

The High-Speed Measurement of a Partial Area Imaging System Applied to
Photoresist Development Processing

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Abstract

Among the parameters that affect photolithography, the most important are exposure and development time which affect the coating photoresist characteristics. This study further researches the relationship between the exposure and development time using a high speed image inspection system, and the relationship between the development time and photoresist depth using a Scanning Probe Microscope (SPM). A partial scan CCD camera and high speed frame capture card were used to obtain the photoresist development processing parameters. The experimental results verified that this imaging system provides an economical and effective method for producing a micro-photo-etched product. It is expected that these experiments can also offer some good references useful in the micro electro mechanical industrial field.

Keyword : Photolithography, exposure and development time, high speed image inspection system .