

## Life Care Business

### Health Care

#### Eyeglass Lenses

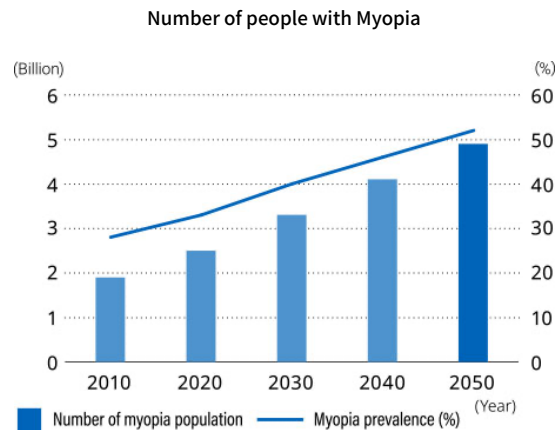
##### Market Environment

Myopia, also known as short-sightedness, is a common eye condition whereby objects far away appear out of focus, it is a rapidly growing health concern globally. By 2050, an estimated 5 billion people could be affected by myopia and annual myopia progression rate is most rapid under 10 years of age. Childhood myopia is a growing global problem<sup>\*1</sup> due to factors such as increased near-work activities including the usage of digital devices and spending less time outdoors, but there is a lack of awareness<sup>\*2</sup> of this condition and impact amongst patients and the parents of children living with myopia.

We are committed to closing the vision health gap and continue our call on governments and public health bodies, as well as the entire healthcare ecosystem to improve eye care health policies globally, allowing children to lead fuller, more inclusive lives.

Concurrently, there is a heightened global awareness of health and well-being. Economic growth in emerging markets has also led to increased purchasing power and a greater emphasis on eye health, thanks to aging population and wider level of awareness (organic growth of presbyopes). Consequently, the demand for eyeglass lenses is projected to experience stable growth.

Despite uncertainties in the global economic environment, the eyeglass lens market remains relatively resilient. This resilience is attributed to the necessity of eyeglasses and the coverage provided by private and public health insurance in many Western countries.



Source: Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Sankaridurg P, Wong TY, Naduvilath TJ, Resnikoff S, Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050, Ophthalmology, May 2016 Volume 123, Issue 5, Pages 1036–1042

<sup>\*1</sup> Holden BA, Fricke TR, Wilson DA, Jong M, Naidoo KS, Sankaridurg P, Wong TY, Naduvilath TJ, Resnikoff S, Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050, Ophthalmology, May 2016 Volume 123, Issue 5, Pages 1036–1042

<sup>\*2</sup> World Economic Forum. Global rates of short-sightedness are rising rapidly, study shows. Accessed April 2024. [Myopia: What causes short-sightedness and why is it rising?](https://www.weforum.org/articles/2023/04/myopia-what-causes-short-sightedness-and-why-is-it-rising/) | World Economic Forum (weforum.org)

## Status of Our Business

### Business Overview

Our mission is to provide lifelong eyecare solutions, and guided by this purpose, we offer a diverse array of lenses for all stages of life, ranging from general single-vision lenses to progressive (varifocal) lenses for the elderly and myopia control lenses for young children. To ensure we provide the best possible products, we invest heavily in continuous research and development, focusing on improvements in optical design, lens coating, and photochromic lenses\*

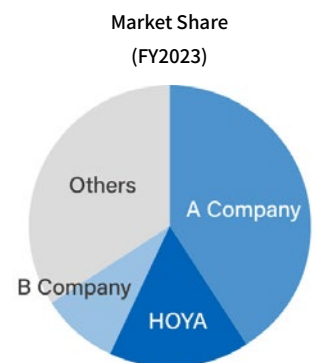
Internationally, overseas net sales constitute 90% of our total revenue, with the highest sales in Europe, followed by the Americas. We operate production facilities worldwide, with significant production volumes in Thailand, Vietnam, Hungary and local manufacturing operations to reinforce our sustainability agenda and provide best possible service to our customers and their consumers.

\* Photochromic lenses are those that darken when exposed to UV light.

### Market Position

HOYA proudly holds the position of the world's second-largest eyeglass lens manufacturer. Our growth strategy includes not only organic expansion but also an increase in market share through strategic mergers and acquisitions.

