

SUMITA OPTICAL GLASS, Inc.



## COMPANY PROFILE

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# Company Profile

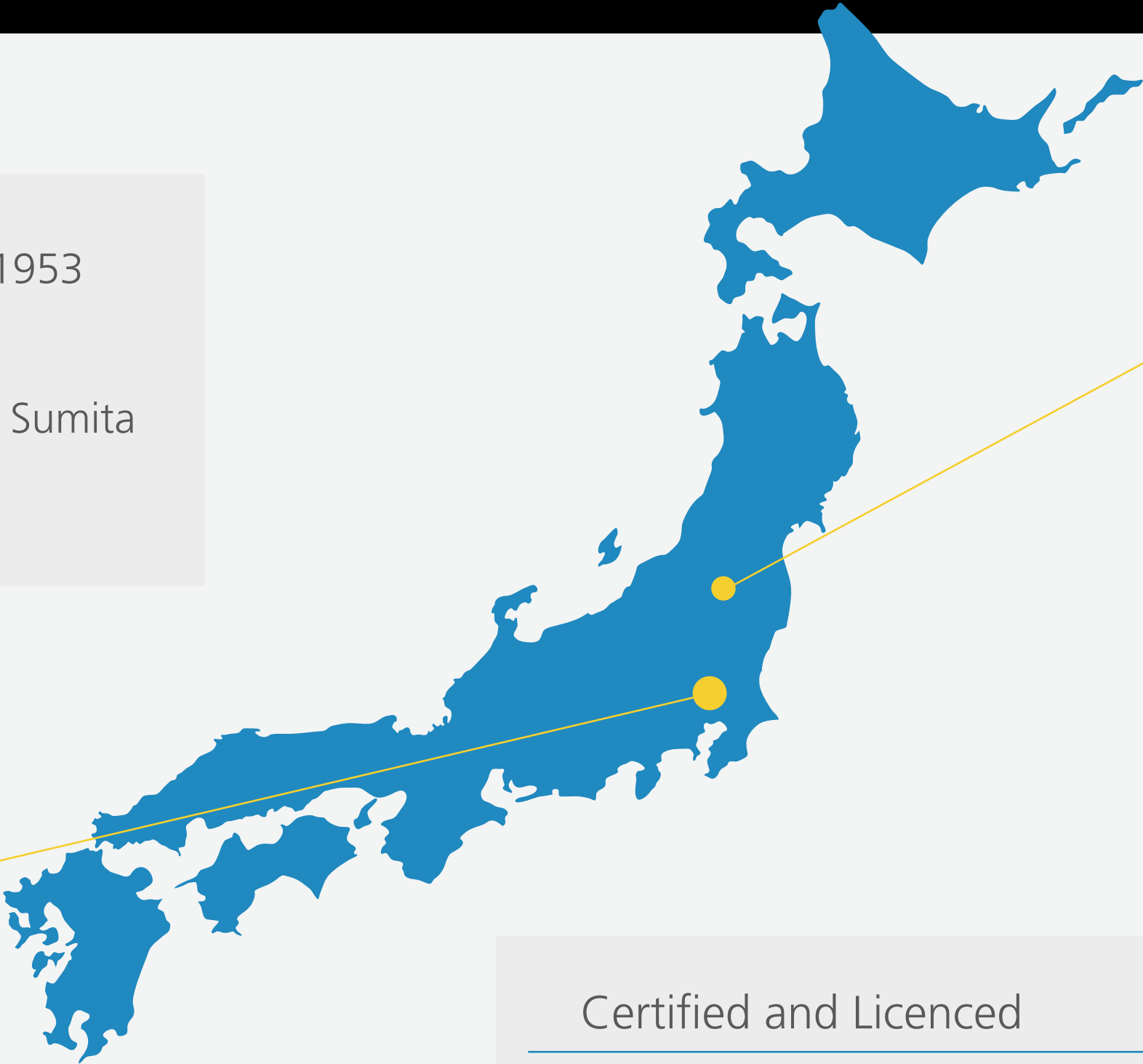


Established	October 13, 1953
Capital	¥49,347,000
Representative	CEO Toshiaki Sumita
Employees	380

