37－27　Development of QTAT online electronic circuit patterning system

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An arbitrary pattern exposure system has been developed by employing a liquid crystal display (LCD) with 1600×1200 pixels for the formation of the projection images in place of a conventional reticle. The minimum pattern size becomes 11.5 m that corresponds to the aperture size of each pixel on the LCD. For the purpose of quick turn-around-time (TAT), the exposure system was directly connected to the circuit design system with the TCP/IP network. By the experimental results on patterning of a typical electronic circuit data with the area of 46mm×46mm, it was confirmed that the TAT from the output of design data to the finish of the exposure becomes less than 28min. By using this system, reduction of the production cost in the PWBs fabrication is expected.

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