

## How a semiconductor wafer is made (supplementary information)

In a semiconductor device, tens to hundreds of millions of elements such as transistors are integrated on a silicon chip only a few millimeters square.

These elements are connected with a few layers of metal wiring made of copper or the like to form an electronic circuit.

Each transistor has dimensions of five-hundred-millionth of a meter or so, and is invisible to the human eye. How are such small transistors made?

In semiconductor factories, they are formed on a wafer (silicon disk) by ultramicrofabrication. Hundreds to thousands of semiconductor devices (chips) a few millimeters square are formed on a wafer at the same time. This manufacturing process is called wafer processing, and the flow of this process is called a process flow. An overview of how transistors and multi-layer wiring are made is provided here.