More than 30% of the market is occupied by numerous small to medium-sized lens manufacturers. By targeting and acquiring these smaller players, HOYA is committed to continuously increasing its market share and solidifying its leadership in the industry. We would also like to strengthen our position by becoming trusted partners, delivering the best and most innovative portfolio of products and solutions, providing great service, and being relevant to customer needs.

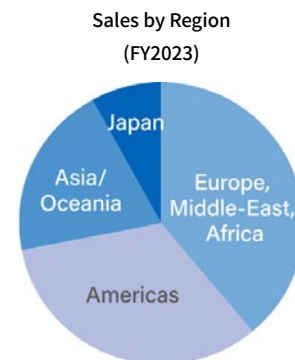


[HOYA estimate on a value basis]

### Conditions by Region

The market is a mature one, with North America and Europe constituting our most important regions, accounting for approximately 70% of our divisional sales. However, the HOYA Group sees significant growth potential in the United States, where we are actively working to strengthen our local organization and sales capabilities.

In Asia, excluding Japan, our growth in China has been remarkable. We are significantly expanding our sales in China, particularly through our innovative MiYOSMART product (details to follow).



### Outlook

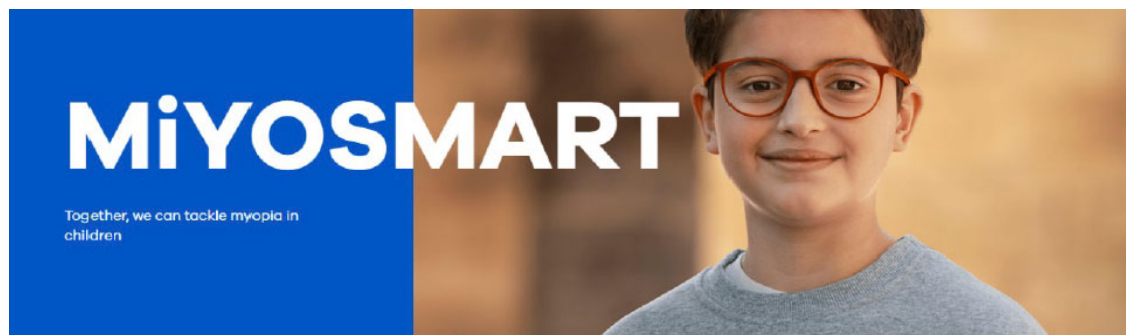
The eyeglass lens business is HOYA Group's largest source of sales, driving the overall expansion of the Life Care business.

We are dedicated to partner with optometrist shops and Eye Care Professionals worldwide to support their growth. To achieve this, we continuously drive innovation in products, practices, and processes; enhance services to our customers with a global presence of manufacturing capability and digitalization of customer interactions; solidify our support to customers and become a relevant partner to their business. Organization sustainability will be the backbone of these initiatives, including digital infrastructure, corporate governance, sustainability and talent management.

Among our notable advancements is MiYOSMART, a lens designed to slow the progression of myopia in younger children. Launched in 2018 ahead of our competitors, MiYOSMART has seen significant growth, particularly in the Chinese market. The product lineup has been expanded to include sunglasses and photochromatic lenses and is now available in more than 30 countries<sup>\*3</sup>.

Beyond China, HOYA plans to intensify promotional activities in Europe thanks to change in the insurance policies. In March 2022, MiYOSMART was recognized as being of public utility by the French Ministry of Health, raising government awareness which should lead to an increase in myopia treatment reimbursement. Since July 1st 2024 in Switzerland, the government has begun to reimburse myopia management solutions for children. This proves the impact we can make by raising awareness, educating, and ensuring governments understand the importance of prioritizing myopia.

Regionally, we are strengthening our sales efforts in high-growth emerging markets, especially in China, to expand our market share. In the United States, where a significant portion of sales is to independent optometrist shops, we are enhancing our presence with business targeting optometrist chains. Additionally, we are exploring mergers and acquisitions to extend our reach to customers, to deliver better consumer satisfaction and contribute to the category growth. Through these initiatives, we aim to achieve higher growth than in the past, targeting mid single-digit growth rates.



<sup>\*3</sup> MiYOSMART has not been approved for myopia management in all countries, including the United States, and is not currently available for sale in all countries, including the United States.

As of August 2024, MiYOSMART has not received approval in Japan. For more information, please visit the official [MiYOSMART website](#).

