SHARP

Environmental and Social Report 2011 –Highlights–

CONTENTS

Business Philosophy

We do not seek merely to expand our business volume. Rather, we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits and welfare of people throughout the world.

It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living.

Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders …indeed, the entire Sharp family.

Business Creed

Sharp Corporation is dedicated to two principal ideals:

"Sincerity and Creativity"

By committing ourselves to these ideals, we can derive genuine satisfaction from our work, while making a meaningful contribution to society.

Sincerity is a virtue fundamental to humanity ... always be sincere.

Harmony brings strength ... trust each other and work together.

Politeness is a merit ... always be courteous and respectful.

Creativity promotes progress ... remain constantly aware of the need to innovate and improve.

Courage is the basis of a rewarding life ... accept every challenge with a positive attitude.

■ Sharp Environmental and Social Report 2011, and System for Information Disclosure

Information on Sharp's efforts toward corporate social responsibility (CSR), particularly the environmental and social dimensions of CSR is made available in the following three formats to meet the needs of various stakeholders.

Annual Environmental and Social Report, Highlights Version

This report

This report outlines the highlights of Sharp's CSR efforts during fiscal 2010 in a highly readable, easy-to-understand way, and is available on the Sharp website as a downloadable PDF file.

Relevant information posted to the Sharp website is indicated by this Web icon.

Annual Environmental and Social Report

This report on Sharp fiscal 2010 efforts presents special information in sections called Special Feature and Special Focus; detailed information in three sections called Management, Sharp and the Environment, and Sharp and Society; and a variety of related data. It is available as a PDF file and e-book on the Sharp website.

Website

The Sharp website will be redesigned to make the browsing experience smoother and provide better access to this report document, supplementary data, and the latest information.

Sharp Social & Environmental Activities website
http://sharp-world.com/corporate/eco/

About the Cover

Artist's rendering of a mega solar power generation plant in Thailand that Sharp is building jointly with local construction companies. The plant on 190 hectares of land will have a capacity of 73 MW, one of the largest in the world. See page 9 for details.

Sharp Contributes to Society Through Its Manufacturing-, Technology-, and Value-Oriented Business

"Make products that others want to imitate." These words, spoken by Sharp founder Tokuji Hayakawa, embody Sharp's management concept. As a manufacturer, Sharp contributes to society by being the first to make products that meet the needs of a new era. Successive generations of Sharp leaders have, in their own way, pursued this concept by making products that contribute to society and in the process created a corporation that is known and trusted by society.

In 1973, Sharp clarified the unchanging spirit of its founder in the company's business philosophy and business creed. The business philosophy states that Sharp aims for mutual prosperity with society and stakeholders—the foundation of CSR* today—by "contributing to the culture, benefits and welfare of people throughout the world." The business creed calls for "Sincerity and Creativity" and all employees must hold to it and follow it in order to realize the business philosophy.

The goal that Sharp aims at through its CSR efforts is nothing less than realizing the business philosophy through its business activities, as well as through social contribution activities with a primary focus on these business activities. As it strives to create new value by proposing one-of-a-kind products and new lifestyles—calling upon the "gene of creativity" endowed from its founder—and as it fulfills its social responsibility, notably in the environmental and social areas, Sharp will act with sincerity so that it can continue to be a corporation that is trusted by all.

* Corporate social responsibility

Moving Toward an Era of Renewable Energy, Sharp Is Working Globally to Strengthen Its Position as a Total Solar Energy Solutions Company and Manufacturer of Energy-Efficient Products

One of the world's largest mega solar power generation plants under construction in Thailand (artist's rendering)

Katsuhiko Machida Chairman
Mikio Katayama President (right)

First of all, we would like to express our deepest sympathy to those who have suffered from the devastating impact of the Great East Japan Earthquake of March 11, 2011. Sharp is committed to doing as much as it can to help bring about the earliest possible recovery of the disaster-hit areas.

Sharp Corporation Today, Built on the Experience of the Great Kanto Earthquake

The catalyst for Sharp Corporation to move forward in its electronics business was the Great Kanto Earthquake of 1923. Sharp Corporation founder Tokuji Hayakawa, who had started his own business in Tokyo in 1912 at the age of 19, invented the Ever-Ready Sharp Pencil (called the "Sharp pencil" in Japan today) in 1915 based on his knowledge of metalworking. His business was going well, with volume orders coming in from overseas. Then, on September 1, 1923, the Great Kanto Earthquake hit Tokyo. He lost the pencil factory to fire. Much worse, he also lost his beloved wife and their two sons.

Determined to rise again, Hayakawa moved to Osaka, about 400 kilometers west of Tokyo, and used his experience in working with metal to develop a crystal radio set. The product succeeded in its first commercial introduction in Japan. His company then developed other products, such as Japan's first television set and the world's first all-transistor-diode electronic calculator. Sharp grew to become a manufacturer of a full range of electronic products.

Approaching Its 100-Year Anniversary, Sharp Is Working Hard to Realize Its Visions

Sharp will celebrate its 100-year anniversary next year. The spirit of its founder, who was able to rise up in the face of adversity by challenging himself with a new goal, became a key to Sharp's corporate culture and has been passed along ever since. At Sharp, we consider environmental change to be a new opportunity for innovation and we are pioneering efforts for the next era—starting with transforming ourselves.

Last year, Sharp adopted the concept of becoming an "Eco-Positive Company" as its new corporate vision. An "Eco-Positive Company" is a company that works with all stakeholders in creating solutions that have significantly more positive impact on the environment than the negative impact caused by company operations.

Sharp also developed two business visions to help support its new corporate vision. The first is to "Contribute to the world through environment- and health-conscious businesses, focusing on energy-saving and energy-creating products". The second is to "Contribute to a ubiquitous society with one-of-a-kind LCDs."

In response to problems arising from this year's earthquake and subsequent accident at a nuclear power plant, the expectations for solar power generation and renewable energies have increased, and the need for energy saving in our daily lives as well as in business has become more important than ever.

Sharp believes making further efforts to realize these visions will help lead the way to an early recovery of the disaster-hit areas, stimulate growth in Japan, and contribute to the world.

Moving Forward Globally as a Total Solar Energy Solutions Company

In response to increasing worldwide demand, Sharp has been developing its total solutions business related to solar energy in various parts of the world.

Sharp received an order from one of Thailand's independent power producers, NED (Natural Energy Development Co., Ltd.), to build one of the world's largest mega solar power generation plants with a capacity of 73 megawatts. Sharp is working on the project in cooperation with ITD (Italian-Thai Development Public Co., Ltd.) and ITE (ITALTHAI Engineering Co., Ltd.), Thailand's largest construction companies, with the goal of starting operations by the end of this year.

With an eye to starting an independent power producer business in Europe using solar power, Sharp established the joint venture company ESSE (Enel Green Power & Sharp Solar Energy S.r.l.) in July 2010 with Enel Green Power, a group company of Enel Corporation, the largest electric power company in Italy. ESSE's first solar power generation plant was completed in March 2011 in southern Italy, and the power generation business has begun. Sharp is also planning to build multiple solar power generation plants, with a total capacity of more than 500 megawatts, by the end of 2016 and to develop power generation businesses in Europe, the Middle East, and Africa, focusing on the Mediterranean region.