## Headquarters



Saitama, Japan



## Tajima Tabehara/ Nagano Factory



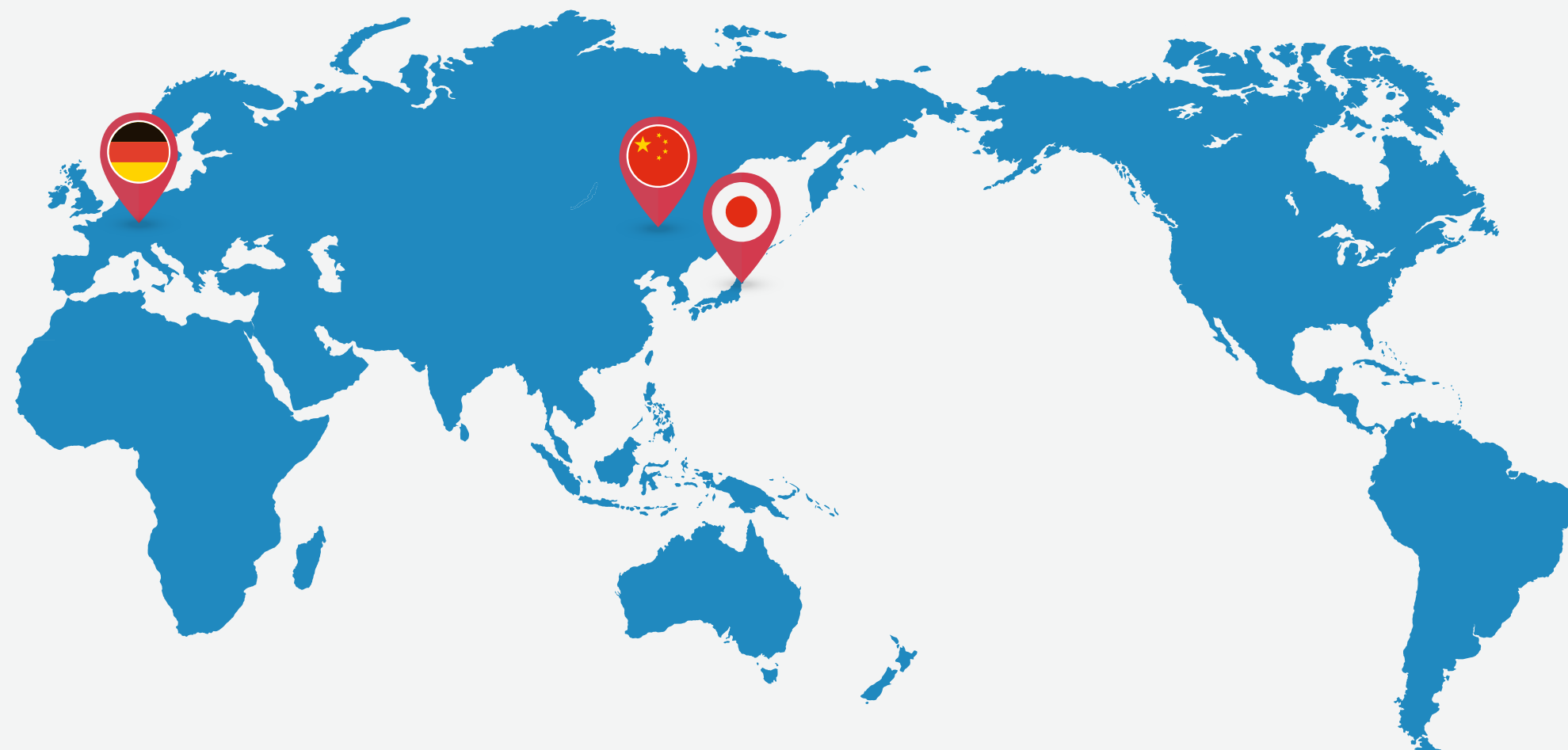
Factory for Medical Device MFG  
Fukushima, Japan

## Certified and Licenced

Certified for ISO14001/ ISO9001/ ISO13485

Licence for Medical Device MFG/ Medical Device Repairing/ MFG & Selling of Type II Medical Device/ Selling & Lending of Advanced Medical Apparatus/ Medical Device MFG for Animal Use

# Affiliated Company



## Sumita Optical Glass Europe GmbH



Established 2005

Location Nuremberg, Germany

Business Sales & Marketing in Europe



## SUMITA OPTICS (Dongguan) Co., Ltd. (China)



Established 2018

Location Dongguan, China

Business Sales & Marketing in China



## Sumita Photonics



Established 1984

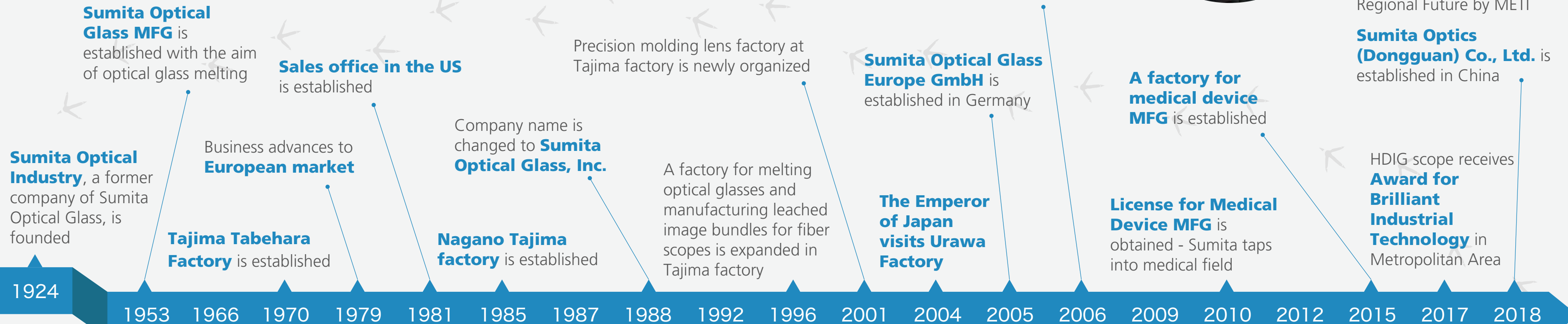
Location Fukushima, Japan

Business Assembling optical fiber



# History

## EVENTS



Sumita is selected as The Leading Company for Regional Future by METI

**Sumita Optics (Dongguan) Co., Ltd.** is established in China

**A factory for medical device MFG** is established

**License for Medical Device MFG** is obtained - Sumita taps into medical field

HDIG scope receives **Award for Brilliant Industrial Technology** in Metropolitan Area



Development of **multicomponent optical fiber** is begun

**Aspheric lens** that does not require polishing is developed with Matsushita Electric Industrial (later Panasonic Corporation)

