

# 6 Reducing Environmental Impact by Contributing to the Performance and Adoption of Hybrid Vehicles

*Aiming to Become the Top Supplier of Power Electronics Devices and Systems for Motor Vehicles*



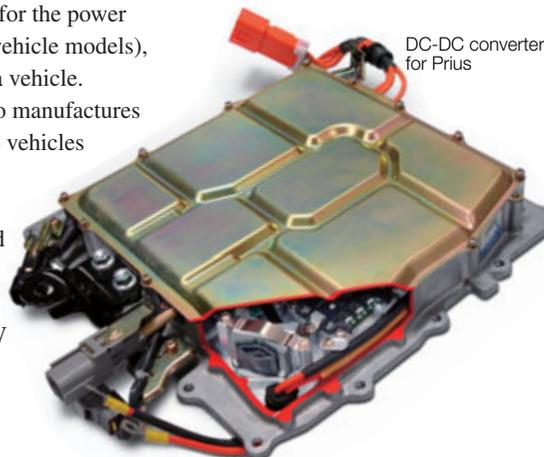
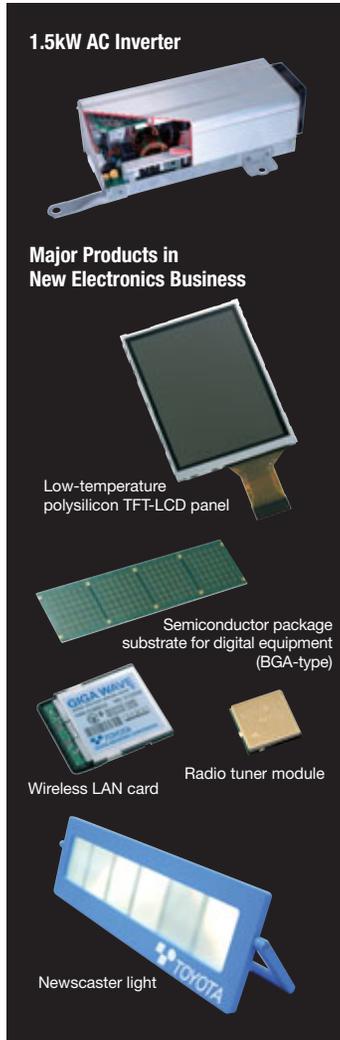
## Promoting Improvements to DC-DC Converters and Contributing to Improvements in Fuel Efficiency and Cost Reduction for Hybrid Vehicles

Toyota Motor Corporation's hybrid vehicles draw significant attention from around the world with their superior environmental friendliness. In the future, the hybrid vehicle market is expected to expand even further, with other automobile makers entering into the market. Toyota Industries' electronics business produces DC-DC converters, which are an extremely important component for hybrid vehicles. These converters convert the high voltage of the main battery to a lower voltage to recharge the auxiliary battery and to supply power to the lights, wipers, horns and other in-vehicle devices, or to operate the electric power steering. By proceeding with improvements to make products smaller and lighter, with higher efficiency and lower costs, and attaining higher fuel efficiency and cost reductions, we are contributing to the performance and adoption of hybrid vehicles, and hence contributing to a reduction in their environmental impact.

We must not produce defective components in any case, as the performance and function of our products is directly related to a vehicle's fuel consumption, costs and safety. Toyota Industries has, therefore, been working on "activities to improve market quality" since 2004. In 2005, we set even higher standards and started production of converters for the power steering used on Lexus (hybrid vehicle models), the top-of-the-line luxury Toyota vehicle.

The electronics business also manufactures 1.5kW DC-AC inverters fitted to vehicles that convert direct current to alternating current.

The DC-AC inverter installed on popular hybrid vehicles such as the Alphard and Estima, is capable of delivering up to 1.5kW of electricity, and enables the use



of household electrical appliances with high electric consumption, such as microwave ovens and hair driers outdoors. It is expected that the product not only makes owners' car lives more enjoyable, comfortable and convenient, but it can also be used as an emergency power source during blackouts or in the event of a disaster.

We aim to become the top supplier of power electronics devices, such as converters and inverters, and electric power systems for motor vehicles.

We will continue to work on enhancing design, production preparation and initial management; to ensure high quality products are constantly provided; as well as improving production efficiency in order to meet the anticipated increase in demand.

## Launch of New Electronics Business

We have also engaged in a new electronics business not only for automobile manufacturers but also for manufacturers of mobile phones, and electric products.

ST Liquid Crystal Display Corp (STLCD), a joint venture with Sony Corporation, manufactures low-temperature polysilicon TFT-LCD panels, the next generation in liquid crystal displays, for use in digital still cameras, video cameras, PDAs and mobile phones used across the globe. TIBC Corporation (a joint venture with Ibiden Co., Ltd.) manufactures the latest semiconductor package substrates for use in PCs, mobile phones, IC cards, etc.

Toyota Industries is also actively involved in the development, manufacture, and sale of radio tuner modules for use in mobile phones, wireless LAN cards optimized for use in small information terminals, and our newscaster light (which is used to light up the face of newscasters on TV programs) with triple wavelength luminescent white organic EL light source.