The solar cells to be used in these power plants will be supplied by a thin-film solar cell plant in Italy. Production at the plant will be carried out by a joint venture that was established in July 2010 between Sharp, Enel Green Power, and STMicroelectronics. The thin-film solar cell plant is planning to start mass production later this year.

In the North American market, last year Sharp acquired Recurrent Energy, LLC, an American developer and operator of solar power generation plants. Sharp is planning to advance the business by developing mega solar power generation plants.

The key factor to growth in solar power generation is to achieve grid parity (where solar power generation costs are equal to conventional power generation). For Japan, it is predicted that technological innovations will make it possible within several years to replace conventional power generation for general households with solar power generation, without raising electricity costs.

Sharp will increase its solutions capability by expanding business throughout the value chain to include the development and production of materials, cells, and modules for solar panels, system design, construction of mega solar power generation plants as well as an independent power producer business. Further, Sharp is aiming to help usher in the era of renewable energy by contributing to the achievement of grid parity worldwide.

Sharp Expects to Achieve Its Fiscal 2012 Corporate Vision Goal One Year Ahead of Schedule

In addition to energy-creating efforts through its solar power business, Sharp is developing and promoting energy-saving products, such as LCD TVs, LED lighting, air conditioners, refrigerators, and digital MFPs.

Considering the limits of fossil fuels, renewable energy like solar power and energy-saving products are essential for future growth, especially for newly emerging economies and developing countries where energy resources are insufficient. To this end, Sharp is advancing a locally self-sufficient production system of "local production for local consumption" for both solar power generation and energy-saving products.

As a result of Sharp's global operations for promoting energy-creating and energy-saving products, Sharp forecasts that in fiscal 2011 it will achieve its fiscal 2012 goal for reducing greenhouse gas emissions. Sharp will reach this goal—the most important goal for realizing the corporate vision—a year early. Reaching this goal means that the reduction in emissions resulting from customers using Sharp's energy-creating and energy-saving products will be more than double the total greenhouse gas emissions from Sharp's business activities.

Sharp's efforts, based on its corporate vision of becoming an "Eco-Positive Company", have spread throughout the entire Sharp Group and have led to reductions and prevention of greenhouse gas emissions, waste, and other environmental burdens. Environmental awareness among employees has risen as well as a result of progress made, in every area of the world that Sharp operates, in activities designed to contribute to the environment and society.

Sharp Is Contributing to the Sustainable Development of Society by Creating New Value and Utilizing Management Resources, Based on Its Business Philosophy and Business Creed of "Sincerity and Creativity"

As the international community and the world economy continue to change and shift away from traditional frameworks, Sharp is operating more globally than ever. Sharp is aware that there are growing expectations for its corporate activities to contribute to solutions for issues that are important to the international community, such as protecting the global environment, respecting human rights and equality, and providing opportunities for primary education.

Based on its business philosophy and its business creed of "Sincerity and Creativity," Sharp will continue striving to create new value by developing proprietary technologies and one-of-a-kind products and devices. And Sharp will further contribute to the sustainable development of society by working to help resolve the previously mentioned societal issues through utilizing management resources that include an employee-diversity strategy and activities to support education.

As a participant in the United Nations Global Compact since 2009, Sharp continues to support the Compact's 10 principles regarding human rights, labour, the environment, and anti-corruption. Sharp will fulfill its social responsibility by continuing to make further efforts in each area, so that it can gain trust from all of its stakeholders, including consumers, shareholders, investors, business partners, suppliers, employees, and local communities.

Sharp will continue to make efforts for transparency, disclosing information about its business operations and sharing stakeholders' valuable opinions with management. We look forward to hearing your candid opinions.

July 2011

Chairman
Katsuhiko Machida

President
Mikio Katayama

Special Report

Responding to the Great East Japan Earthquake

Immediately following this tremendous earthquake and tsunami, which caused unprecedented damage, Sharp responded by setting up an Emergency Operations Center with President Katayama in command. The first actions taken were to place the highest priority on human life and confirm the safety and well-being of employees and their families, and to set in motion Sharp's BCP (business continuity plan). In terms of initiatives to assist in recovery and reconstruction, Sharp has been making monetary donations and contributing company products. Also, in the light of ongoing electric power shortages, Sharp has been promoting efforts to conserve electricity. Sharp will continue making contributions to the affected areas' quick recovery through volunteer reconstruction activities conducted by employees and through other methods.

Great East Japan Earthquake Reconstruction Support

Sharp is supporting the reconstruction of the areas afflicted by the disaster through monetary donations and the use of corporate resources to provide what help it can.

Soon after the earthquake, Sharp and Shin-Kobe Electric Machinery Co., Ltd. jointly prepared solar power systems* for the devastated areas and donated them to emergency shelters with the cooperation of the Japanese Ministry of Defense. Moreover, Sharp provided LCD TVs, refrigerators, washing machines, and other household appliances for use at temporary housing.

* The disaster-relief solar power system is a stand-alone power system that consists of Sharp solar cells, Shin-Kobe Electric Machinery storage batteries, and an AC power strip. The generated power can be used for purposes such as recharging mobile phone batteries.

Disaster-relief solar power system (left)
Solar power systems being sent to afflicted areas with the help of the Ministry of Defense (right)

Main Support Activities

Monetary Donations

- Corporate donation (via Japanese Red Cross Society and other organizations): 100 million yen
- Sharp Group employee donations (incl. overseas employees): Approximately 42 million yen

Product Donations

- Disaster-relief solar power systems: 250 units
- Six varieties of household appliances: 1,325 units (LCD TVs, refrigerators, microwave ovens, fully automatic washing machines, rice cookers, Plasmacluster Ion air purifiers)
- Industrial-use Plasmacluster Ion generators: 335 units

After-Sales Service Support

Sharp is providing a special service for consumer electronics products being used by customers in the disaster-hit areas. Sharp has lowered its repair fees as part of efforts to support the recovery of those areas.

At Sharp's service bases in the Tohoku region, after-sales service had to be suspended for a week due to the disruption of utilities and transportation systems. Soon after that, employees rushed from service bases across the country to help resume repair services. By the end of May 2011, some 500 people had taken part in activities to support the Tohoku region.

Sharp service bases have also taken on the task of installing Sharp-donated home appliances in emergency shelters and temporary housing so that displaced residents can start using the donated appliances as soon as possible.

Sharp also added on its website information on how to handle electronics products in case of power outages, tips for saving power and water, as well as measures to prevent products from tipping over or falling.

Efforts for Business Continuity

The Great East Japan Earthquake was a disaster on a scale far greater than ever expected. Sharp responded by setting up an Emergency Operations Center at the Sharp Head Office and activating its BCP immediately after the earthquake occurred. Its first action following the quake was to give the highest priority to confirming the safety of employees and their families (including temporary employees and employees of subcontractors on Sharp premises), followed by assessing the damage at each sales office and the level of damage sustained by business partners in the Tohoku area.

Because none of Sharp's production sites or sales offices sustained significant damage as a direct result of ground motion or the subsequent tsunami, and hence, little time would be required for operations at production facilities to resume, Sharp was able to focus its energies on making initial damage assessments and getting a system up and running to quickly implement needed support measures under the BCP. However, Sharp is continuing to review issues that still remain, such as assessing damage to the supply chain.