## Contact Lenses

### Market Environment

The retail market for contact lenses in Japan is growing at a gradual 2% or so annually. We estimate that the demand for contact lenses will continue to grow even against a background of declining birthrate and population aging, due to rising myopia among the young combined with increasing adoption of bifocal contact lenses among the elderly. In addition, an increase in average unit price per sale due to increased sales of high-value-added lenses is also expected to lead to market growth.

## Status of Our Business

### ► Business Overview

Eyecity is HOYA's contact lens specialty retail store chain, comprising 370 outlets across Japan. Eyecity offers consulting sales, proposing products optimally tailored to each individual customer, backed by a comprehensive lineup of products from major producers worldwide. Outlets are typically situated in convenient locations, such as near train stations and in shopping malls. To cater to today's growing online shopping needs, HOYA also offers Hoshii Toki Bin (on-demand delivery) and Otoku Teiki Bin (money-saving regular delivery), to enthusiastic customer reception.



In March 2022 HOYA began manufacturing and selling the hoyaNONE series of private-brand contact lenses. It currently offers six products in the series.

### ► Market Position

HOYA holds more than 50% of the market share in the largest category of contact lens sales channels, contact lens specialty stores. HOYA expects contact lens specialty stores to continue taking market share from ophthalmological channels, owing to their comprehensive lineups and superior prices.

On the other hand, online shopping has been expanding its market share in recent years. HOYA believes that responding to this channel will be vital in assuring the Company's market position.

### ► Outlook

The Company has been pursuing a strategy of raising its profile by opening 15 to 20 stores a year. HOYA will continue to open new stores and strengthen marketing to attract new customers.

At the same time, we will aim for continuous growth by further expanding our product lineup, including our private-brand series, strengthening our recommendations of high-value-added products such as lenses for astigmatism and bifocal lenses, and enhancing in-store services to increase customer repeat rates and average spending per customer.

Sales Composition Ratio by Sales Channel (FY2023)



HOYA Market Share at Contact Lens Specialty Stores  
[HOYA estimate on a value basis]



## Medical

### Medical Endoscopes

#### Market Environment

Medical expenses are increasing worldwide in line with the aging of society. To keep medical expenses in check, governments in countries across the globe are promoting the early detection of disease and minimally invasive medical procedures. Minimally invasive medical treatment does not involve the use of a scalpel on the patient's body and thus minimizes the physical burden on the patient. Due to this demand, endoscopes are attracting a great deal of attention.

The growth of the endoscope market is modest in developed countries. In Asia ex-Japan, however, growth rates remain high, as these countries are still in the early adoption phase. China especially is expected to lead growth in the global market.

#### Status of Our Business

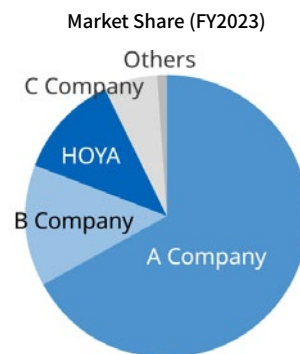
##### Business Overview

HOYA conducts research & development, manufacturing, and sales of medical flexible endoscopes used in the examination and treatment of digestive system, ear, nose & throat (ENT), respiratory organs, etc. Medical flexible endoscopes are composed of a scope that is inserted into the patient's body and a video processor. The Company sells these products to healthcare institutions, organizations that purchase jointly with healthcare institutions, and sales agencies.



##### Market Position

HOYA is the third largest group in the industry globally. The Group's strengths lie in the state of the art endoscopes for gastrointestinal endoscopy (GI); small-diameter endoscopes for pulmonology; market leading Ear-Nose-Throat systems composed of endoscopes, processors and stroboscopy systems.



[HOYA estimate on a value basis]

##### Conditions by Region

Most of the Company's sales are in Europe and other overseas regions.

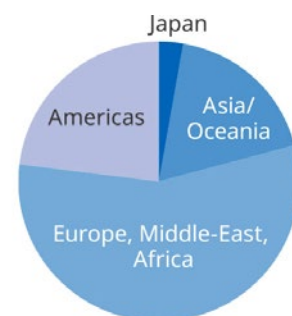
##### Outlook

The demographic profiles of many countries are aging. Also, demand is growing for minimally invasive medical procedures. As a result of these factors, the market for medical endoscopes is forecast to grow in the mid-to-high single digits.

In the near term, the structural reforms implemented in fiscal 2022 in the Americas are steadily bearing fruit and the business there is showing signs of an upturn.