Sale of **industrial fiber scope** is begun



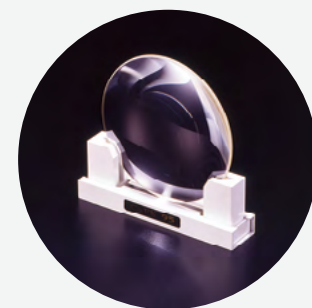
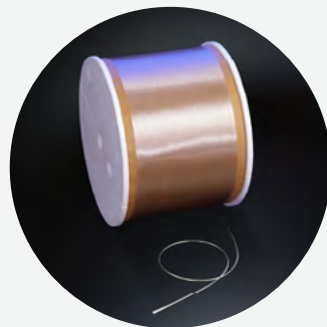
Optical glass K-PSFn2, which has **a refractive index of more than 2** is developed

**HDIG Scope, an ultra-thin image bundle**, is developed

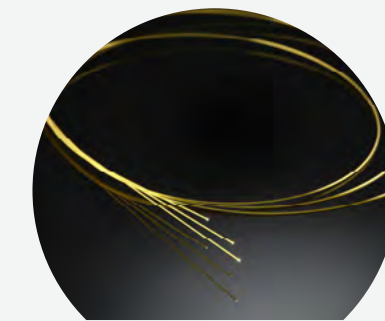
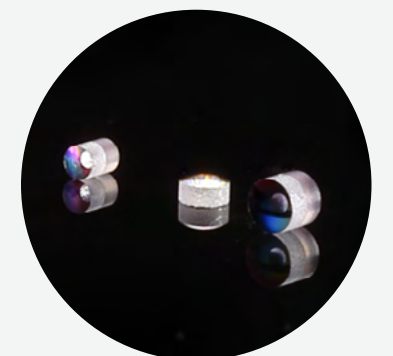
Glass encapsulated LED is developed jointly with Toyota Gosei

**Ultra micro aspherical lens** is developed

K-FIR100UV, a low dispersion (**over 100**) glass material, is developed



**Material for aspherical lens preforms** is developed



**Photaron**, an optical glass in place of fluorite, is developed

## ACHIEVEMENTS



# Awards



1988	The Circle of Excellence Award Winners from the US Magazine Photonics Spectra	Photaron K-CaFK95
1992	The 24th Ichimura Industry Award	Molded Glass Aspherical Lens
1995	20th Invention Grand Prix	Low dispersion glass "Gadron" and "Super Gadron"
1997	The Circle of Excellence Award Winners from the US Magazine Photonics Spectra	Lumilass B
2003	The Circle of Excellence Award Winners from the US Magazine Photonics Spectra	Super Vidron K-PG325
2007	Nikkei BP Technology Award, Electronics/Information Appliances Category	Visible Fiber Laser Element
2009	Japan Brand Award at Super MFG Award	Glass Encapsulated LED
2014	Excellent Award from Fire and Disaster Management Agency	Teluna -LED Head Light-
2017	Saikai Award	Endoscope Type OCT Probe

... and more



# Over 100 Patents Possessed

"Must be interesting if we can achieve this with optical glasses!"

"How can we further advance our technology?"

Sumita's R&D starts from these ideas. Our researchers stick to new technologies, resulting creating many unique and revolutionary world-renowned products.

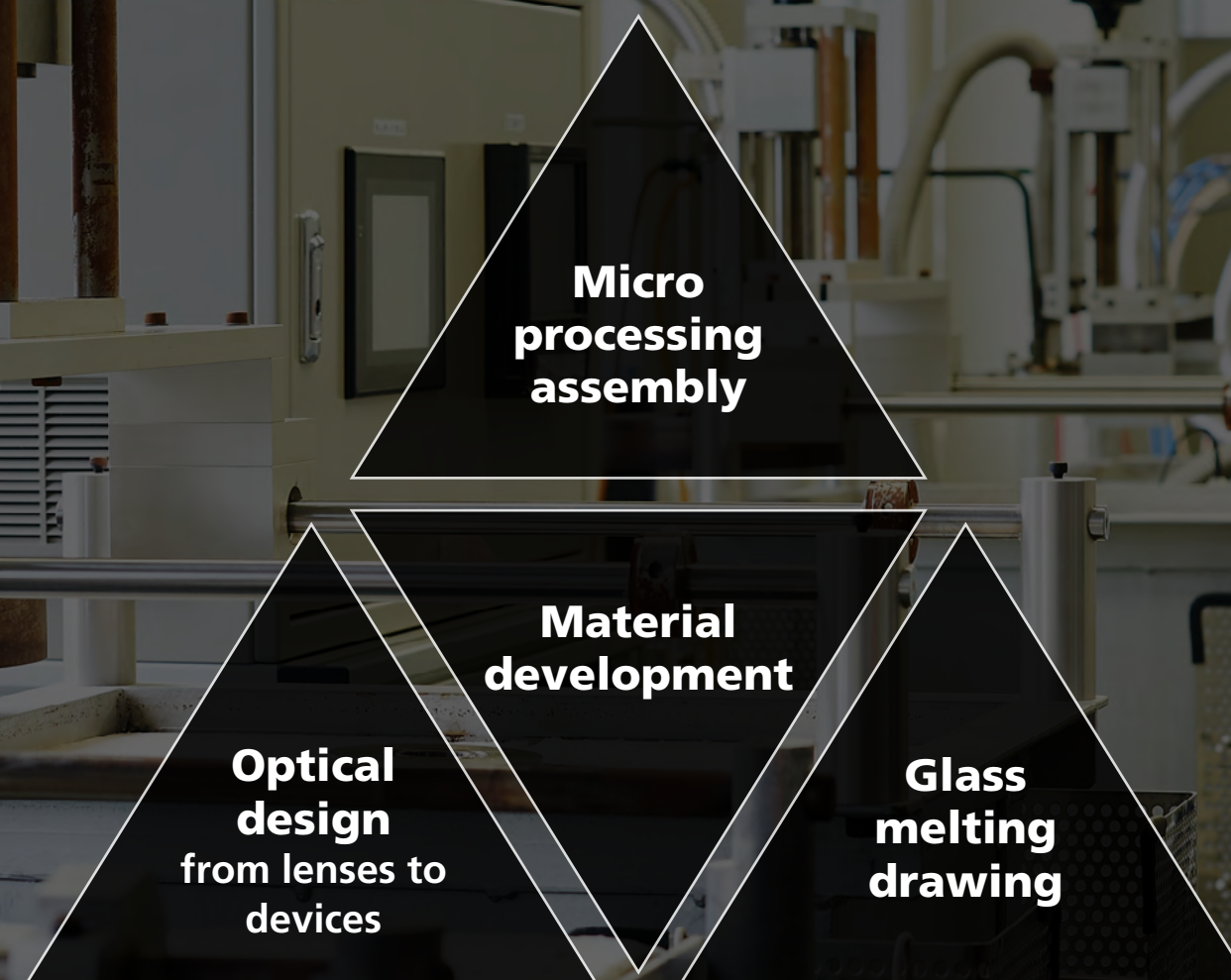
Some examples of patents we hold:

- Production method and manufacturing equipment of glass materials
- Optical glass with high refractive index for precision molding
- Optical glass for precision molding
- Glass composition of gradient-index lens
- Glass for near infrared absorptive filter
- Fiber Optic Image bundle
- Manufacturing method of LTP or LATP crystal particle



# Sumita's Technology

As a leading innovator in optics and glass science, Sumita has been placed an emphasis on thinking outside the box and challenging ourselves.





# Business Units



Sumita's 4 Business Units

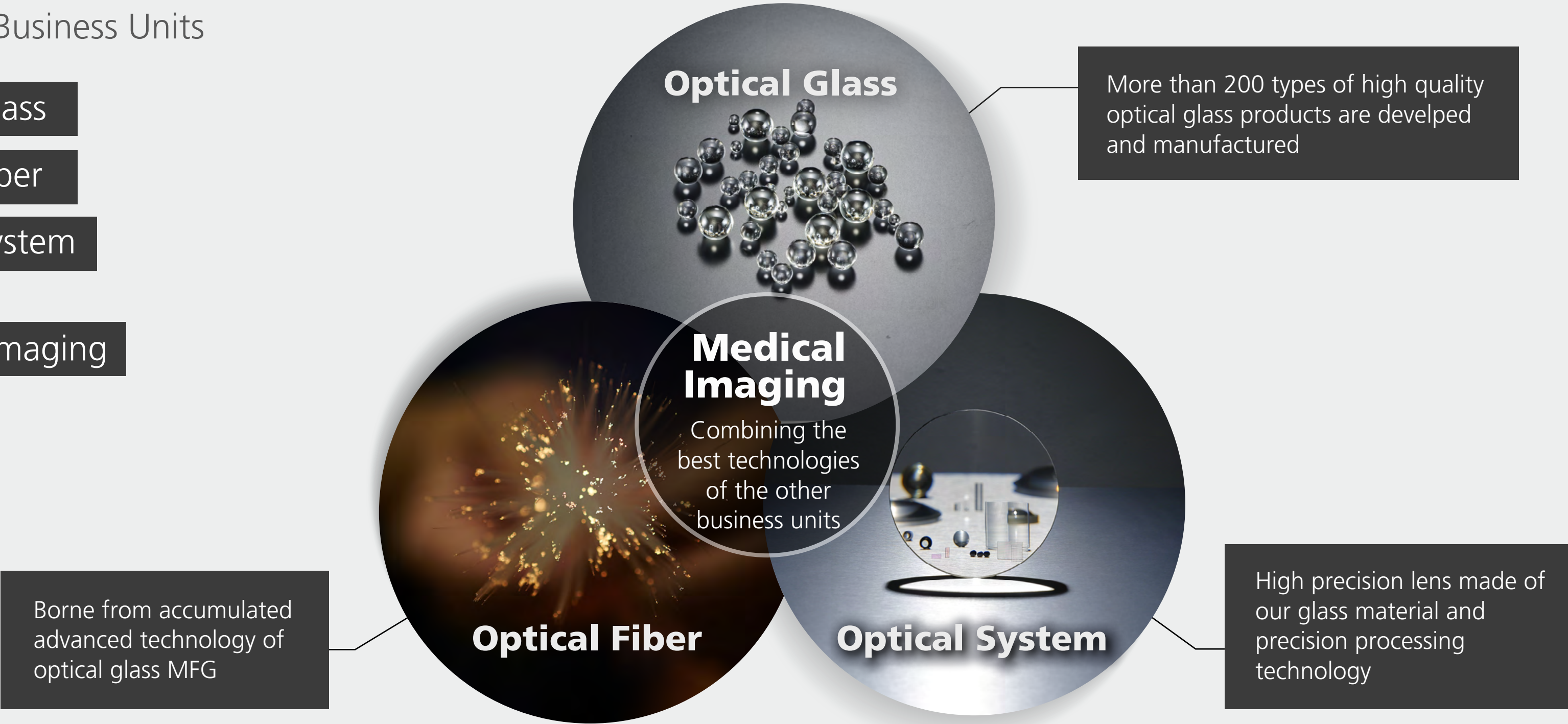
Optical glass

Optical fiber

Optical system

+

Medical Imaging





# Optical Glass

Sumita develops and manufactures more than 200 types of optical glass products including preforms for precision molding and advanced glass materials.

