# Environmental Initiatives in Transportation

The Tokyo Electron Group is committed to reducing the environmental impact caused by the transportation of its products through energy saving and effective use of resources.

# Our Approach to Environment-Friendly Transportation

In April 2006, Japan's Law Concerning the Rational Use of Energy ("Energy-Saving Law") was revised and regulations on transportation were strengthened, reflecting an increasing demand for reductions in the environmental impact caused by transportation to prevent global warming.

In response, the Tokyo Electron Group has been actively reducing the environmental impact caused by the transportation

of its products. For example, we introduced low-emission trucks to transport our products and started to use returnable containers for their delivery. Also, we give first priority to driving safely in delivering products to customers.



Introducing a low-emission truck

### Environmental Impact of Transportation

The revised Energy Saving Law designates shippers who transport 30 million ton-kilos or more a year as specified shippers and demand that they reduce CO<sub>2</sub> emissions from the transportation of their cargos.

The amount that the Tokyo Electron Group transports (in freight tonkm: weight of major products transported multiplied by their transportation distance) as a whole has been increasing over the years, although it has slightly decreased in FY 2006 over FY 2005, because of an increase in the number of shipments and an increase in the weight per product (see "Changes in Product Weight" shown on the right).

The Group delivers precision machines to customers and has to transport them carefully. We will measure the transportation amount and distance and CO<sub>2</sub> emissions from the transportation of our products in a more accurate manner, while examining measures to reduce our CO<sub>2</sub> emissions, including a modal shift. In FY 2006, we started to identify the use of gasoline and diesel oil by vehicles owned by Group companies in Japan.

#### **Freight Transportation Amount**



(Calculated for major domestic products and based on a given load per vehicle)

# Changes in Product Weight

The Group's products have been getting larger and larger. For example, our FPD production equipment weighed approximately 11 metric tons about 15 years ago and could be transported on

four trucks. The total weight of our latest model, however, is approximately 170 metric tons, requiring a special truck and a lot of other vehicles to transport the product. The product has become this large because of the increase in the size of FPD circuit boards manufactured using the product.





Special truck for transporting FPD production equipment

# TOPICS

# Reducing the Use of Packaging Materials at Shipment and Reusing Casters

In the past, we placed each product accessory to be delivered to the customer in a separate plastic container and then packaged each of the containers. Now, however, we place the plastic containers on a rack, package the entire rack, and deliver it to the customer. As a result, we have reduced the use of packaging materials by half and the use of buffer material to one-tenth. We were also able to shorten the loading time at shipment. In addition, the space that the customer needed for storing the cargo was also reduced and it has become easier for the customer to keep the cargo in good order.

Furthermore, we now remove the casters attached to the body of an etch system for delivery and reuse them for subsequent deliveries.





Delivery rack

Container for reused casters