Efforts for Conserving Electricity

This summer, regulatory restrictions on electricity use have been imposed within the service territories of Tokyo Electric Power Co. and Tohoku Electric Power Co., and users served by Kansai Electric Power Co. have been asked to conserve power. In response, Sharp made this a priority management issue and set up a special task team led by an Executive Vice President (Chief Officer, General Administration) to develop measures to cope with the situation.

Sharp has declared conserving power to be a company-wide policy, and is making its best endeavors—as in the measures listed below—to reduce electricity usage in ways that will not impact the production and supply of products and components.

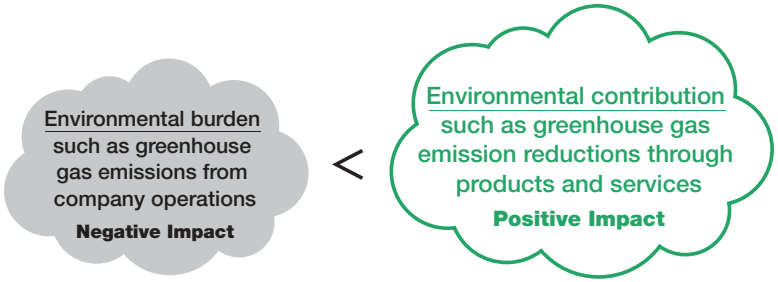
- Implement measures to save electricity in facilities and offices, such as setting the air conditioning cooling temperature at 28°C, taking a certain percentage of lights out of service, sharing the use of photocopiers, and removing some elevators from service.
- Introduce daylight saving time within the company, and relax the summer dress code.

Corporate Vision: Eco-Positive Company

Looking ahead to the year 2012, the 100th anniversary of its founding, Sharp has set two business visions. One is “Contribute to the world through environment- and health-conscious business, focusing on energy-saving and energy-creating products.” The other is “Contribute to a ubiquitous society* with one-of-a-kind LCDs.” The aim of both of these visions is to contribute to the next generation by using the proprietary technologies that Sharp has built up over many years of development. Through actions geared towards achieving these visions—indeed through everything that Sharp does—Sharp is striving to become an Eco-Positive Company, its corporate vision.

* A “ubiquitous society” refers to how the whole of society will be connected through the rapid development of IT infrastructure and how networks will always be accessible to users.

■ Corporate Vision: Eco-Positive Company



Fiscal 2010 greenhouse gas emissions:
1.634 million t-CO_2
(See page 14.)

Fiscal 2010 greenhouse gas emission reductions:
3.263 million t-CO_2

Web Method used for calculating greenhouse gas emission reductions

■ The Four Aspects of the Eco-Positive Strategy

EP = Eco-Positive

- **Eco-Positive Technologies**
  Generate new business through one-of-a-kind environmental technologies
- **Eco-Positive Products**
  Expand contributions to protecting the environment through products and services
- **Eco-Positive Operations**
  Reduce environmental impacts in product engineering and manufacturing
- **Eco-Positive Relationships**
  Enhance corporate value through involvement with the community

What’s an Eco-Positive Company?

By “Eco-Positive Company,” Sharp means a company that works with all stakeholders in creating solutions that have significantly more positive impact on the environment than the negative impact caused by company operations.

A particular focus is the reduction of greenhouse gas emissions. By fiscal 2012, Sharp’s goal is to have emission reductions that result from customer use of Sharp energy-creating and energy-saving products be more than double the total greenhouse gas emissions from business activities. To this end, Sharp is developing and promoting the use of solar cells and energy-saving products as well as reducing its emissions.

In fiscal 2010, Sharp emitted 1.634 million t-CO_2, but use of Sharp energy-creating and energy-saving products contributed to emission reductions of 3.263 million t-CO_2, approximately 1.9 times the amount of Sharp’s emissions. We expect to achieve our goal of having emission reductions be more than double our greenhouse gas emissions in fiscal 2011, one year earlier than initially planned.

Kenji Ohta
Executive Vice President
Sharp Corporation

Eco-Positive Strategy

Sharp is striving to realize its corporate vision by carrying out its Eco-Positive Strategy worldwide. Under this strategy, Sharp is pursuing environmental efforts from four aspects (see diagram to the left). We are placing particular emphasis in the areas of products and factories, since these have a direct effect on reducing greenhouse gas emissions. Both products and factories are certified if they pass assessments based on Sharp in-house standards. These assessments have been carried out ever since the Kameyama Plant started operations in fiscal 2003, and their stimulation of competition among Sharp divisions has resulted in great success.

The benefits of our Eco-Positive Strategy go beyond Sharp’s environmental divisions. All divisions in and outside Japan—including product development and manufacturing divisions, as well as indirectly related divisions covering sales, personnel, accounting, and more—are setting goals that will make environmental contributions, and this group-wide effort has boosted not just the reduction of greenhouse gases but also Sharp’s total positive environmental impact.

Hiroshi Morimoto
Executive Officer
Group General Manager
Environmental Protection Group
Sharp Corporation

As With Electronic Calculators and LCDs

Sharp Makes Solar Power Available to Anyone in the World

In 1964, Sharp commercialized one of the world's first all-transistor-diode electronic calculators, and in 1973, embedded for the first time in the world an LCD in a pocket calculator. For both the calculator and the LCD, technological innovations led to improved performance and lower costs, and their use spread around the globe.
Now, looking ahead to the coming era of renewable energy, Sharp is putting its full efforts behind initiatives to enable anyone around the world to use and enjoy the benefits of solar-generated electric power.

The state-of-the-art thin-film solar cell plant, operated by 3Sun S.r.l.

Inauguration Ceremony Held at Italy's Largest Solar Cell Plant

Web Inauguration ceremony held

On July 8, 2011, the inauguration ceremony was held in Catania, Italy, for a state-of-the-art thin-film solar cell plant to be operated by 3Sun S.r.l., (hereinafter: 3Sun) a joint venture of Sharp Corporation, Enel Green Power* (hereinafter: EGP), and STMicroelectronics (hereinafter: ST).

The inauguration ceremony was attended by Raffaele Lombardo, President of Sicily Region, Giuseppe Castiglione, President of the Province of Catania, and Raffaele Stancanelli, Mayor of the City of Catania, as well as executives of Sharp Corporation, Enel, EGP, ST, and 3Sun.

Production capacity in the first phase of operation of this plant is set at 160 MW annually, and plans call for it to expand to 480 MW within the next few years. This thin-film solar cell plant is the largest in Italy and one of the largest in Europe.

Sharp's concept is to contribute to the full-fledged adoption of solar power by moving into the total solutions business for solar-generated electric power—from development and production of solar cells to the design of solar power systems, construction and maintenance of solar power generation plants, and even becoming an independent power producer. This plant plays an important role as one part of this concept.

Over the years, Sharp has taken the lead in developing and broadening the use of products that will be in demand in the coming era. Before introducing Sharp's solar power initiatives, the following pages will provide a brief introduction to the electronic calculator and LCD as examples of successful Sharp business enterprises.

