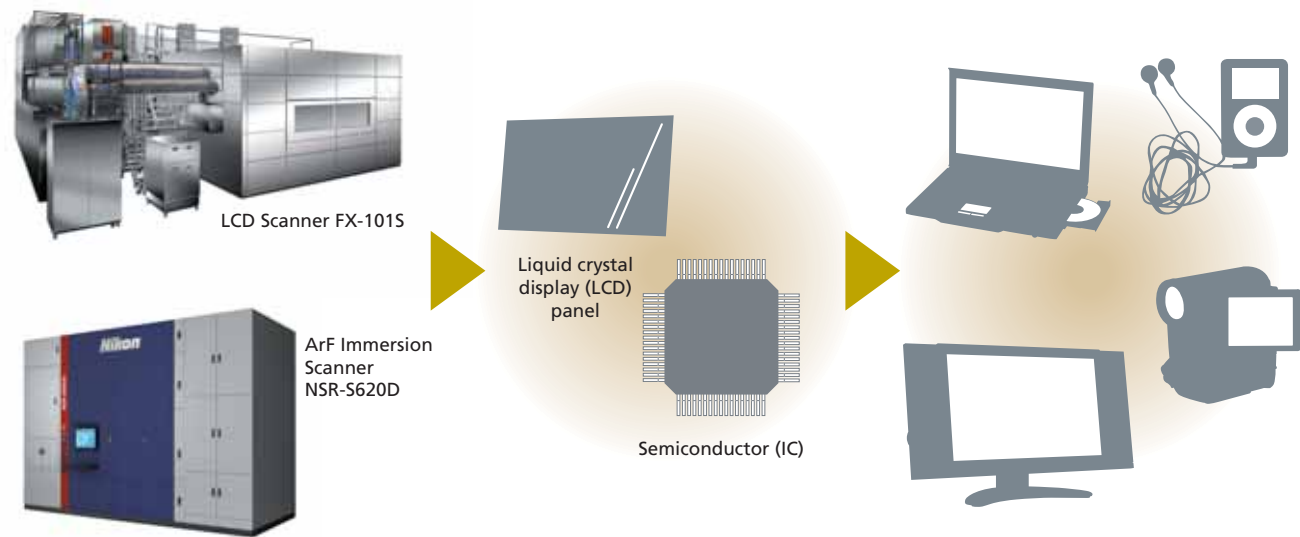


Business Activities and CSR

One of the basic commitments of the Nikon Group is its determination to contribute to the substantial development of society through its business activities. Based on this idea, each in-house company is taking a variety of initiatives to meet customers' expectations.

Precision Equipment Company

The Nikon Precision Equipment Company contributes to the progress of the information society through IC/LCD steppers and scanners.



Information society and exposure systems

Electronic devices have made great progress in the short term. Together with communication technologies, these devices have made our society more information-oriented and enabled us to lead more convenient and comfortable lives, store information more speedily and accurately, and send clearer and more beautiful images. In recent years the energy efficiency of electronic devices has been substantially improved, making it possible to read newspapers and books electronically without wasting important resources.

Semiconductors (ICs) and LCD panels are indispensable components for electronic devices. The Precision Equipment Company develops and manufactures the equipment essential for the manufacture of ICs and LCD panels, thereby contributing greatly to the development of the information society.

Roles of IC/LCD steppers and scanners

IC/LCD steppers and scanners are used to print semiconductor (IC) circuits and LCD panel circuits precisely onto silicon wafers and glass plates using projection exposure technology. The Precision Equipment Company develops and manufactures state-of-the-art equipment in response to the miniaturization of ICs and also to the upsizing of LCD panels and the miniaturization of the circuits for these panels. The miniaturization of ICs helps raise energy efficiency, downsize products, and reduces the use of resources. Leading-edge Nikon IC steppers and scanners enable the formation of a circuit in units of nanometers (1/1,000,000,000 meter). LCD panels are much more energy-efficient than cathode-ray tube displays, and they can be made even more energy-saving with the formation of smaller circuits. Nikon LCD steppers and scanners are also used to manufacture organic ELs and other displays that are basically more energy-efficient than LCD panels.

Product-related activities (for CS and the environment)

Development of an Ultra-Large Exposure System That Meets Both Customers' Expectations and Environmental Requirements



LCD Scanner FX-101S

Environmentally friendly features

- Energy efficiency
 - Larger in size but parallel in energy efficiency with the FX-85S for the eighth-generation plates (Calculated based on Nikon Corporation's own criteria for the area that can be exposed per unit of power)
- Lead-free solder
 - Used on 100% of new circuit boards
- Ozone layer protection
 - Use of new HFC refrigerant with zero ozone depletion potential (ODP) for temperature control and air conditioning chillers
- Reduction in the use of polyvinyl chloride (PVC)
 - Reduced use of PVC cables

The FX-101S is a super-large exposure system for tenth-generation glass plates which are a large three meters per side.

