2021, representing a CAGR of 21.1%. China’s ophthalmic medical device technical service market is expected to continue its growth trajectory, reaching to RMB1.6 billion in 2025 and RMB3.8 billion in 2030, with a CAGR of 24.5% from 2021 to 2025 and 19.6% from 2025 to 2030, respectively.

**China Ophthalmic Medical Device Technical Service Market, 2017–2030E**



Source: Frost & Sullivan Analysis

### Competitive Landscape

The ophthalmic medical device technical service includes preventive maintenance and corrective maintenance, both of which require skillful engineers with in-depth ophthalmic medical device expertise. The ophthalmic medical device maintenance is vital to the efficient and accurate operation of ophthalmic medical devices held by the end customers and thereby contribute to patients’ diagnosis and treatment process. As more expensive ophthalmic medical devices are used by public hospitals and specialized hospitals, the demand for well-trained ophthalmic medical device maintenance engineers continues to increase. The ophthalmic medical device maintenance service providers are ranked below in terms of revenue in 2021:

In 2021, our Group and Carl Zeiss occupied more than half of the market share. Benefiting from full coverage of product line and a highly qualified engineer team, Gaush ranked second in China’s ophthalmic medical device technical service market in 2021, and ranked first among domestic ophthalmic device technical service providers in terms of number of technicians and revenue from provision of technical services in 2021.

## INDUSTRY OVERVIEW

### Breakdown of China’s Ophthalmic Medical Device Technical Service Market, 2021

Million RMB

Company	Revenue	Share
Carl Zeiss	241.5	37.1%
Gaush	167.7	25.7%
Alcon	78.5	12.0%
Johnson & Johnson – Abbott Medical Optics	61.7	9.5%
NIDEK	32.4	5.0%
Others	69.9	10.7%
Total	651.7	100.0%

Source: Frost & Sullivan Analysis

### RAW MATERIALS

Raw materials needed for the manufacture of IOL include hydrophobic substance, hydrophilic substance, radiation blocking substance, as well as some additives used in small volume for IOL performance improvement. Even though hydrophobic and hydrophilic substances have already been widely applied to the manufacture of IOL during the past decades and can be procured in relatively low price, IOL manufacturers are still working on the R&D of IOL raw material formulation. The additives, even added in small volume, are able to significantly improve the performance of IOL if applied in an balanced volume with hydrophobic and hydrophilic substances, which is the reason for their relatively high price and increases the general cost of IOL manufacture. Prices for the raw materials mentioned above range from RMB15,000 per ton to RMB75,000 per kilogram. The prices remain stable and there was no significant price fluctuation observed during the Track Record Period.

### THE FROST & SULLIVAN REPORT

In connection with the [REDACTED], we commissioned Frost & Sullivan, an Independent Third Party, to prepare a report on global and China’s ophthalmic medical device market (excluding contact lens and lens solution for the purpose of this Document). We have agreed to pay a total of RMB0.7 million in fees for the preparation of the Frost & Sullivan Report. Frost & Sullivan is a market research and consulting company that provides market research on a variety of industries including healthcare. In preparing the report, Frost & Sullivan referred to both primary and secondary research obtained from various sources in respect of the designated market. Primary research consists of in-depth interviews with leading industry participants and industry experts. Secondary research consists of reviewing reports of market participants, independent research reports and data of the Frost & Sullivan’s own research database. Projected data were obtained from extrapolation of historical and macroeconomic data with reference to specific industry related factors, in which the underlying data referenced has been cross-validated through multiple channels. Our Directors confirm that, to the best of their knowledge, after taking reasonable care, there has been no adverse change in market information since the date of the Frost & Sullivan Report which may qualify, contradict or impact the information disclosed in this section.