* Enel Green Power, S.p.A. is a member of the Enel Group of companies, Italy's largest power utility, and develops renewable energy power generation projects in Italy and worldwide.

Ribbon-cutting at the inauguration ceremony

Plant location in Catania on the island of Sicily

Greetings from Sharp Chairman Katsuhiko Machida

Press conference for media in attendance

Commemorative plaque from the IEEE (in background) and Sharp electronic calculators recognized as an IEEE Milestone for innovations in size and power-consumption reduction
(From left) CS-10A all-transistor-diode calculator, CS-16A IC calculator, QT-8D LSI calculator, and EL-805 LCD pocket calculator

*1 The IEEE ("I-triple-E") is the world's largest academic society of electrical and electronics engineers, with headquarters in the US. Through its more than 395,000 members worldwide, the IEEE plays a leading role in technical areas ranging from computing, electronics, and telecommunications to electric power, aerospace engineering, and biomedical technology.

*2 IEEE Milestone: The IEEE established the IEEE Milestone program in 1983 to honor historic achievements—among significant innovations made in the fields of electrical, electronics, information, and telecommunications engineering—that have been recognized as having contributed to the betterment of society and the advancement of industry. Currently there are approximately 110 Milestones around the world, including Volta's Electrical Battery Invention and the Fleming Valve. In Japan, there are 14 Milestones including Sharp's Electronic Calculator (2005), Sharp's Solar Cell (2010), the Directive Short Wave ("Yagi") Antenna (1995), the Tokaido Shinkansen ("Bullet Train") (2000), the Electronic Quartz Wristwatch (2004), and the Kurobe River No. 4 Hydropower Plant (2010).

EL-805 LCD Pocket Calculator (1973)
Up to 100 hours of use on a single AA battery. Integrating an LCD, LSI/IC chips, and circuit wiring onto a single glass substrate shrunk the size considerably.

■ Comparison of Sharp's First Electronic Calculator (1964) and LCD Calculator (1973)

Model	CS-10A, Sharp's first electronic calculator	EL-805 LCD calculator	Ratio
Outstanding feature	One of the world's first all-transistor-diode electronic calculators	World's first LCD pocket calculator	
Year of introduction	1964	1973	
Size (W x D x H)	420 x 440 x 250 mm	78 x 118 x 20 mm	Thickness: 13:1
Weight	25 kg	195 g	125:1
Number of basic components	Transistors: 530 Diodes: 2,300	LSI: 1 ICs: 2	
Power consumption	90 W	0.02 W	4,500:1
Price	535,000 yen	26,800 yen	20:1

Developing a Calculator That Anyone Could Use, Anytime, Anywhere, Plus Realizing the Dream of a Wall-Mountable TV

In 1960, over half a century ago, Sharp seized on a voluntary proposal from some of its young engineers as an opportunity to launch the development of a calculator that could be used by anyone, anytime, anywhere.

After a great deal of trial and error, Sharp commercialized one of the world's first all-transistor-diode electronic desktop calculators in 1964, followed by the commercial introduction of the world's first IC/LSI-based calculator (1967/1969) and the LCD pocket calculator (1973).

These innovative initiatives to shrink the size of the calculator and to reduce its power consumption made it possible for the use of calculators to spread around the world, and the technologies established over the course of their development contributed greatly to the subsequent development of the global electronics industry. In December 2005, Sharp's pioneering development of the calculator was recognized by a prestigious IEEE*1 Milestone*2 from the IEEE, the world's largest academic society for electrical, electronics, information, and telecommunications engineering.

The adoption of an LCD as the screen display accelerated the evolution of the pocket calculator away from desktop models. In addition, the subsequent development of LCD technologies and applications led to these displays being used even more widely in products such as information devices, audio/video equipment and communication appliances.

Even as they moved ahead with these developments, Sharp engineers remained committed to achieving the dream of developing a wall-mount LCD TV, and thanks to a persistent focus on technological innovation, that dream has become a reality. As developers and manufacturers, including Sharp, compete in technological innovations, LCD TVs, like the calculator, are becoming increasingly affordable as well as featuring remarkable improvements in picture quality, lighter weight, thinner profiles, and greater energy efficiency. Today, they have become products used by people the world over.

■ Comparison of CRT TV (2000) and LCD TV (2001, 2011)


32C-HE1 CRT TV (2000)


LC-30BV3 LCD TV (2001)

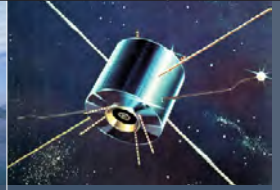

LC-32V5 LCD TV (2011)

(Comparison of models for the Japanese market)

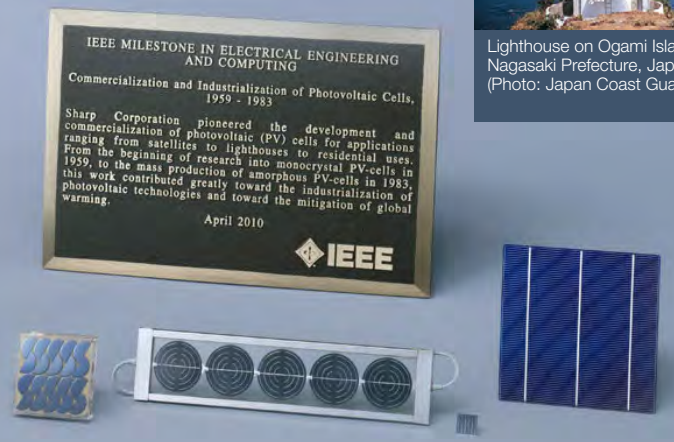
Model	32C-HE1 CRT TV	LC-30BV3 LCD TV	LC-32V5 LCD TV
Screen size	32-inch	30-inch	32-inch
Date of introduction	September 2000	November 2001	March 2011
Size (W x D x H)	99.9 x 55.3 x 54.9 cm	100.2 x 9.6 x 49.7 cm	77.4 x 6.0 x 49.2 cm
Weight (approx.)	63 kg	18 kg	9 kg
Power consumption	224 W	154 W	74 W

Note: LC-30BV3 LCD TV dimensions and weight refer to the display area with detachable speakers in place.
LC-32V5 LCD TV dimensions and weight refer to the display area and built-in speakers.