Against the background described above, we will continue to actively pursue continuous technological innovation in both reusable and single-use endoscopes, offer products and solutions that take cleaning and disinfection into consideration, strengthen our sales capabilities, and leverage AI.

Sales by Region (FY2023)





PENTAX Medical ONE Pulmo  
(Single-use bronchoscope)



PENTAX Medical INSPIRA™ Video Processor EPK-i8020c, i20c series scope  
(High-end video processor and video gastroenteroscope)



AquaTYPHOON™  
(Automated brushless endoscope  
channels pre-cleaning system)



PENTAX Medical Discovery™  
(AI-equipped endoscopic image diagnosis support software)

## Intraocular Lenses

### Market Environment

As populations age around the world, medical infrastructure spreads in emerging countries and access to advanced medical technology improves, demand for intraocular lenses for cataracts is rising. Cataracts are a disease in which a cloudy white area forms in the crystalline lens of the eye, causing vision to deteriorate. Probability of suffering cataracts increases with age and is the greatest cause of eyesight loss in the world today. In cataract surgery, the natural lens that has developed the cataract is replaced with a new, clear IOL. In addition to conventional unifocal lenses, in recent years high-end products such as trifocal lenses and lenses with deep focal depth have entered the market, resulting in mid-single digit market growth.

### Status of Our Business

#### Business Overview

In this field, we perform research and development, manufacturing, and sales of intraocular lenses (IOLs) for cataract surgeries. Drawing on over 30 years of experience and expertise in the IOL business, HOYA has contributed to improving the vision and quality of life of millions of cataract sufferers.

HOYA pre-loaded IOLs\* combine HOYA's strengths in optical technology with the Group's experience and expertise in developing injectors for intraocular lenses. These advantages have earned admiration on the global market, propelling the HOYA Group to top market share in this category.

\* In a pre-loaded injector, the intraocular lens is pre-installed in the injector, supporting safer and more reliable surgeries.



Vivinex™

## ▶ Market Position

HOYA is steadily increasing its market share and currently holds the global No. 3 position.

Driven by the flagship brand, Vivinex™ (launched in 2015), sales continue to grow at a pace that is above the market. Vivinex™ combines an IOL material that offers unprecedented clarity of vision with multiSert™, our proprietary 4-in-1 injector, which is designed to provide outstanding IOL delivery consistency.

## ▶ Status by Region

In a breakdown of net sales by region, Japan accounts for about 40% of HOYA's worldwide net sales.

HOYA is continually expanding the roster of countries in which it sells. As a result, our overseas sales ratio is expected to rise.

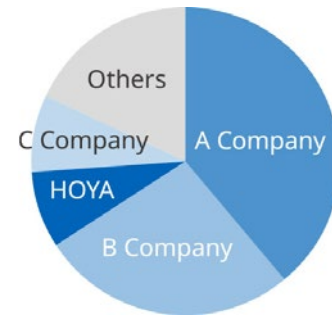
## ▶ Outlook

By bolstering sales of Vivinex Gemetric trifocal IOLs, a high-value-added product, HOYA is meeting the needs and expectations of a wider range of customers.

In addition to bolstering our sales workforce in regions in which we already have sales bases, we are establishing sales companies and reaching out to sales agencies in regions in which we do not yet have a presence. In this way we are widening our total addressable market. In January 2023 the HOYA Group established a sales company in South Korea, a country where demand for IOLs is rising.

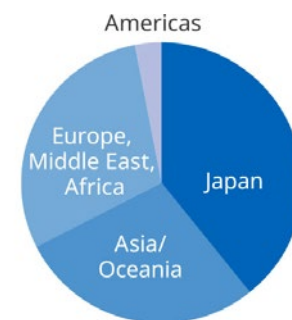
Although the sales growth rate is expected to slow temporarily in fiscal 2024 due to the cyber attack at the beginning of the fiscal year, we intend to outpace the market growth rate (mid-single digits) for IOLs.

Market Share (FY2023)



[HOYA estimate on a value basis]

Sales Composition of HOYA Surgical Optics by Region (FY2023)



## Ceramic Artificial Bones, Metal Orthopedic Implants

### Market Environment

As Japan's demographic profile ages, bone fractures and disease are on the rise. The market for orthopedic and neurosurgical implants effective in their treatment is expected to continue to grow.