Past exposure systems were upsized to match the upsizing of the glass plates. Nonetheless, in developing a system for the tenth-generation glass plates, we thought that if we continued upsizing the equipment as in the past, the size would be over 1.6 times as large as the product for the eighth-generation glass plates and accordingly the weight would also increase. We therefore started developing a product that was as compact and light as possible.

As a result, we were able to develop the FX-101S, which needs an installation area that is almost the same size as for the machine for the eighth-generation glass plates (FX-85S), and because we made it as compact as possible, we were also able to reduce the use of materials substantially.

The FX-101S has a productivity that is at least 50% higher than for the previous model. In addition to its high performance achieved through Nikon optical technologies, it displays the world's highest productivity in the mass production of 32 to 70-inch LCD panels. It can also be used efficiently for the mass production of LCD panels larger than 100 inches.

We will continue to develop products that meet both customers' needs and environmental requirements capitalizing on our long accumulated technologies.

Tomoyuki Watanabe
 Second Development Section
 Second Development Department
 LCD Equipment Division
 Precision Equipment Company
 Nikon Corporation



Eco-Friendly Product

ArF Immersion Scanner NSR-S620D



Environmentally friendly features

- Energy efficiency
 - Reduced consumption of electricity (energy) per wafer
- Lead-free solder
 - Drastic use of lead-free solder on new circuit boards
- Elimination of hexavalent chromium
 - Discontinuance of the use of hexavalent chromium in the surface treatment process
- Use of Eco-glass
 - Drastic use of Eco-glass for optical systems
- Ozone layer protection
 - Use of new HFC refrigerant with zero ozone depletion potential (ODP) for temperature control and air conditioning chillers

<Product feature>

ArF immersion scanner equipped with a platform that provides both high precision and high throughput, which achieves double patterning by forming fine circuits through double exposure

Imaging Company

The Nikon Imaging Company is engaged in multiple activities related to images, in addition to providing cameras and lenses to the market, thereby creating new value for customers and contributing to the development of the world of photography.

Images capture, communicate, and store in people's mind the "moments" of individual memories and of worldwide news reported throughout the globe. Nikon imaging products, which are made using long-accumulated Nikon technologies, meet a range of needs for customers all over the world and provide them with new value. We are also widely engaged in activities

that contribute to the development of photography, including the organization of photo competitions and photo classes. We also manage a photo storage and sharing website as a platform on the Internet.

Nikon Photo Contest International 2008–2009



Now's your chance to move the world.
With the stories unfolding around you.
With the moments that stir your passions.
Express the experiences and visions that inspire you.

Nikon Photo Contest International, which was launched in 1969, is designed to provide an arena for interchange among photography enthusiasts from all over the world (professional and amateur alike) and to contribute to the culture of photography. In recent years the contest has been held biennially and the latest one is the thirty-second. Works were collected on the theme "At the heart of the image," which is the Imaging Company's own brand statement.

Cooperation with NPOs



An NPO named the All Japan Welfare Photo Association organizes a photo competition as part of its activities to provide people with disabilities and the elderly with more opportunities to go out and participate in society and maintain their health. The Japan Culture Association also organizes a national photo exhibition for the blind, at which the Association displays photographs taken by people with visual impairment in a special manner: the photos are copied on panels in a way that gives them three dimensions so that visitors to the exhibition can touch and feel them.


Nikon Imaging Japan (NIJ) supports the activities of these NPOs and presented a Nikon COOLPIX S230 as a prize at the fourth photo competition named "Yume" and the 25th national photo exhibition for the blind held by the NPOs.

Nikon College



Nikon Imaging Japan Inc. (NIJ) has been holding a photo class named "Nikon College" since April 2009, under the slogan "Let's enjoy photography!" The class is held about 500 times annually with the participation of about 10,000 people in total in Tokyo (Tamachi and Shinjuku) and Osaka. In 2010, NIJ began holding the class also in Yokohama. It also organizes a photography tour about 30 times a year.

my Pictown



The Nikon my Pictown photo storage and sharing website was launched in 2007 as an Internet platform to add new value to the imaging business in this age of digital and network innovation.