Lighthouse on Ogami Island, Nagasaki Prefecture, Japan (Photo: Japan Coast Guard)



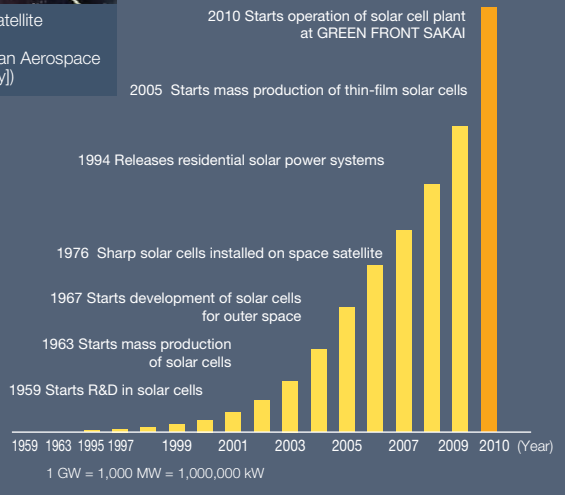
Ume application satellite (launched in 1976) (Photo: JAXA [Japan Aerospace Exploration Agency])



Commemorative plaque from the IEEE (behind) and (from left) two monocrystalline solar modules for lighthouses (installed on the Ogami Island Lighthouse in 1966 and 1978), a monocrystalline solar cell for outer space (installed on the Ume application satellite in 1976), and a residential-use polycrystalline solar cell

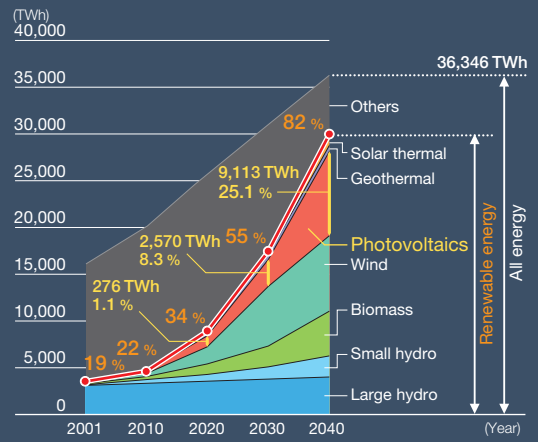
■ Sharp's Cumulative Solar Cell Production Volume

Total approx. 4.3 GW



1 GW = 1,000 MW = 1,000,000 kW

■ Forecast for World Electricity Demand



Source: Created by Sharp based on *Renewable Energy Scenario to 2040*, published by the EREC (European Renewable Energy Council) and reports of the WBGU (German Advisory Council on Global Change)
% is the percentage of all energy.
1 TWh = 1,000 GWh = 1,000,000 MWh = 1,000,000,000 kWh

Web IEEE Milestone recognition (solar cells)

Generating Electricity from the Unlimited Light of the Sun

Sharp's research on solar cells started 52 years ago in 1959. From the very beginning, Tokuji Hayakawa, Sharp's founder, stepped into the laboratory and expressed strong interest in the research. His ideas were presented in his writings. "If we could find a way of generating electricity from limitless solar heat and light, that would benefit humankind to an extent we can scarcely imagine…" (from his autobiography, 1970). When speaking about technologies of the future, Hayakawa always touched on solar cells first.

Under Hayakawa's vision, R&D into solar cells made steady progress, and in 1963, Sharp succeeded in mass producing monocrystalline solar cells. However, they were expensive at the time, and their main application was as a stand-alone source of power in places where the electric power grid did not reach, for example, remote lighthouses. In 1966, Sharp delivered to the Maritime Safety Agency of Japan (now the Japan Coast Guard) what was then the world's largest solar power system for lighthouses, which was installed at a lighthouse on Ogami Island in Nagasaki Prefecture. Then, in 1976, Sharp solar cells were installed on Ume, Japan's first application satellite. To the present, Sharp solar cells have been in use on more than 160 space satellites and at lighthouses in more than 2,500 locations.

Sharp solar cells have proven their reliability in harsh environments such as on lighthouses exposed to intense wind and rain, and in outer space with its extreme temperature variations. Since then, this technology has found widespread application, such as in the development of residential solar power systems, and is now playing an active role throughout the world.

Following previous recognition of its pioneering development of the electronic calculator, Sharp's achievements in the commercialization and industrialization of solar cells were recognized as an IEEE Milestone from the IEEE in April 2010.

Toward Achieving Grid Parity

As a result of these efforts spanning more than half a century, Sharp's cumulative production of solar cells reached 4.3 GW (gigawatts) by the end of 2010. This would be enough to power more than one million homes if each house were equipped with a 4-kW residential solar power system.

For medium- to long-term demand for solar power, according to a forecast for global electricity demand (see graph above) by the EREC (European Renewable Energy Council), it is assumed that photovoltaic power generation will continue to expand globally and account for 25.1% of the total demand for electricity worldwide in the year 2040.

However, reaching grid parity—the point at which the cost of photovoltaic electricity is equal to or less expensive than existing grid power—will be absolutely essential to bring about the widespread use of solar power.

In R&D of solar cells spanning more than 50 years, Sharp has consistently taken up the challenge to reduce costs. Sharp has increased the conversion efficiency of crystalline solar cells, reduced the thickness of the silicon used, and tackled innovations in production technology. Sharp has also been conducting R&D on thin-film solar cells which use less silicon and require fewer steps in the production process, and which offer ample room for reducing costs.

The high conversion efficiency of crystalline solar cells makes them ideal for residential applications where installation space is limited. At the same time, thin-film solar cells suffer less of a decline in conversion efficiency at high temperatures, and are ideally suited for large-scale power generation systems in climates with high ambient temperatures. By taking full advantage of the respective properties of these two types of solar cells, Sharp is aiming to reach grid parity at the earliest possible date.

Artist's Rendering of a 73 MW Mega Solar Power Plant in Thailand—One of the Largest in the World

Sharp received an order from NED, one of Thailand's independent power producers to build one of the world's largest solar power generation plants with a capacity of 73 MW. Sharp is collaborating on the design and construction with ITD and ITE, the largest construction companies in Thailand, and is supplying thin-film solar cell modules and surrounding systems for the plant. Construction is moving ahead with the goal of starting activity within this year.

- Company name: NED (Natural Energy Development Co., Ltd.)
- Area: 190 ha (1.9 km²)
- Power generation capacity: 73 MW
- Details of the system: Thin-film solar cells, inverter, mounting, etc.
- Start of operation: By the end of 2011
- Location: Lop Buri Province, Thailand

Solar cell plant at GREEN FRONT SAKAI

Bringing Solar Power to People Around the World

Sharp's newly constructed solar cell plant at GREEN FRONT SAKAI has been producing thin-film solar cells since last year, and in March of this year, started production of new high-efficiency monocrystalline solar cells. In the future, Sharp's idea is to develop production facilities in regional markets around the world according to local demand, with this plant serving as the core "mother plant."

In addition, Sharp is promoting its total solutions business around the world along the entire value chain—from the materials for solar cells, to the development and production of solar modules, to system design, to the construction of mega solar power plants, and even to being an independent power producer.

In July 2010 in Europe, Sharp established a joint venture with EGP to develop a solar independent power producer project. Power generating operations already began in March of this year. By the end of 2016, Sharp will be constructing several more solar power plants with a total generating capacity of more than 500 MW, and has plans to expand its power generation business in Europe, the Middle East, and Africa, particularly in the Mediterranean region. Sharp will produce the solar cells to be installed at these solar power plants at its thin-film solar cell plant in Italy mentioned on page 6.

In addition to the challenges of innovation, Sharp will be expanding its solar power business based on the policy of "local production for local consumption," working in collaboration with leading companies in regions around the world. By increasing our knowledge through our experience as a total solutions company, Sharp will contribute to achieving grid parity worldwide.

Sharp will be making every effort to ensure that solar power is widely available so that anyone around the world can take advantage of its use and enjoy its benefits.