### Status of Our Business

#### ▶ Business Overview

HOYA develops and manufactures ceramic artificial bones and metal implants, which are used to compensate for bone loss and repair bone fractures. The Company mainly supplies these products to healthcare facilities in Japan, where they contribute to the treatment of numerous patients.

## ▶ Market Position

In the ceramics market, HOYA was the first company in Japan to manufacture and sell a hydroxyapatite product with more or less the same constituents as a human bone and has led the Japanese market ever since. HOYA entered the market of metal implants in 2012, through management integration with Japan Universal Technologies, Inc. We manufacture and sell implants that are optimized to the skeletal structure of Japanese people in terms of shape and size. In metal orthopedic implants for distal radius fractures, HOYA offers an extensive product lineup that has captured the top market share in Japan (HOYA survey, case basis).

## ▶ Outlook

By maintaining its share of the ceramic artificial bone market and developing new applications, the Company expects to expand its market. HOYA will respond to patient and healthcare-facility needs by extending its lineup of metal implant products and bolstering its sales capabilities. Leveraging its strength as both a manufacturer and vendor of both ceramic artificial bone and metal implants, HOYA aims to combine products of both materials to propose new surgical procedures, thereby differentiating itself from the competitors.



Bioactive ceramic implant BIOPEX



Metal orthopedic implant HTS Stellar D for distal radius fractures

## Chromatography Media

### Market Environment

The market of separation/purification media (chromatography media) used in the development and production of biopharmaceutical products is expected to grow at a rate above mid-single digits globally in the years ahead, due to the expansion of the biopharmaceuticals market.

### Status of Our Business

#### ▶ Business Overview

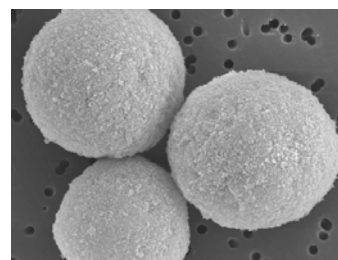
The Company manufactures bioceramic chromatography media and sells them through distributors. The products are adopted by pharmaceutical companies and research facilities worldwide.

#### ▶ Market Position

A wide range of methods are used to separate and refine biopharmaceuticals. HOYA's spherical ceramic hydroxyapatite media possess high capacity for absorption of various proteins, enabling efficient removal and powerful separation of impurities in the purification process. As such, these unique products enjoy strong market favor.

#### ▶ Outlook

Market needs for biopharmaceuticals are many and diverse, extending to antibody preparations, vaccines, gene therapies and more. To cater to these needs and secure further growth, the HOYA Group is working with customers and research institutes to accelerate the development of products and refining processes and is expanding production capacity to respond to growing demand.



Chromatography media  
(enlarged image)

## Information Technology Business

### Electronics

#### Mask Blanks for Semiconductors

##### Market Environment

Although prone to business cycles, the semiconductor market is forecast to continue growing for the long term, in tandem with the continuing development of technologies such as cloud computing, AI, IoT and automated driving. To fabricate ever more high-density, high-performance semiconductors, miniaturization of circuit patterns is progressing. For example, the introduction of lithography technologies using extreme ultraviolet (EUV) light is expanding.

In fiscal 2023, the semiconductor market experienced negative growth due to a downturn in the memory market, but a gradual recovery has continued since the first half of 2024 due to increased demand for semiconductors for generative AI. Although the recovery remains mixed, GPUs and ASICs for generative AI and high-bandwidth memory (HBM) are expected to continue to drive growth.

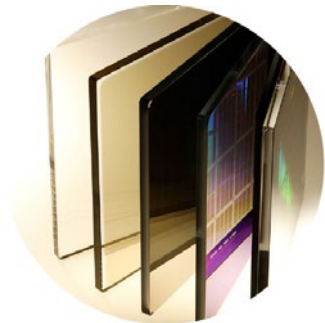
##### Status of Our Business

##### ► Business Overview

In this business, we perform research, development, and manufacturing of mask blanks for semiconductors and sell these products to semiconductor manufacturers and foundries as well as mask shops.

Mask blanks are the base components of photomasks, which are the master plates used to transfer a semiconductor's intricate and complex circuit pattern onto a semiconductor wafer and are literally blank (i.e. before the circuit patterns are transferred).

The nature of mask blanks is such that demand is stimulated by the broadening range of applications, such as for smartphones, PCs, and generative AI. As such, the current situation where end customers prefer their own semiconductor designs is considered advantageous for HOYA's products.



