

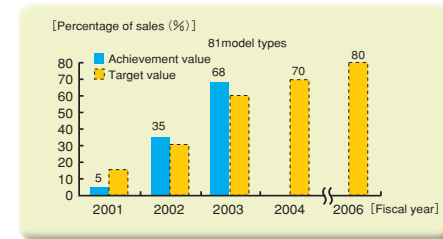
Ecological Products

We assess environmental load at the stage of designing products and are working on creation of environment-friendly products.

1 Environment-friendly products

We are developing products by introduction of "assessment of environment-friendly designs" adopting the concept of environment-friendly design, so to minimize lifecycle environmental load, which products cause to the environment at each stage of the product lifecycle (material, production, distribution, usage, recovery, resolution and proper disposal). Assessment is made by product and the superior products which can obtain more than 2 points of the score out of 5 standard points in each category, as well as more than 3 points in the general average score are defined to be environment-friendly products.

Change in percentages of sales of environment-friendly products



Assessment items for environment-friendly designs

Category	Life Cycle Stage	Assessment Criteria
Resource reduction	Selection of component materials, production, distribution	Resource conservation, compactness, lightweight, conformity, high yield, standardization
Product longevity	Usage	Upgradability, ease of repair and maintenance, durability, reliability
Resource recycling	Reuse, distribution	Reusability, conformity of component materials, use of recycled materials, promotion of resource recycling, labeling of materials
Ease of disassembly	Disassembly	Ease of disassembly, selection of component materials, ease of sorting, labeling of materials
Ease of processing	Production, distribution, disassembly	Crumbing, fragmentation, disassembly and separation, ease of processing
Environmental safety	Selection of component materials, production, distribution, usage, disassembly, disposal	Potential toxicity, potential harmfulness, explosiveness, potential for implosion, potential hazard
Energy conservation	Usage, production	Energy conservation, longer durability, energy efficiency
Provision of information	Usage, disassembly	Provision of information regarding processing, provision of information regarding product disposal

2 Examples of environment-friendly products

Semiconductor manufacturing systems



300 mm wafer LPCVD systems
Product name: Z-7 (C)

- Power consumption: 27 % reduced
- Hours for assembly: 27 % shortened
- Mass: 12 % lowered

LPCVD : Low Pressure Chemical Vapor Deposition



Epi-SiGe deposition equipment
Product name: V-V (SE)

- Power consumption: 43 % reduced
- No. of parts: 37 % reduced
- Capacity: 35 % reduced



Batch-type ALD equipment
Product name: ALDINNA

- Power at activation: 37 % reduced
- Power at hold time: 27 % reduced
- Capacity: 35 % reduced

ALD : Atomic Layer Deposition

Communication and Information systems



Amplifier for the 3rd generation cellular phone station
Product name: MCPA

- Power consumption: 5 % reduced
- Mass: 17 % lowered
- Capacity: 7 % reduced
- Noise reduction: 8 dB reduced



Digital portable radio
Product name: EUM-01 DN/ET

- Power consumption: 15 % reduced
- Capacity: 43 % reduced
- Mass: 40 % lowered



Digital receiver
Product name: ECF-8601

- Lead-free solder adopted for print-circuit board
- Absolutely no assembly screws (simple assembly and maintenance)

Broadcasting and video systems



Full multimode FPU
Product name: FRO55-ZX2

- Capacity: 37 % reduced
- Mass: 28 % reduced

FPU : Field Pick-up Unit



Outdoor camera platform all-in-one type camera
Product name: HC-240

- Power at hold time: 95 % reduced
- Power at activation: 23 % reduced
- Mass: 38 % reduced
- Capacity: 26 % reduced



Ground-based digital broadcasting UHF preamplifier
Product name: PAU-250A

- Capacity: 47 % reduced
- Mass: 28 % reduced
- Noise factor: Reduced to less than 2.2 dB
- UHF output level: 90 dB μ (wave 7)

3 Green procurement

It is important to procure materials or parts with less environmental load in order to produce products with less environmental load.

"Guidelines for Green Procurement" was handed out at the suppliers meeting, and we requested them to provide information on the items related to reducing environmental load, such as environment preservation activity, resource conservation of procured goods, energy saving, recycling and the items concerning the content of substances, for which Hitachi Group performs voluntary management.

In fiscal 2003, we received information from 411 companies covering main model types in connection with environment preservation activities, and commenced our research giving priority to substance content investigation by Restricting the use of Hazardous Substances (RoHS) Directive 6 of European Union.



Suppliers meeting



Guidelines for Green Procurement