Tetsuo Onishi
Executive Managing Officer
General Manager
Solar Business
Group General Manager
Solar Systems Group
Sharp Corporation

Contribute to the World Through Environment- and Health-Conscious Business, Focusing on Energy-Saving and Energy-Creating Products

One of Sharp's business visions is "Contribute to the world through environment- and health- conscious business, focusing on energy-saving and energy-creating products." Under this vision, Sharp aims to contribute to the welfare of people throughout the world by protecting the Earth's environment and offering people a healthy lifestyle.

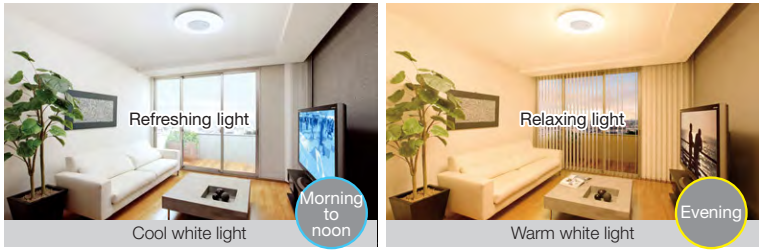
Creating New Health- and Environment-Friendly Lighting

Efforts to curb global warming and protect the environment are being conducted worldwide. A key to these efforts is the adoption of environmentally friendly LED lighting to take the place of conventional incandescent and fluorescent lighting. Along with energy-creating solar cells, LED is a focus of attention for its energy efficiency, long life, mercury-free construction, and almost complete absence of ultraviolet ray emissions.

Sharp has been developing LED for 43 years. Using one-of-a-kind technologies like planar lighting and dimming algorithms, Sharp began its entry into commercial LED lighting in 2007 with the introduction of a solar-powered LED light. In 2009, it created the stimulus for expansion of LED lighting in the Japanese market with the release of home LED lamps. With further releases, like LED ceiling lights in 2010, Sharp began to expand its lineup of commercial and residential products and became one of the pioneers of the LED lighting industry—all while aiming to contribute to society by offering consumers new value unique to LED lighting.

The solar-powered LED light can keep on shining in the event of a power failure brought on by an earthquake or typhoon, so it helps prevent crime and ensure safety on a local level.

Sharp's LED ceiling lights incorporate the Eco Light Rhythm*1 function for automatically adjusting the color and brightness of the light. This technology was jointly developed with Nara Women's University.



The Eco Light Rhythm function is a lighting program that makes automatic color and brightness adjustments throughout the day to provide lighting similar to natural sunlight. It enhances the user's lifestyle rhythms while reducing excess brightness and enables the user to save energy without being aware of it. It reduces energy consumption from lighting by up to 65%,*2 compared to when lights are fully on at all times, thus contributing to reducing overall energy consumption in the home.

Sharp will continue seeking new possibilities for LED in order to meet people's needs to save energy and contribute to the creation of a society where people can live in a healthy environment.

*1 Incorporated in Sharp's color and brightness adjustable models DL-C601V/C501V/C301V/C302V (as of June 2011).
*2 When the three eco-functions (Eco Light Rhythm, Eco Dimmer, and Eco Sensor) are turned on versus turned off.

Basic Features of LED Lighting

Energy efficiency
Energy consumption is dramatically less than incandescent or fluorescent lighting.

Immediate brightness
Because LED is a semiconductor, it's bright the instant you turn it on.

Mercury free
Because LED lighting generates light in a completely different way than fluorescent lights, it uses no mercury, an environmentally hazardous substance.

Doesn't easily attract insects
Because LED emits minimal ultraviolet light, it doesn't easily attract insects. This means easier cleaning of light fixtures and enduring cleanliness.

Long life
Because they're designed to last 40,000 hours*3, LED lights require minimal maintenance.

Low ultraviolet and infrared ray emissions
Because LED emits almost no light outside the visible spectrum, there is minimal color fading from ultraviolet light and heat generated from infrared light.

Withstands repeated on/off switching
Even frequent switching of the light on and off will not shorten the life of the LED.

Low CO_2 emissions
LED consumes minimal electricity and so results in lower CO_2 emissions.

*3 Design life of 60,000 hours for LED security lights, LED canopy lights, and LED yard lights, and 25,000 hours for DL-J40AN/J40AL LED lamps. This is the amount of time until total luminous flux drops to 80% (oblong and square types) or 70% (down lights, outdoor lighting, LED lamps) of the initial level. Note that these design life estimates are not a guarantee of product service life.

Where There's Air, There'll Be Plasmacluster

With today's ever-greater need for safe food and clean air, society has high expectations for the creation of safe and sanitary environments.

Based on its business vision, Sharp aims to offer people a healthy and comfortable life by aggressively spreading the use of its health-conscious products.

Sharp first incorporated its proprietary air purifying technology, Plasmacluster, into air purifiers in 2000 and later put it to use in air conditioners, refrigerators, and other Sharp products. The effects and safety of Plasmacluster have been verified by academic and research institutes around the world and recognized by other companies in other industries, with 27 of those companies adopting Plasmacluster technology in their products.

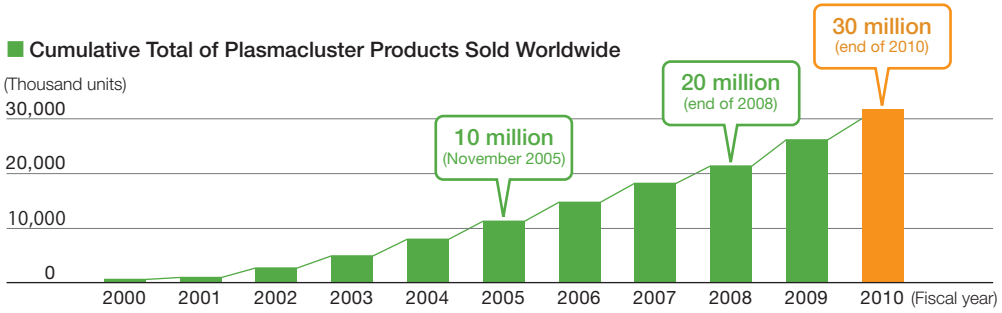
Plasmacluster products are for sale worldwide in approximately 100 countries. In ASEAN and other newly emerging country regions, Sharp offers Plasmacluster products geared to each country's lifestyles. As of the end of December 2010, cumulative sales of Plasmacluster products had reached 30 million units worldwide*.

IG-DX100 Plasmacluster Ion Generator
(portable type for vertical/horizontal placement)

Plasmacluster products are at work bringing sanitary air and peace of mind to a wide range of settings: homes, public spaces like hotels and theaters, offices, stores, pharmaceutical factories, and vegetable factories, to name a few.

By bringing people around the world LED lighting, Plasmacluster, and other environment- and health-conscious products that meet consumers' needs, Sharp is realizing its business vision and contributing to society.

* Total number of Plasmacluster products and Plasmacluster ion generating devices shipped in Japan and other countries between October 2000 and the end of December 2010.



IG-840 Plasmacluster Ion Generator
(for rooms up to approx. 50 m²)

Plasmacluster in a vegetable factory (Ryobi Holdings Co., Ltd.)

