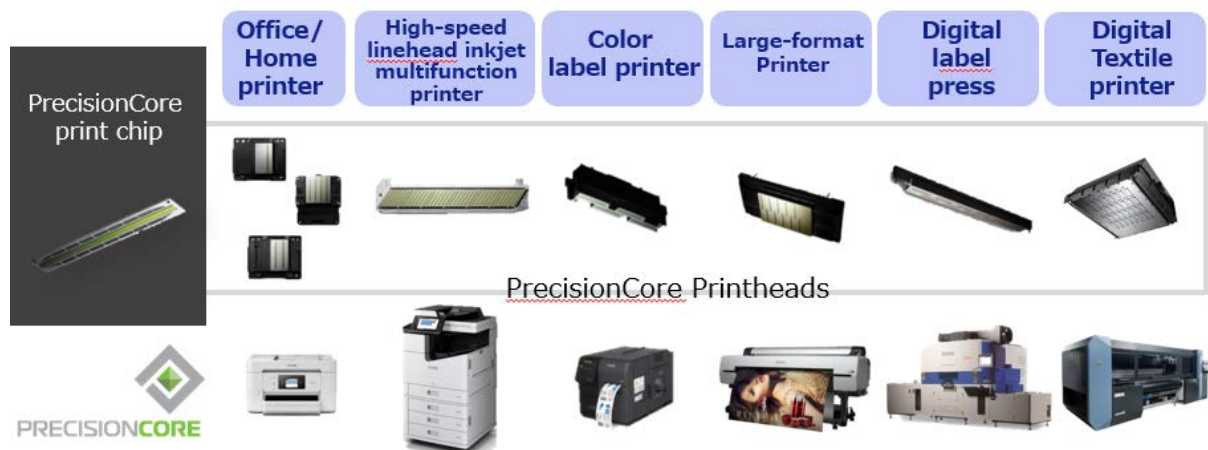


## State-of-the-art PrecisionCore printheads

Micro Piezo printheads eject droplets of ink via mechanical pressure. This mechanical pressure is created when piezoelectric elements in the printheads contract in response to an applied voltage. Two main characteristics set Epson's technology apart from other inkjet printing systems. The first is that Micro Piezo printing systems do not use heat to eject the ink droplets, meaning that Micro Piezo printheads have high durability, consume little energy and therefore result in a lower environmental impact. The second characteristic is that they precisely control the volume of ink contained in each ink droplet.

PrecisionCore printheads—the ultra-precise core devices that underpin Epson's most powerful inkjet printer products—have individually controlled nozzles, each of which is capable of firing up to 50,000 precise ink droplets per second with astonishing accuracy. This level of precision and performance makes highly sophisticated technology essential for their production. To achieve both high quality and high throughput, Epson employs fully automated production lines that capitalize on Epson's own industrial robots, as well as a combination of inkjet technologies developed over two decades and microfabrication processes that are accurate to one one-thousandth of a millimeter.

By developing and producing PrecisionCore MicroTFP printheads entirely in Japan\*, Epson aims to accumulate technological expertise for next-generation printheads, build a rock-solid base of production technology, and further the competitive advantage of its sites producing core devices.



PrecisionCore are the core devices in a wide range of Epson printer products

\* As of July 2018, Epson's Suwa Minami Plant handles front-end (print chip) production while Tohoku Epson Corporation and Akita Epson Corporation handle the back-end process (head assembly).

Please see the link below for further details about PrecisionCore.

◆ Micro Piezo technology

[global.epson.com/innovation/core\\_technology/inkjet/micro\\_piezo.html](http://global.epson.com/innovation/core_technology/inkjet/micro_piezo.html)

◆ Micro Piezo Printhead manufacturing technology

[global.epson.com/innovation/manufacturing/micro\\_piezo.html](http://global.epson.com/innovation/manufacturing/micro_piezo.html)