Material R&D



Melting of  
special glass

Precision gob  
preform MFG







## Mold pressed blanks

- High-mix low-volume production
- Economical production



## Cut bar products

- Low volume to mass production
- Quick delivery



Preforms made of dropping method

## Gob preforms

- Polishing unnecessary
- Low cost
- Quick delivery



Glass with various advanced functions

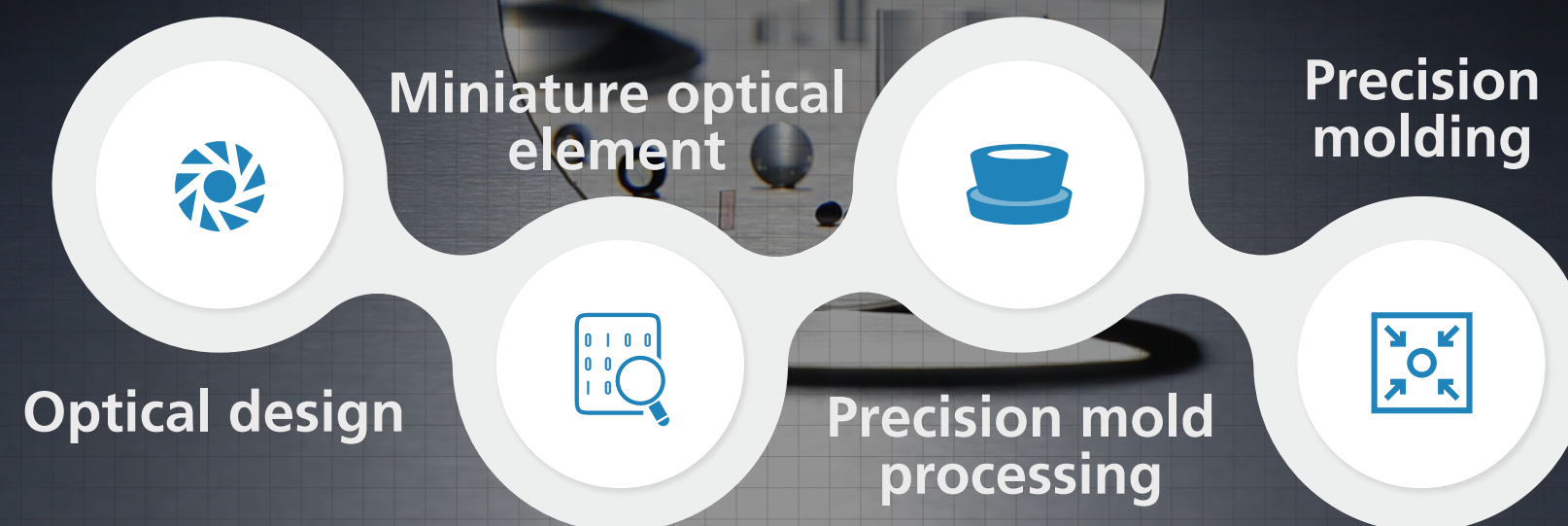
## Specialty Glass

- UV to visible light converter
- IR to visible light converter
- Blue filter
- IR transmitting glass
- Tempered glass, etc.



# Optical System

We offer customized optical solutions including molded aspheres, specialty lenses, and optical devices. Our engineering department is available to assist with product designs and development.





# Optical System



## Aspherical lens

From micro size 0.35 mm to 30 mm in diameter



## Specialty lens

In various shapes including micro lens arrays and cylindrical lenses



## Lens unit

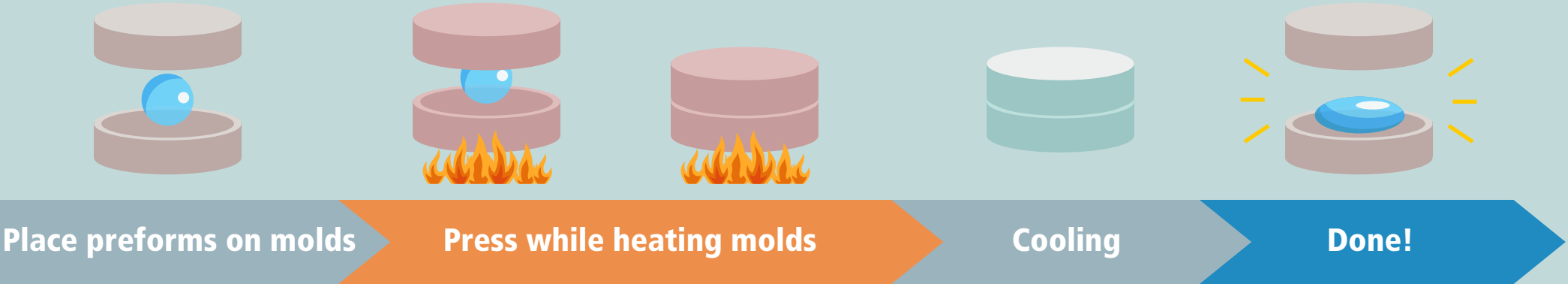
Lens units and sub-assemblies with CMOS



## Optical device

Optical device products with electronic apparatus

### How lenses are formed





# Optical Fiber

We draw optical fiber and manufacture light guides for a wide range of fields including image processing, sensing, medical equipment and lighting.