Plasmacluster was a winner
in the Best Home Appliance category of
the 2011 Mother's Selection Awards
sponsored by the Japan Mothers Society

Words from the Group General Manager

Noboru Fujimoto
Executive Officer
Group General Manager
Health and Environment
Systems Group
Sharp Corporation

Sharp aggressively develops and releases proprietary environment- and health-conscious products that make people's daily lives healthier and more comfortable. Besides LED lighting and Plasmacluster products, these include the Healsio superheated steam oven for maintaining a healthy diet.

As a manufacturer, we recognize our responsibility to build a sustainable society by harmoniously coexisting with the Earth's natural environment while at the same time bringing the world's people a healthy and plentiful lifestyle.

Amidst today's heightened social concern about energy efficiency, energy-use reduction, safety, and peace of mind, Sharp will strive to achieve its business vision by utilizing its management resources to make products driven by its proprietary environment and health technologies.

Contribute to a Ubiquitous Society* with One-of-a-Kind LCDs

Another Sharp business vision is "Contribute to a ubiquitous society with one-of-a-kind LCDs."
Sharp will raise the standards of culture and living for people around the world through its business.

One World: Raising People's Standards of Culture and Living

The dizzying pace of advancement in telecommunications infrastructure and networks is giving people access to information from around the world through television and the Internet and creating a borderless information society.

It is said that of our five senses, sight is the one that gives us more than 85% of our information. In an advanced information society, displays are at the core of almost everywhere we look. They contribute to an improved standard of culture and living as windows to information. Today, displays are indispensable to making our lives fulfilling.

In 1931, eighty years ago, a time when radios were beginning to spread, Sharp embarked on research into the new medium of television. In 1951 Sharp created a successful prototype of Japan's first TV. In January 1953, just ahead of the start of television broadcasts in Japan, Sharp began mass producing TVs to open the curtain on the new era of television.

In 1973, Sharp introduced a pocket calculator, the first-ever product to incorporate an LCD screen, after which Sharp devoted itself to progress in advancing this new display medium. In 1998, when CRTs were the dominant screen type, Sharp declared that by 2005, it would phase out CRTs and sell only LCD TVs in Japan.

In 2001, the AQUOS LCD TV was born as the world entered the 21st century. In the 10 years since, through AQUOS, as well as through innovations such as increasing screen resolution and screen size, Sharp has brought customers new image experiences and lifestyles.


Japan's first TV (1953)


Pocket calculator with LCD (1973)

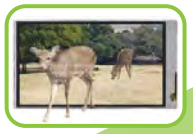

LCD Museum wall-mount TV (1991)


Crystaltron color LCD TV (1987)


AQUOS, the TV that opened the curtain on the age of LCD TVs (2001)


Mobile Advanced Super V LCD module (2003)

108-inch professional-use LCD (2008)


3D touchscreen LCD (2010)

Four-color 3D LCD (2010)


Smartphone, media tablet


Information display (professional LCD monitor)


Multi-screen display system at Huis Ten Bosch theme park, Nagasaki (artist's conception)

Towards a new stage in LCD applications


85-inch direct-view LCD compatible with Super Hi-Vision (ultra high definition) (prototype)


Free-Style AQUOS


Electronic whiteboard system

The word AQUOS is a combination of "aqua" and "quality." Sharp's aim from the very start was to make AQUOS a fusion of performance, quality, and environmental consideration—characteristics ideal for the 21st century on Earth, the water planet—and allow as many people as possible to enjoy TV while lessening their impact on the environment at home.

But Sharp's role has not been only to make LCDs. Together with suppliers and other business partners, and with all its stakeholders, Sharp has made LCDs an engine of growth in the world of electronics, in the process making these displays into a major segment that contributes to industry as a whole.

* The term "ubiquitous society" refers to how the whole of society will be connected through the rapid development of IT infrastructure and how networks will always be accessible to users.

Contributing to the Realization of a Ubiquitous Society

A 'ubiquitous society' is one in which the lives of people around the world are made more fulfilling, since anyone can connect to a network for access to a range of services anytime and anywhere.

One of Sharp's business visions is to use the one-of-a-kind LCDs it has built up to realize a ubiquitous society in which displays make society better in numerous ways.

In Japan, for example, displays could offer effective teaching methods to solve the problem of the falling levels of education among children today. Or they could help improve the field of medicine by providing remote medical care to solve the problem of shortages of doctors in this age of falling birthrates and aging populations. Sharp is also aiming to contribute widely to society by developing lifestyle support services that can be used by anyone, anywhere, anytime. One such example is a home control system; with today's increasing awareness of the environment and energy conservation, people at home need to know how much electricity they are consuming and how much energy they are generating through their solar power generation systems.

Sharp's mission is to continue to achieve breakthroughs in LCD image and energy-saving technologies that lead to new products that go beyond TVs—products like digital signage, mobile devices and tablets, and electronic whiteboard systems—and that offer never-before-seen value and raise the level of culture and lifestyles for the world's people.

Small- and medium-size displays　Large displays　Ultra-large displays

Words from the General Manager

Yoshisuke Hasegawa
Executive Managing Officer
General Manager
Display Device Business
Sharp Corporation

It was 38 years ago that Sharp introduced a pocket calculator that was the first calculator in the world to incorporate an LCD screen. Since then, Sharp has overcome numerous obstacles to create new possibilities for LCDs, with products boasting color display, a wide viewing angle, high-speed refresh rate, and large screens.

Today, Sharp is on the verge of taking LCDs to whole new fields by building on its innovations over the years.

From ultra-large displays that cover entire walls, to small- and medium-size displays for smartphones and tablets, Sharp is widening the range of applications for LCDs, and we are helping realize information and services via cloud computing, in the process making people's lives better than ever.

Sharp will continue to pursue its business vision of contributing to society by offering new value that is unique to Sharp.

Case Study　Sharp Participates in e-Education Proof-of-Concept Trial in India

India has enjoyed extremely rapid economic growth in recent years, and this has led to a rapidly increasing demand for higher education. A shortage of schools and teachers accompanying this demand has become a serious problem. To resolve these challenges, the development and adoption of electronic systems for education, as well as implementing remote e-education based on them, is urgently needed in India.

Sharp participated in a proof-of-concept trial for electronic education (e-education) in March 2011 at the Indian Institute of Technology Hyderabad to be conducted under the Project for International Expansion of Advanced ICT Business (Ubiquitous Alliance Project) launched by the Ministry of Internal Affairs and Communications of Japan.

In the proof-of-concept trial, the content of textbooks used in courses, as well as curriculum information, was downloaded to the e-textbook terminals via a wireless (Wi-Fi) connection to a dedicated remote e-education server. In addition, the content shown on electronic whiteboards used during class was displayed on the e-textbook terminals. This enabled interactive classes to be conducted, using a microphone and speakers in classrooms where no teacher was present.

This system aims to enable students who are not able to take courses because of a lack of teachers to attend advanced classes.

