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Abstract
Silicon epitaxial film plays a very important role in electronic material, and is closely linked with every kind of electronic devices that is in integrated or discrete devices and its application fields. Now it’s researching about integrated or discrete devices at schools and industry in the world. And integrated of optical electronic devices and optical signal process circuits are the future vision of optical-communication and ICs. Optical-electronic sensor device is the bridge between signal transmission and received circuits. In the paper, we will discuss “Study of Silicon Epitaxial Film in Optical Electronic Sensor Devices” and its application.
In this experiment, we adjusted many steps at process conditions, for example, baking time、purge time、wafer etch time、deposition temperature、heat up/down ramping, to fabricate a novel device that more stable, more better properties in electrical. Since semiconductor industry developed until now, every kinds of electronic devices in application of silicon epitaxial films is necessary. For example, power devices、photo- electronic devices and ICs, etc…. However the properties must be effected by epitaxial films in material、structure and quality.
In this paper, we will discuss the study of silicon epitaxial films in photo-electronic sensor devices. Studying the relation in growing silicon epitaxial films and the process parameters those as follow, growth rate、resistivity、thickness and doping profiles also effected by process condition.
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