The website helps users to take photos with a digital camera, store the photos comfortably, process them easily, and immediately send them to family and friends living far apart, thereby connecting photos/images with people and people with people and contributing to the development of photography in a ways that brings more smiles to people's faces.

Product-related activities (for CS and the environment)

"Meeting needs. Exceeding expectations." through a Digital SLR Camera with Super-High Light Sensitivity



D3S digital SLR camera (released in November 2009)

Environmentally friendly features

- Lead-free solder
- Used on 100% of circuit boards for electronic parts
- Use of Eco-glass
- 100% use of Eco-glass
- Measures for hazardous substances
- All the parts are compliant with the regulatory standards enforced in each country and region, including the RoHS Directive and the EuP Directive in Europe, the China RoHS, and the regulations on batteries enforced in South Korea.

As for its ISO performance, the D3 reached the unprecedented level of ISO 6400 as standard. We began developing the D3S as the next-generation camera following the D3 immediately after the product was released on the market. As the first step in its development, we collected opinions from customers. In the target specifications compiled from customers' requests, we found that they wanted us to further improve the already high light sensitivity. It was a very severe request because we had made so much effort to reach ISO 6400. However, we were also assured that there was a clear need for higher light sensitivity and that we were doing the right thing by drastically pursuing high light sensitivity in developing the D3. The key to further improving the light sensitivity was development of a completely new image sensor. First, we examined which part of the camera needed to be modified to improve the image quality, and actually made

improvements based on the results.

We first improved the micro lens and the pixel part, thereby making it possible for the camera to accept and store more light with a higher S/N ratio and wider dynamic range. At the same time, we reduced noise levels. We made special efforts to reduce noise in the dark part, and we did it effectively by reviewing the circuit part. We analyzed the noise characteristics of the built-in amplifier and optimized the characteristics to minimize the influence of noise on the image.

We pursued higher image quality at ISO 12800 as standard and were able to improve the quality to such a high level that it seemed practically possible to make the ISO performance expandable to the ISO equivalent of 102400 (Hi 3), although we had initially planned to make it expandable to Hi 2 as in the case of the D3. In the latter half of the development period, we therefore decided to take on the challenge of improving the light sensitivity to a level one digit higher than Hi 2.

As a result of these efforts, we were finally able to develop the D3S with a light sensitivity level higher than expected for customers who want to "take photos without a speedlight even in the dark, when the subject is not clearly visible to the naked eye, because it is important to record them as they are as images." We achieved a higher light sensitivity with higher auto white balance and auto-focus precision and better operability not only for still images, but also for moving ones. We have thus developed a totally new digital SLR camera with super-high light sensitivity. For its environmental performance, we have achieved a high standard in line with the Nikon Green Procurement Standards and with the environmental standards imposed by each country in the world.

We will continue to provide unprecedented imaging methods by continuously taking challenges in the Nikon way: "meeting needs and exceeding expectations."

Tetsuya Yamamoto
General Manager
First Development Department
Development Headquarters
Imaging Company
Nikon Corporation



Nobuaki Sasagaki
General Manager
First Marketing Department
Marketing Headquarters
Imaging Company
Nikon Corporation

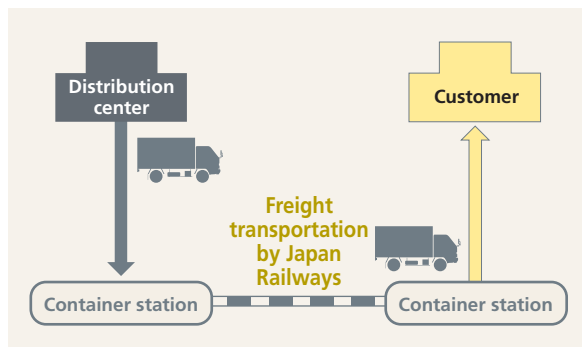


Instruments Company

The Nikon Instruments Company develops microscopes, measuring instruments, and semiconductor inspection equipment that meet the most advanced needs of our customers, thereby contributing to the development of bioscience and industrial fields.

Improving physical distribution (for the environment)

Reducing the Environmental Impact of Transportation through Modal Shift



One of the priority activities conducted by the Instruments Company to reduce its environmental impact is environmentally friendly transportation. To this end, we have been actively implementing measures that include simplifying packaging and reusing packaging materials, while fostering modal shift.

