Lasertec

PRESS RELEASE

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Lasertec releases new mask blank inspection systems MAGICS series M8650 and M8651

Yokohama, Japan, April 3, 2017 – **Lasertec Corporation** has released **MAGICS series M8650 and M8651 ("M8650/51")**, a new line of semiconductor mask blank inspection system that enables the high sensitivity, high throughput inspection in the cutting-edge design nodes of 7 to 10nm.

The MAGICS series mask blank inspection systems are a highly reputable de facto standard tool. Over the years, many of them have been used for outgoing inspection at mask blank[1] manufacturers and for incoming inspection and process control at mask shops. Recently, various innovations have been made in the field of mask technology, such as the introduction of extreme ultraviolet (EUV) and new architecture masks, to meet the needs of semiconductor lithography in the cutting-edge nodes. Because of this, it is imperative that mask blank inspection can be performed with higher sensitivity and at higher throughput.

Lasertec has developed M8650/51 to achieve higher throughput and higher sensitivity than available with M8350/51, the current line of MAGICS system released in April 2014.

M8650/51 has adopted a 355nm laser as its light source while using the core technology of MAGICS series as its base. Compared with M8350/51, M8650/51 uses twice as many beams and completes inspection in half as much time. In the high-density scan, M8650/51 achieves a 1.5-times higher sensitivity than M8350/51 does for the same inspection speed. M8650/51 is field upgradable from M8350/51. Lasertec has received many inquiries for the new systems and already won multiple-unit orders.

Lasertec will keep making its contribution to enhancing the quality control of the next-generation high-quality mask blanks and to improving incoming inspection and mask making process control at mask shops.

【Key Features】

- Latest line of advanced inspection systems attaining high sensitivity for the next-generation mask blank inspection and offering high throughput for outgoing and incoming inspection at production facilities
- 63-beam scanning confocal optics based on the core technology of MAGICS, a de facto standard tool, combined with special small defect detection circuitry
- Significantly higher sensitivity not only for defects on substrates[2] but also for defects on each layer of advanced semiconductor mask blanks, enabling the more stringent qualification of high-quality blanks.
- Compatibility with multi-slot cassettes for blank manufacturers, with RSP and MRP for mask shops, and with dual pods for EUVL.
- M8651 meets the requirement of line & space monitor pattern inspection and is effective for various process controls at mask shops.

【Applications】

- Inspection of substrates, optical mask blanks (Cr, MoSi, half-tone) and EUV mask blanks (Mo/Si multilayer, absorber)
- Defect reviews

Notes
1. A mask blank is a photomask with no patterns printed on it.
2. A substrate is a glass plate used for making a mask blank.

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