## ▶ Market Position

In close collaboration with its customers, HOYA has long contributed to the miniaturization and improvement of performance of semiconductors. This track record has enabled the Company to maintain an exceptionally large share of the market for mask blanks for many years.

Competition in the field of EUV mask blanks is expected to intensify over the medium to long term. HOYA expects to continue to lead the field, leveraging its preeminence in low-defect products and next-generation products such as phase-shifting masks.

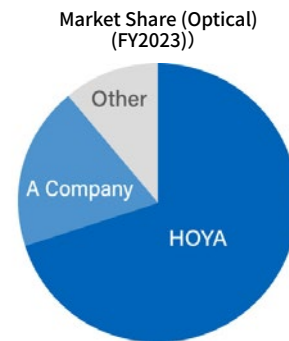
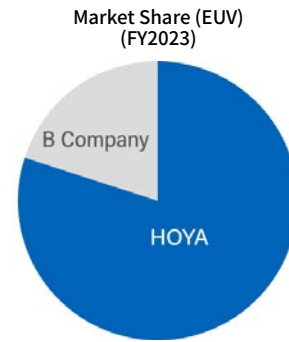
HOYA consistently maintains a strong presence in optical deep-ultraviolet (DUV) lithography, a conventional lithographic technology.

## ▶ Outlook

Demand for EUV mask blanks, an advanced technology, is expected to continue to grow along with the ongoing miniaturization of circuit channels as semiconductors for improved performance and energy efficiency.

Mask blanks are used in R&D activities in significant quantities, but they are not consumables, so demand for them related to the mass production phase is comparatively light. For this reason, demand for mask blanks is only weakly correlated with demand for final products in the semiconductor market. As such, growth for these products derives from the continuing miniaturization of circuit channels and the number of designs for final products.

As of 2024, mass production of semiconductors of the 3 nm generation using EUV lithography has taken off in earnest. Nodes will continue to shrink every few years, to 2 nm, then 1.4 nm and so on. In tandem with this miniaturization, customer demands for quality (fewer defects, etc.) will become increasingly challenging. In addition, the introduction of mask blanks suited to phase shift masks and high-numerical-aperture (high-NA) EUV lithography (next-generation EUV lithography technology with higher numerical aperture) are expected in the future, and mask blanks compatible with these lithography technologies are in demand. Under these conditions, the Company is introducing leading-edge equipment and continuously strengthening production capacity to maintain a competitive advantage in advanced fields.



[HOYA estimate on a value basis]

## Photomasks for FPDs

### Market Environment

Flat panel displays (FPDs) are used in a wide array of products, including TVs, PCs, smartphones, and automobiles.

For many years, liquid crystal displays (LCDs) were the focus of display technology. In recent years, adoption of organic electroluminescence (OLED) displays has advanced, principally in smartphones and high-end TVs.

Under the environment described above, photomasks for FPDs have continued to enjoy solid demand, as LCDs have given way to OLEDs and new functions and designs, taking advantage of OLED's unique characteristics, such as foldable screens, have been developed. In regional terms, manufacturers in China have set the pace on growth in this segment.

### Status of Our Business

#### Business Overview

When manufacturing FPDs for TVs, smartphones, laptop computers, and other devices, photomasks for FPD manufacturing are important components used as the master plates to transfer the circuit pattern onto the substrate.

HOYA sources the substrate from raw materials manufacturers and creates blanks from that substrate by performing polishing, deposition, and resist application. When the manufacture of the blanks is completed, HOYA conducts circuit pattern drawing, developing, etching, and resist stripping and cleaning, and sells them to panel manufacturers as photomasks.

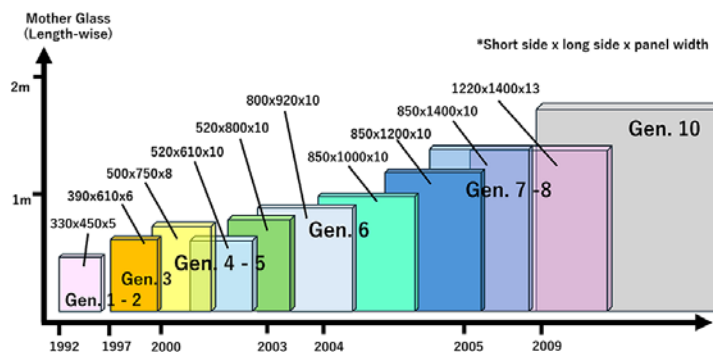
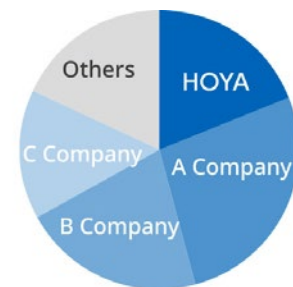