Modal shift means a shift to a transportation method that is more environmentally friendly. Railway transportation is said to have the lowest environmental

impact, because per-unit CO₂ emissions from railway transportation is only about one-seventh of those from transportation by truck. We are therefore encouraging modal shift from transportation by truck to the railways, targeting transportation from the container stations nearest to our distribution centers to the container stations nearest to each of our customers, thereby reducing emissions of CO₂, which is said to be a contributor to global warming. In addition, modal shift is expected to help reduce energy consumption, mitigate traffic congestion, and bring various other benefits.

We can transport our products by railway only when we meet certain conditions for the delivery areas, delivery dates, and the transportation volume, and we mainly utilize this method of transportation for the bulk shipment of microscopes. We currently transport our products by railroad once or twice on average per month, and would like to increase this.

Noriaki Nakamoto
 Manager
 Distribution Promotion Section
 Business Management Department
 Instruments Company
 Nikon Corporation



Eco-Friendly Product
 High-definition cooled color camera head DS-Fi1c (released in April 2009)
 High-speed live display color camera head DS-Vi1 (released in March 2010)



Environmentally friendly features

- Energy efficiency
 Energy consumption reduced by 7.5% for the DS-Fi1c and by 15% for the DS-Vi1 compared with the previous models
- Lead-free solder
 100% use of lead-free solder on circuit boards for electric parts
- Measures for hazardous substances
 All parts compliant with the RoHS Directive

<Product feature>

New camera heads for the DS series digital microscope cameras. The DS-Fi1c is equipped with a 5-megapixel color CCD, into which a Peltier cooling mechanism is incorporated to cool the CCD down to at 20°C below the ambient temperature. The DS-Fi1c is suitable for fluorescent imaging that needs long-term exposure and is therefore used for biological research and clinical examinations. The DS-Vi1 is equipped with a 2.0-megapixel color CCD and can display SXGA high-precision images at 15 fps. It is used mainly for quality assurance testing and monitoring in industrial fields.

Group Company (Hikari Glass Co., Ltd.)

Hikari Glass is a unique Nikon Group company: it is the only company in the Group that is engaged in manufacturing general optical glass.

Plant-related activities (for the environment)

Improving the Recycling Rate to Achieve Zero Emissions

Optical glass materials are generally processed at high temperatures exceeding 1,000°C. The process generates a lot of waste that is sent to landfill, including heat-resistant substances that were melted at high temperatures, optical glass to be disposed of because of quality problems, and sludge from the glass grinding process. In order to solve this difficulty with waste, Hikari Glass began a zero emissions activity in 2005, when the company released about 640 tons of waste per year, of which only about 80 tons were recycled. The recycling rate at that time was about 12%, with the remaining 88% of the waste sent to landfill.

I have been in charge of waste treatment since 2008 or three years from the start of the zero emissions activity. The recycling rate had not been raised much by that time and I had many things that I could not understand, including how to encourage recycling, but I managed to formulate recycling policies step by step thanks to the cooperation of my predecessor and from the Environmental & Technical Administration Department of Nikon Corporation. In the

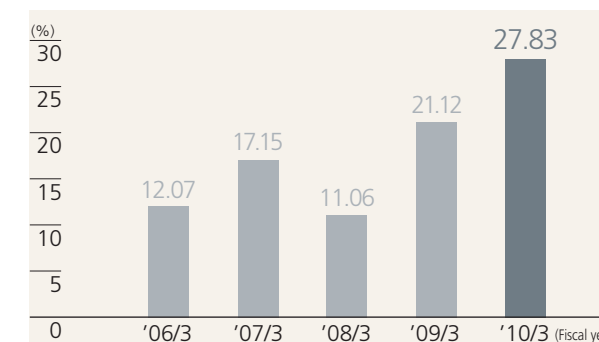
process, I had a meeting with a new waste glass recycling company established near our company and as a result of repeated analysis and experiment jointly with this recycling company, we found that some of our waste glass could be recycled. After careful investigation, we commissioned the recycling to the company and subsequently the recycling rate gradually improved. At present we commission the company to recycle waste brick and diatomite in addition to waste glass.

It is almost two years since I was put in charge of the treatment of waste, and I believe there is still room to improve our recycling rate. I would like to tackle a range of problems in cooperation with other employees working at the manufacturing plant and to meet the challenge of zero emissions.

Hiroki Ishibashi
 Environmental Facilities
 Administration Section
 General Affairs Department
 Hikari Glass Co., Ltd.



Industrial waste recycling rates



In the zero emissions activity, it is important to form a partnership with a company that recycles the targeted waste.

For example, in 2008, the Akita Plant formed a partnership with a recycling company for waste glass and brick, which started treatment of that waste. As a result, the plant succeeded in almost doubling its industrial waste recycling rate.

Recycling of waste glass and brick

