

Providing Clean Energy Solutions

Solar Cell Business Helps Resolve Global Warming

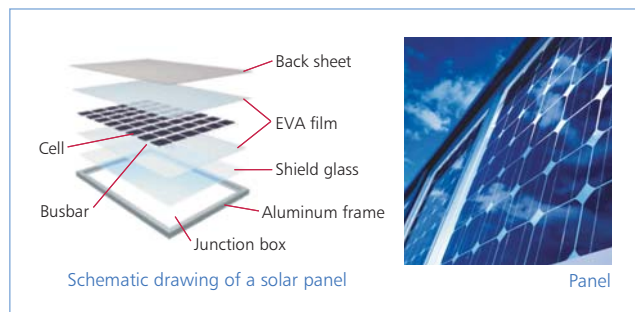
Solar Cells under the Spotlight

Clean energy is currently attracting attention around the world as a means of reducing emissions of CO₂, the main cause of global warming. Electric power energy can be generated by many different methods, including power from the wind, sunlight, solar heat, terrestrial heat, tides and water. Hitachi High-Technologies' trading divisions are currently focusing their business on solar cells.

Demand for solar power generation is on the increase, especially in Japan and Europe. Solar power systems are in short supply because material procurement and panel manufacturing have been unable to keep pace with this jump in demand. We are using our trading function to help people around the world gain access to clean energy, by accelerating our global business development and providing quick deliveries of better quality products.

Reliable Supply of Solar Panel Materials

Solar panels are made from seven different main materials, as shown in the drawing below. In collaboration with Hitachi High-Technologies Group companies in China region, we are securing quality supplies of these materials and ensuring a reliable supply of materials in China where much of the panel manufacturing is carried out. In this way, we are helping to meet demand for panels and supporting the manufacture of panels capable of highly efficient power generation.

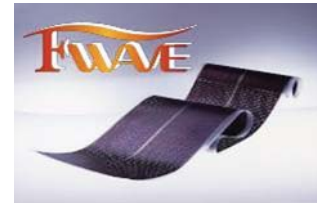


VOICE



Seiji Seki

New Business Development Department
Corporate Strategy Division
Hitachi High-Technologies



A flexible solar cell

Solar cells as shown on the photograph above, have already been developed. These solar cells are light and highly portable, so they can be installed in existing buildings or even on dome-shaped roofs. They can also be used to generate power in mountainous or high-altitude regions where it is difficult to install power-generating facilities or power lines. I work in this business because I believe the greater use of solar cells can help to resolve global warming.

Promoting Solar Panel Use in Japan and Overseas

We are working on product supplies in Japan and overseas, especially Europe. We purchase solar panels capable of efficient power generation and supply them to customers that provide solar power systems.

Supplying Equipment Used in the Manufacture of Solar Panels

We purchase the production equipment needed to manufacture solar panels from Japanese manufacturers that have superior technologies and supply this production equipment to overseas manufacturers. We use our trading function to procure the assembly and testing equipment employed in back-end processes and also in response to customer requests to combine products from various different manufacturers in order to provide optimal solutions and improve panel manufacturing productivity.

Addressing Environmental Issues through Manufacturing

Developing Eco-Products and Super Eco-Products

Expanding Our Eco-Product Portfolio

Hitachi High-Technologies is working to design, develop, and manufacture “Eco-Products” that have less environmental impact than conventional products, for example through reduced power consumption or compact design to reduce materials usage and energy usage during transportation.

Eco-Product Designation

All Hitachi Group companies conduct an environmental design assessment in order to minimize the environmental impact of the product at all stages, from manufacturing to disposal. The assessment evaluates the products according to eight categories, including resource reduction, resource recycling, and ease of decomposition and processing. Products that meet a certain standard* are designated as Eco-Products.

We are also working to increase the proportion of in-house products division sales accounted for by Eco-Products as part of our efforts toward the global supply of products that produce a less environmental impact. In fiscal 2007, 24 products were registered as Eco-Products accounting for 74% of sales, beating our target of 72%. From fiscal 2008, we are targeting 80% or more of sales from Eco-Products.

*Products can score up to 5 points per category; Eco-Products need to achieve at least 2 out of the 5 available points for each category and a total average point score of 3 or more.

Improving Environmental Efficiencies and Developing Super Eco-Products

We are working to increase the environmental efficiency (efficiency of global warming prevention and resource efficiency) per unit of energy consumed or resources used, in a bid to improve performance and extend product life.

Super Eco-Products are Eco-Products where a marked improvement in environmental efficiency has been achieved and the product is either recognized as the industry leader or has an excellent reputation outside the company. We are working to increase the proportion of Super Eco-Products. In fiscal 2007, the Hitachi High-Technologies Group had seven products that met the Super Eco-Product criteria.

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The NanoFrontier LD liquid chromatograph mass spectrometer for protein analysis

We have designed this environmentally friendly equipment with the operator in mind, so it performs rapid protein-level analyses of high sensitivity, requires little maintenance, uses less organic solvent, and is easy to dispose of.



Izumi Ogata

Analytical Systems Design Department
Naka Division
Nanotechnology Products Business Group
Hitachi High-Technologies

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GXH-3 high-speed modular moulder

We worked to improve productivity and increase functionality in our electronic component module assembly systems and managed to reduce faulty circuit board production, reduce waste, and make effective use of material resources. Easier maintenance extended the lifespan and gave the product a better environmental profile.



Hiroyuki Watanabe

Jisso Systems Design Department 1
Design Division
Hitachi High-Tech Instruments Co., Ltd.

We want to help create a sustainable society by reducing the environmental burden of our products and to improve quality of life through the provision of products that are easy to use, can be used with confidence, and that have more convenient and optimal functionality.