Students take a remote class; e-textbook (inset)

Corporate Profile

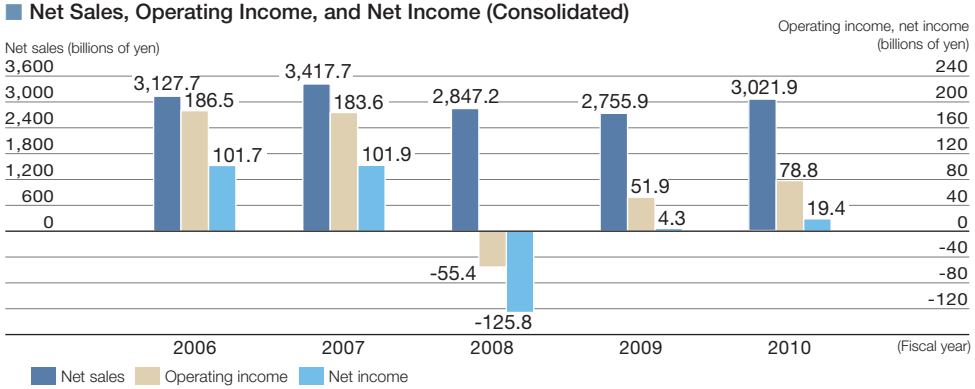
Name	Sharp Corporation	Operations*	Manufacture and sales of audio-visual and communication equipment, health and environmental equipment, information equipment, LCDs, solar cells, and other electronic devices
Head Office	22-22, Nagaike-cho, Abeno-ku, Osaka 545-8522, Japan	Capital Stock*	204,675 million yen (rounded down to the nearest million)
Representatives	Katsuhiko Machida, Chairman Mikio Katayama, President	Consolidated Subsidiaries*	70 (16 in Japan, 54 overseas)
Founded	September 15, 1912	Number of Employees*	Consolidated: 55,580 Entire Sharp Group: 64,246 (31,510 in Japan; 32,736 overseas [Americas 4,516; Europe 4,600; Asia; 23,272; Other 348])

* As of March 31, 2011

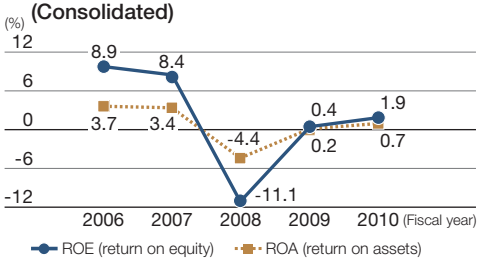
Main Products

Audio-Visual and Communication Equipment	LCD color TVs, color TVs, projectors, DVD recorders, Blu-ray Disc recorders, Blu-ray Disc players, mobile phones, mobile communications handsets, electronic dictionaries, calculators, facsimiles, telephones
Health and Environmental Equipment	Refrigerators, superheated steam ovens, microwave ovens, air conditioners, washing machines, vacuum cleaners, air purifiers, dehumidifiers, humidifiers, electric heaters, small cooking appliances, Plasmacluster Ion generators, LED lights, solar-powered LED lights, network control units
Information Equipment	POS systems, handy data terminals, electronic cash registers, information displays, digital MFPs (multifunction printers), options and consumables, software, FA equipment, ultrasonic cleaners
LCDs	TFT LCD modules, Duty LCD modules, System LCD modules
Solar Cells	Crystalline solar cells, thin-film solar cells
Other Electronic Devices	CCD/CMOS imagers, LSIs for LCDs, microprocessors, flash memory, analog ICs, components for satellite broadcasting, terrestrial digital tuners, RF modules, network components, laser diodes, LEDs, optical pickups, optical sensors, components for optical communications, regulators, switching power supplies

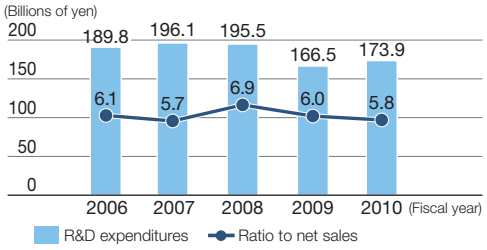
Net Sales, Operating Income, and Net Income (Consolidated)



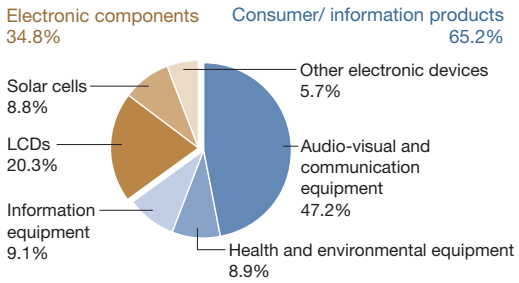
Principal Financial Performance Indicators (Consolidated)



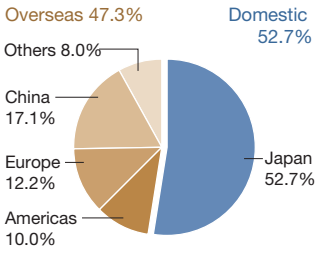
R&D Expenditures (Consolidated)



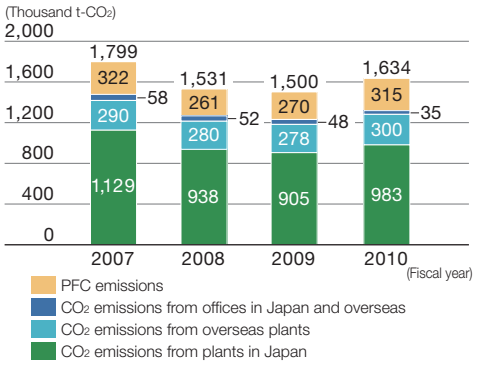
Fiscal 2010 Net Sales Component Ratio by Product Group (Consolidated)



Fiscal 2010 Net Sales Component Ratio by Region (Consolidated)

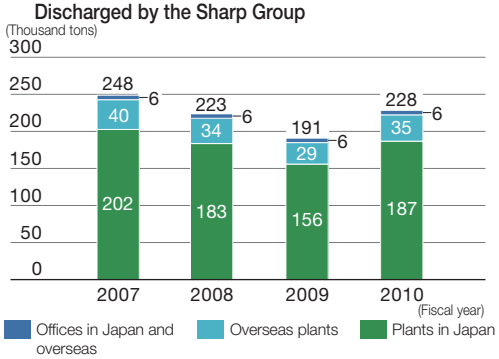


Amount of Sharp Group's Greenhouse Gas Emissions



For more information, see page 60 of the Sharp Environmental and Social Report 2011.

Amount of Waste, etc. (Including Valuable Resources) Discharged by the Sharp Group



For more information, see page 62 of the Sharp Environmental and Social Report 2011.

Web Corporate information
Investor relations

SHARP

United Nations Global Compact

Sharp became a participant in the United Nations Global Compact in June 2009. Since then, Sharp has set concrete targets for its efforts in support of the 10 principles of the Global Compact in the areas of human rights, labour, the environment, and anti-corruption, and is working to further promote these efforts throughout the Sharp Group.

■ SRI (Socially Responsible Investment)*

As of September 2011, the following SRI ratings agencies had given Sharp a favorable CSR rating or included Sharp in their SRI indices.

- FTSE4Good Global Index (UK)
- MSCI Global Climate Index (US)
- Ethibel Sustainability Index (Belgium)
- Morningstar Socially Responsible Investment Index (Japan)
- oekom research AG (Germany), Corporate Responsibility Prime Status

* Investment in companies that fulfill not only their financial obligations but their environmental and social responsibilities as well.

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Published September 2011