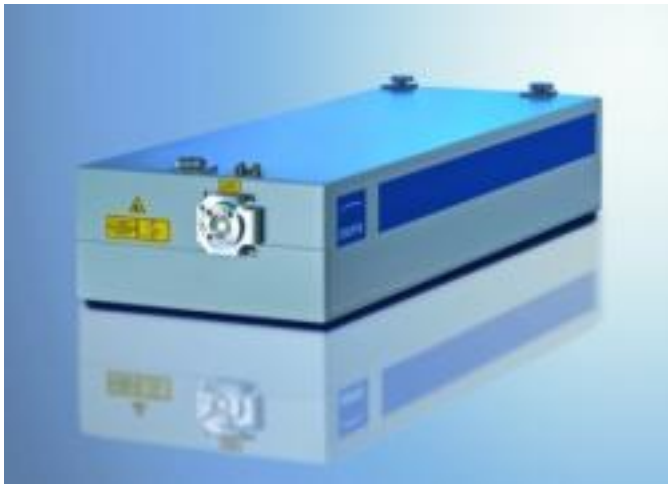


Jenoptik's Lasers & Material Processing division with new products in crystalline photovoltaic at the European industries leading trade fairs PVSEC

Date: 09-06-2010 10:06 AM CET

Category: [Industry, Real Estate & Construction](#)

Press release from: [JENOPTIK I Lasers & Material Processing](#)



The Lasers & Material Processing division of Jenoptik will be from September 6-9, 2010 at the trade fair 25th European Photovoltaic Solar Energy Conference and Exhibition in Valencia, Spain – the European industries leading trade fairs for equipment and technology in the photovoltaic industries. The new products will be present at level 2, hall 4, booth A8.

Expansion of the product range for solar cell processing

The Lasers Business Unit will introduce its new infrared disk laser JenLas® disk IR70. Jenoptik's disk laser product family including the JenLas® disk IR50 is already established in the market. By expanding the product family to higher power, the JenLas® disk IR70 laser meets the requirements of the new technologies in the field of photovoltaics such as metal wrap-through (MWT) and emitter wrap-through (EWT – up to 20,000 holes/second).

The electrical efficiency of the cells can be increased through the use of MWT or EWT technology. In order to increase the active surface area of the cells, in the case of both technologies the contacts are laid from the front to the rear side of the cell. The contact fingers that are currently used as standard and covers parts of the active surface area can therefore be dispensed with. Further applications are long-distance marking of wafers, laser-fired contacts (LFC) as well as laser edge isolation.

The JenLas® disk IR70 allows users to achieve the highest quality at maximum throughput. This feature allows the user to achieve optimal laser parameters because the laser pulse length can be adjusted independently of the repetition rate. The laser covers a wide range of applications in the infrared wavelength range at 1030 nm with pulse energies up to 7 mJ and repetition rates up to 100 kHz. Consequently, the 65-watt system is ideal for the laser drilling of silicon wafers, which then allow the efficient production of back-contact solar cells.

Higher efficiency of crystalline solar cells with the new flexible JENOPTIK-VOTAN™ Solas 1800/3600 laser machine

Driven by falling prices for solar cells modules and competitive pressure, the manufacturers of crystalline solar cells are constantly looking for new methods and cell concepts to cut production costs and improve cell efficiency.

Following this market trend, Jenoptik developed the new JENOPTIK-VOTAN™ Solas 1800/3600 product family, which will

be on display live by the Laser Processing System division at the trade show PVSEC for the first time.

The internal valued-added chain from the laser sources, the laser systems to fully automatic laser production machines and real-life test environments for all processes enable Jenoptik to offer an optimum solution to customers. First reference customers confirm that the new system can have a sustainable effect on cutting production costs and improving the efficiency of the cells.

In the JENOPTIK-VOTAN™ Solas 1800/3600 different processing modules could be integrated to realize all relevant laser processes (metal/emitter wrap through, selective emitter doping, laser ablation of dielectric layer, laser edge isolation, laser-fired contacts and thermal laser separation).

Depending on what the customer needs, a configuration for an R&D system with maximum throughput of 1,000 wafers per production day or a fully automatic production machine with over 3,600 wafers an hour can be chosen. In addition to integration in new factories, JENOPTIK-VOTAN™ Solas 1800/3600 can also upgrade current operational production lines.

The service-friendly wafer transportation concept can be adapted to the different transport solutions installed in production lines. Freely selectable options and the modular design provide utmost flexibility to the customer. With JENOPTIK-VOTAN™ Solas 1800/3600 from Jenoptik, the customer can either cut production costs, increase throughput or improve cell efficiency.

About the Jenoptik Lasers & Material Processing division

In the Lasers & Material Processing division we have control of the entire value-added chain of laser material processing and it is one of the leading providers – from component through to complete system. In the area of laser, Jenoptik has specialized in high-quality semiconductor materials and reliable diode lasers as well as innovative solid-state lasers, for example disk and fiber lasers. In the area of high-power diode lasers Jenoptik is acknowledged worldwide as a leader in quality for high-power diode lasers. In the area of laser processing systems we develop systems that are integrated into production facilities for our customers as part of their process optimization and automation. These systems enable our customers to work with plastics, metals, glass, ceramics, semiconductor materials and solar cells, both in thin-film as well as wafer technology, with maximum efficiency, precision and safety.

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