

Seiwa Optical: The machine vision and inspection equipment specialists

Leveraging its excellent reputation for quality optical solutions in the semiconductor and industrial equipment fields, Seiwa Optical is also now expanding its innovation into life sciences.

The history of Japan's optical equipment manufacturers can be traced back to World War II, during which these companies provided scopes for the munitions industry. In the post-war period, focus shifted to the development of microscopes, industrial measuring instruments and electro-optical devices, before eventually expanding to semiconductors and, more recently, optical devices for new technologies such as the Internet of Things, automation and artificial intelligence (AI).

As such, optical manufacturers have played a very important role in Japan's industrial development, with Seiwa Optical being one of the chief players in the industry for more than seven decades. "Seiwa Optical was founded in 1947. To sustain the business over such a long time, it has been necessary to manage it with a balance between traditional inheritance and modern innovation," says company president, Isao Okazaki. "Many long-



standing companies are pursuing uniqueness and an uncompromising attitude rather than profit, and we are in that category."

Today, Seiwa Optical's three main business segments are optics, industrial equipment and environment. In the past, the company mainly manufactured equipment for display panels, but has since shifted to semiconductor equipment. Meanwhile, with automation in the industrial field evolving



Assembly and adjustment of Projection Exposure Lenses

at an ever-increasing pace, machine vision has become another core business, with the company's range of products in this field including image input equipment (in which telecentric lenses and high-definition cameras play an important role), high-uniformity illumination systems, auto-focus systems, XYθ stages, image processing systems and software.

"The application of Industry 4.0 in high-tech companies has become more and more common," says Mr. Okazaki. "Our optical systems are related to optical technology (inspection, positioning, etc.), and these are essential for automated production lines through the introduction of AI, which is necessary for smart factories."

In the industrial equipment business, Seiwa Optical develops production and inspection equipment that is indispensable to production lines for semiconductors and various electronics devices and components, including microLED displays, all-solid-state lithium-ion batteries, laminated capacitors, and PKG substrates. "These are the products that we are focusing on as they have great potential for overseas sales," Mr. Okazaki adds.

Life sciences has recently become the fourth pillar for the company, which identified Japan's weakness in the field of medical equipment as the country relies heavily on imports. "What I told the government is that we foresee a medical revolution," explains

Mr. Okazaki, with Seiwa Optical subsequently managing to secure government funding to make laser processing and inspection products for the medical and life science fields. "We hope that this fourth business pillar will strengthen us and lead us to becoming a 100-year company," he adds.

As a leader in a range of niche high-tech areas, Seiwa Optical's approach to R&D and OEM (original equipment manufacturer) business model have been key to the company's success. "Our approach to R&D is to work in a tight knit



relationship with our customers," says Mr. Okazaki. "We provide OEM customized technology specifically for our customers' needs, and we also make their black box units to provide unique technology for our customers to win and grow the business. This is how niche top companies strategize."

With wholly owned subsidiaries in seven countries (Japan, USA, Germany, Korea, Taiwan, China, and Singapore) and 12 distributors in



NIR Digital Microscope for Wafer Internal Observation

neighboring countries, Seiwa Optical continues to grow its business internationally and is looking to utilize joint ventures, M&As and co-creation partners to expand both its technological capabilities and geographical reach.



"We will continue to strive with passion to create innovative technology based on our experienced core optical technology."

Isao Okazaki,
President,
SEIWA OPTICAL CO., LTD.

"When we expand overseas, we focus on research and development to suit the circumstances of each country. Then we work with inno-



Machine Vision Lenses designed to bring customer's equipment to the world's best

vation and high technology, and as a result we have a wide variety of products," says Mr. Okazaki.

"We want to contribute to the development of the world economy by developing and selling valuable products that can respond to the circumstances of each country on the planet. To do so, we must keep up with global trends but at the same time, we have to maintain the basic principles of the company along with what we have gained through our experiences. The core of our products will continue to be optical engines.

In the next five years, we expect to see significant advances in technology. Hopefully, we will not only be a part of them, but also be a worldwide frontrunner to lead the core optical instrument field."



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