

Doc. No.: NR101129-1E

Screen to Enter Market for Semiconductor Wafer Pattern Inspection System — Will Augment Lineup of Green Device Manufacturing Equipment —

Kyoto, Japan — November 29, 2010 — Dainippon Screen Mfg. Co., Ltd., has recently developed ZI-2000, a wafer pattern inspection system used for pattern inspections in various manufacturing processes for environmentally-friendly green devices*. The new system will go on sale in December 2010.



ZI-2000

Please download the photo from
<http://www.screen.co.jp/press/nr-photo/indexE.html>

Green devices, technology and products designed to reduce environmental impact, have recently started to become increasingly prominent in the global electronics industry. Power semiconductors are especially energy-saving models that reduce power consumption and improve conversion efficiency, and their market has grown particularly rapidly. Since semiconductors used in vehicle onboard systems need to be extremely reliable for safety reasons, reliable quality control systems that don't sacrifice high productivity are a pressing need for device manufacturers.

In 2009, Screen responded to these global trends by starting Frontier, a project to develop manufacturing equipment targeting the green device industry. The ZI-2000 wafer pattern inspection system will be the Frontier project's second release, and Screen's first entry into the market for semiconductor wafer pattern inspection products. It follows the June 2010 release of the CW-1500 batch-type wafer cleaning system, a system optimized for power semiconductor manufacturing.

ZI-2000 draws on the wealth of image processing technologies Screen has accumulated over the course of its long history in this field. It achieves outstanding cost performance by combining high inspection performance with a simple design driven by functions dedicated to boosting speed and making operation easy. The inspection algorithm is the comparative inspection method that has proven its effectiveness in Screen's PI Series of PCB pattern inspection systems. By detecting differences between wafer patterns, this algorithm greatly reduces the computation time needed for inspection. ZI-2000 uses a proprietary Screen high-resolution lens and high-speed image processing engine, enabling 6-inch wafer pattern inspections in under 1 minute regardless of the chip size or number of chips. These features enable ZI-2000 to support

applications ranging from inspections during pre-processing that demand flexibility, to final pattern inspections requiring high productivity.

Following the release of ZI-2000, Screen is planning several more timely releases of equipment for the green device industry, and will augment the products released through the Frontier project. Our work on developing green device manufacturing equipment is also designed to help reduce global carbon dioxide emissions and to add to our environmental awareness activities.

* Green devices

A general term for environmentally-friendly, CO₂-reducing electronic device technologies and products. Products commonly designed as green devices include LEDs, solar batteries, secondary batteries and power semiconductors (SiC power devices).

Note: This system will be exhibited at SEMICON Japan 2010, held from Wednesday, December 1 to Friday, December 3 at the Makuhari Messe convention complex in Chiba, Japan.