For light transmission

## Glass optical bare fiber

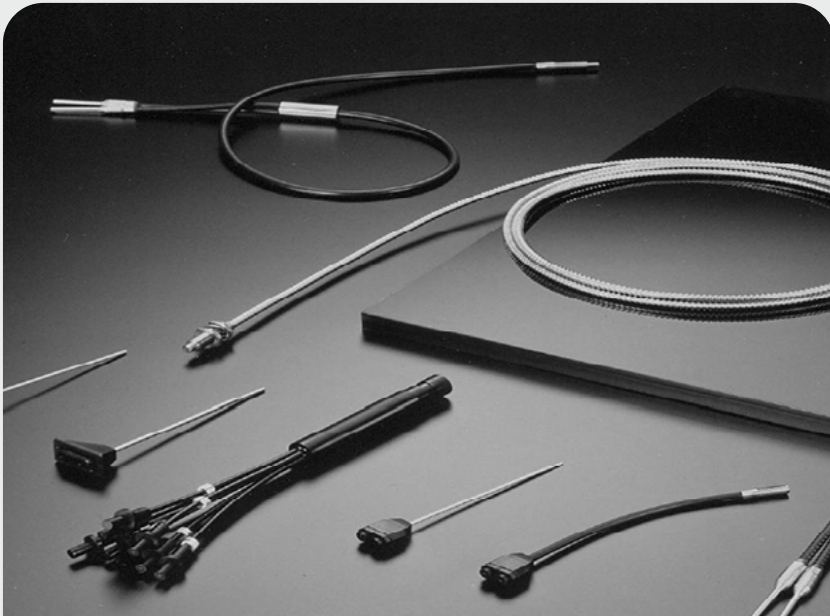
Broad lineup of fiber optics by the difference in opening angles from 15 to 120 degrees, and fiber optics having high transmittance



For light transmission

## Light guide

Light bundles which can be customized in many ways including the shape, NAs, dimension of fibers, length and branching of light guides.



For sensing

## Fiber optic sensor

Fiber optic sensor for light projecting/receiving, etc. We design fiber sensors for your application.



For image transfer

## Image bundle

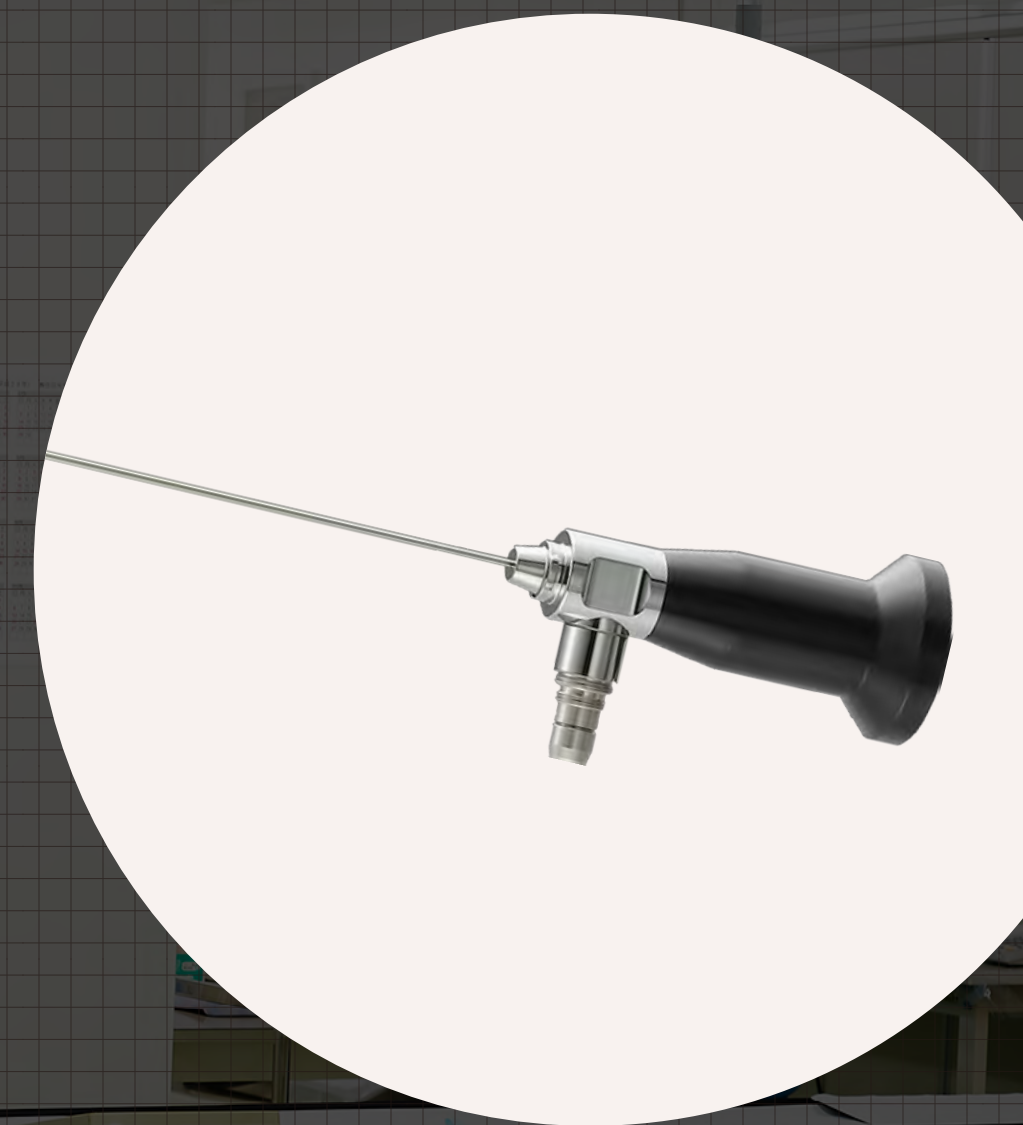
Image bundles consisting of coherent fiber optic bundles are used for transmitting optical images from one end to the other.