#### HOYA Position and Market Share

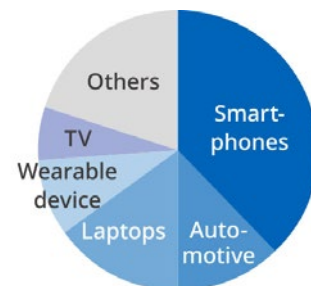
HOYA possesses expertise in high-precision products such as high-resolution masks and phase-shifting masks and holds the top-class market share.

FPDs are categorized by generation, which corresponds to mother glass size. Our business focuses on medium-sized mother glass of generations 6 to 8.6.

Market Share (FY2023)



Sales Composition by Application (FY2023)



#### Sales Composition by Application

The ratio of sales by application is shown in the pie graph on the right. Smartphones account for the largest share. However, sales for new applications, such as car-mounted and wearable devices, are growing.

## ➤ Outlook

Although sales will be affected in the short term by the earthquake that struck Taiwan in April 2024 and other factors, HOYA aims to achieve steady business growth by focusing on high-precision products of medium size (generations 6 to 8.6), which are expected to continue to grow.

Additionally, to capture demand from panel manufacturers in China, which are enjoying blistering growth, in September 2022, HOYA established a joint-venture company, Chongqing MasTek Electronics Co., Ltd., with BOE Technology Group Co., Ltd., one of the world's largest panel manufacturers. This joint-venture company is scheduled to start operation of a new FPD photomask plant in Chongqing in the second half of 2024.



Chongqing MasTek Electronics Co., Ltd. (Chongqing, China)

## Glass Substrates for HDDs

### Market Environment

The market for hard disk drives (HDDs) is expected to enjoy stable demand over the medium to long term as demand for data storage consistently grows. Fields such as cloud services and data centers depend critically on large-volume, low-cost data storage. HDDs provide high capacity and can store large volumes of data at relatively low cost, so they are widely used for nearline\* applications. As data generation volume grows, demand for HDDs is expected to grow continuously over the long term.

In consumer products such as laptop PCs and game devices, however, solid state drives (SSDs) are steadily replacing HDDs, owing to their superiority in high-speed data access, impact-resistance, and low power consumption.

The nearline HDD market continued to experience major adjustments from 2022 to 2023 associated with the special demand for cloud businesses driven by teleworking and remote schooling during the COVID-19 pandemic as well as the subsequent intensive investment in AI. Demand is expected to recover, however, in 2024 against a backdrop of inventory optimization by hyperscalers.

\* Nearline data storage is not as fast as online storage, but it can be accessed over a network if necessary, unlike magnetic tape and other offline storage approaches, so it is a data storage solution capable of high-speed data communication.

## Status of Our Business

### ▶ Business Overview

In this area, HOYA conducts research and development, manufacturing, and sales of glass substrates for HDDs. HDDs incorporate disc-shaped magnetic disks to which data is written, and the component that serves as the base of the magnetic disk is called the HDD substrate. There are two types of substrates: glass and aluminum, of which HOYA manufactures glass ones.

From raw material manufacturers, HOYA sources substrate raw materials, which the Company processes into disc shapes, strengthens and polishes. After processing, we sell this substrate to HDD manufacturers and to media manufacturers who turn it into magnetic media.

HOYA manufactures 3.5-inch-standard products for nearline servers and 2.5-inch-standard products for laptop PCs and other consumer products. Today the majority of sales are in 3.5-inch-standard products.



3.5-inch HDD for nearline applications  
(Source: Toshiba Electronic Devices & Storage Corporation)

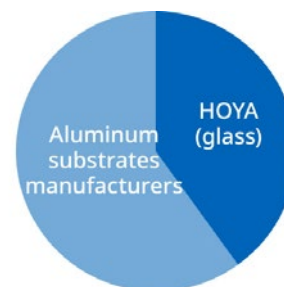
### ▶ HOYA Position and Market Share

HOYA is the world's only glass HDD substrate manufacturer, commanding 100% market share.

