

Seiko Epson Corporation

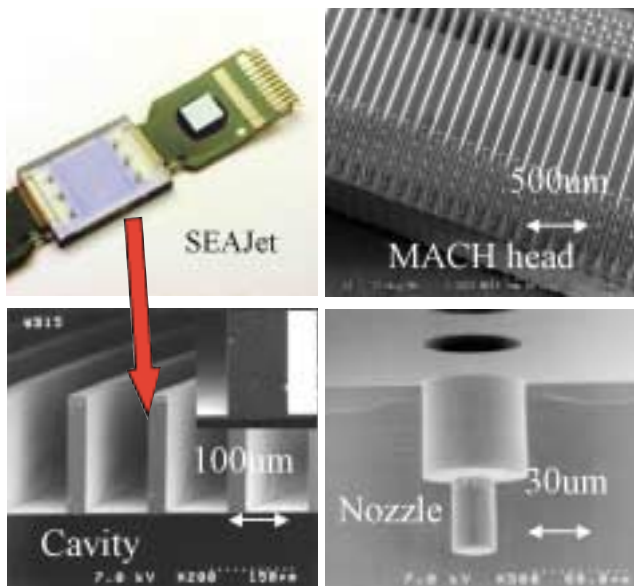
1. The Challenge of Micromachine Technology

Through the world's most advanced technologies, Seiko Epson is providing products that bring us a high quality of life based on harmony with the environment in such fields as information systems, device production, and micro-mechatronics. Our primary products deal with information-related equipment, including personal computers and such peripherals as printers and scanners, and such imaging equipment as liquid crystal projectors; electronic devices, such as semiconductors, displays, and crystal devices; precision instruments, such as watches, glass lenses, and factory automation; and other developments, productions, and services.

One manufacturing technology applying our developed micromachine technology is the SEAJet print head used in POS printers.

2. Development of Micromachine Technology

Here, we will introduce some representative products and related technologies that Seiko Epson has worked on thus far.



An enlarged photograph of a MACH head ink channel, the exterior of the SEAJet head, and enlarged photographs of the ink channel and nozzle



Mituro Atobe

General Manager, Production Engineering and Development Div.

(1) Inkjet print head

Our Colorio series of printers are equipped with inkjet heads having micromachined ink channels. We have also applied our own inkjet technology SEAJet to POS printers used in retail operations, for example. The inkjet head provided in these printers is manufactured using micromachine technology and makes full use of the advantages of this technology to achieve small, highly efficient products with low power consumption.

(2) Electronic devices

We have incorporated micromachine technology in electronic devices, particularly in the crystal oscillator industry, to achieve the world's smallest oscillator products. We are also conducting R&D on future high value-added network devices incorporating optical devices or integrated circuits and micromachine devices on a single chip.

3. Future Challenges

We are working to evolve our ultrafine machining technology from micro- to nanotechnology in order to create devices with originality. It is our fervent wish to continue providing advanced products and services that can delight our customers while maintaining harmony with the environment.