# Medical Imaging

Sumita's core technologies integrated to Medical Imaging.

We provide ultra-thin endoscope parts.



Design of  
micro optical  
element

MFG of micro  
optical  
element



MFG of  
ultra-thin image  
bundle



Assembling of  
ultra-thin  
endoscopy



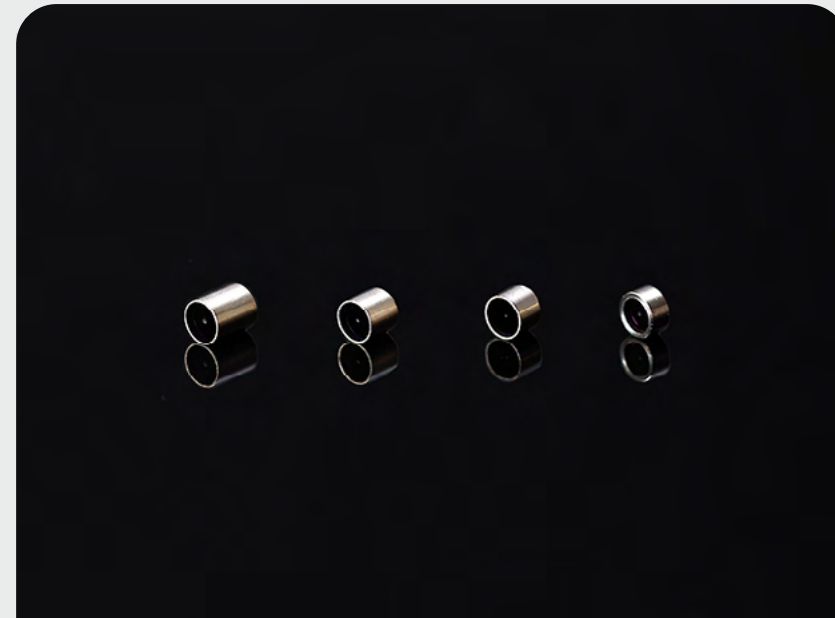




For image transfer

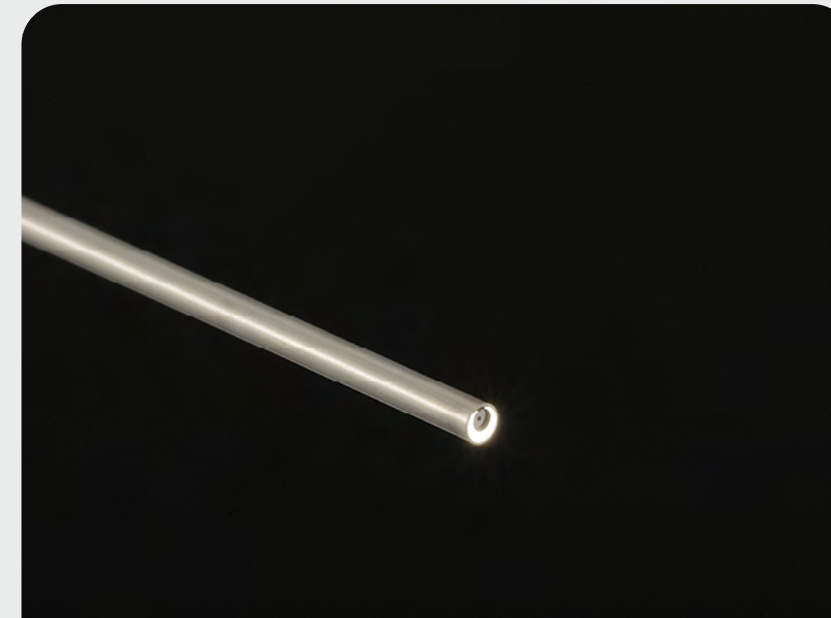
## Image bundle

Image bundles consisting of coherent fiber optic bundles are used for transferring optical images from one end to the other.



## Objective lens Eyepiece

Objective lens units for CCD and CMOS sensors. All the lenses are aspheres, enabling bright and deep depth-of-field.



For light transmission

## Light guide

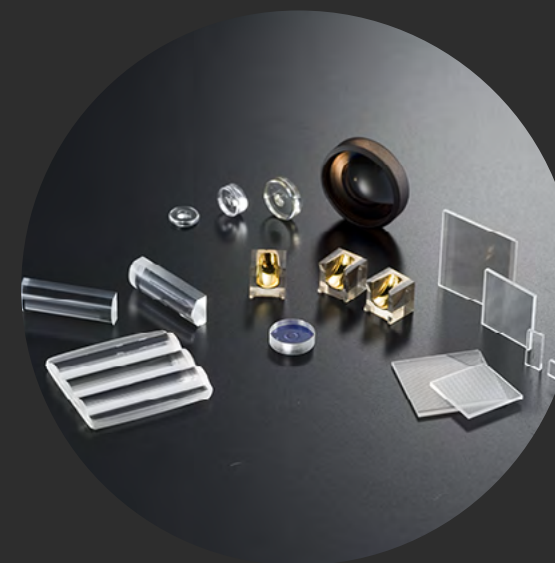
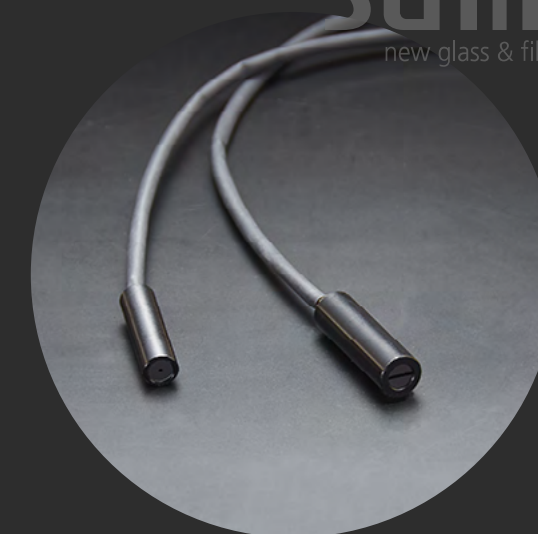
Light bundles which can be customized in many ways including the shape, NAs, dimension of fibers, length and branching of light guides.