The market for substrates for consumer products (2.5 inches) consists entirely of glass products, which is one reason HOYA holds 100% share of this market.

The market for substrates for nearline applications (3.5 inches) includes both aluminum and glass products. We estimate that HOYA's share of this market is about 40%. As ballooning data generation volumes stoke demand for high-capacity HDDs, next-generation technologies such as heat-assisted magnetic recording (HAMR) are expected to be introduced and increasing number of disks (11 or more) are expected to be mounted in some products. Each of these methods require glass substrates, so HOYA expects to extend its share of the data-center market.

3.5-Inch Substrate Used for Near Line Servers Market Share (FY2023)



[HOYA estimate on a value basis]

### ▶ Outlook

In 3.5-inch products for nearline applications, inventory adjustments by hyperscalers have ended. In addition to the normal increase in data distribution, an increase in AI-related data volume is also expected in the medium to long term, so sustainable sales growth is foreseen. The superiority of glass substrates over aluminum substrates in handling even high-capacity data-storage applications is expected to boost HOYA's market share long term. We note that HDDs, which are competitive with SSDs in terms of cost per terabyte, are expected to remain the primary nearline storage solution for a long time to come.

2.5-inch products for consumer products are expected to be gradually replaced by SSDs. However, sales volume on these products is already small, so HOYA believes their impact on the glass substrate business as a whole is projected to be limited.

## Imaging

### Imaging-related Products (Including optical glass, optical lenses, camera lens units, and lasers)

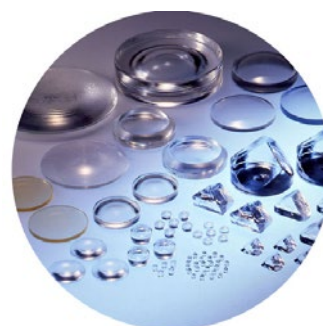
#### Market Environment

The digital camera market is trending favorably, lifted by the reopening of economies after COVID-19 and active development by camera manufacturers of mirrorless cameras and their interchangeable lenses and other factors. The market for cameras used in automotive systems such as driver-assist systems, collision-avoidance systems, and parking-assist systems is continuing to grow, and further growth is forecast in fields related to automated driving systems.

#### Status of Our Business

##### ► Business Overview

In this area, we conduct research and development, manufacturing, and sales of optical lenses for digital cameras and a variety of other cameras, as well as for optical glass materials. These products are used in a wide variety of applications, including automotive cameras and interchangeable lenses for mirrorless cameras. HOYA sources materials from optical glass material manufacturers, conducts compound and solution treatments, manufactures lens materials and lens products, and sells to lens and camera manufacturers.



##### ► Market Position

HOYA is engaged in the entire sequence of operations from R&D on optical glass composition to manufacturing of finished products of lenses. We have built out a system fully capable of multi-model, large-volume production.

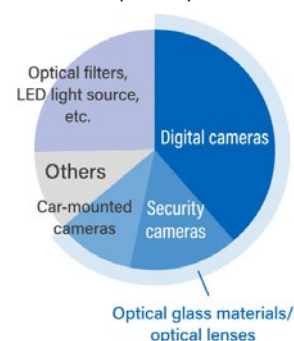
HOYA boasts strengths in aspherical glass molded lenses (GMOs), supporting high market share.

GMOs are optical lens products that are molded by direct pressing of optical glass that has been rendered flexible in high heat, without polishing. Because they deliver excellent aberration correction, GMOs enable the number of lenses used in optical systems to be reduced, contributing to smaller size, lower weight and more advanced function of the cameras that are the final products.

##### ► Sales Composition by Application

Interchangeable lenses for mirrorless cameras and lenses for digital cameras such as compact digital cameras account for some 40% of HOYA's sales in this field. Relatively new applications such as security cameras and automotive cameras are growing as a percentage of sales.

Sales Composition by Application (FY2023)



▶ Outlook

While sales of products for digital cameras are currently firm, the market is expected to dwindle gradually over the medium to long term as the features and resolution of smartphone cameras expand and improve. In automotive camera products, applications for advanced driver-assistance systems (ADAS) are expected to broaden. Meanwhile the discovery of new applications, such as optical products for augmented reality\*, is continuously advancing.

\*AR (Augmented Reality): Technology that superimposes maps and other digital information on the real world by wearing eyeglasses or goggle-type devices.