## Tapered conduit

Highly efficient light guides for dental curing devices, and are perfect light probes for cavity.





Optical Glass

Optical Fiber

Optical System

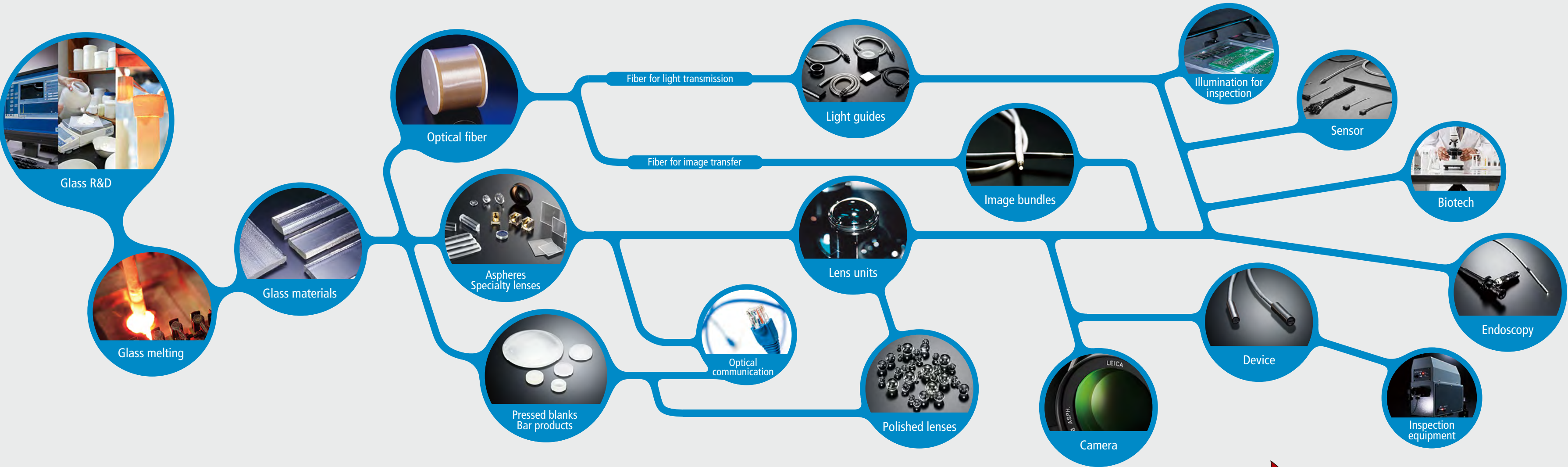
Medical Imaging

**"Act freely, think flexibly and stay resilient."**

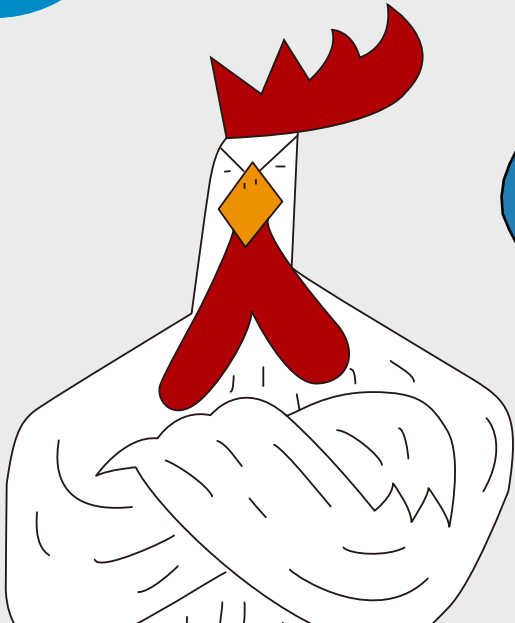
As a leading-edge technology-oriented company, we have developed a number of new technologies.



# Value Chain



Sumita's products widely used in many fields



Think the next stage.





# Nazetaro

The SUMITA mascot is a rooster named Nazetaro. Nazetaro is not the narrowly confined chicken of a poultry farm, but a free-range rooster who thinks outside of the box.

Nazetaro represents our corporate philosophy, which is “Act Freely, Think Flexibly and Stay Resilient”. Sumita is full of passionate and talented employees. Rather than excessive commercialization and corporate profits, we have been putting efforts on developing new technologies.





# Act Freely, Think Flexibly and Stay Resilient.

Sumita Optical Glass, Inc. has nearly 100 years history and accumulated expertise within the optics industry. We have dedicated ourselves to providing the highest quality product to support development of industries.

We always welcome new challenges and look forward to co-developing new products with customers.

