



SCHILLER AUTOMATION  
GMBH & Co. KG

Pfullinger Strasse 58  
D-72820 Sonnenbühl

Contact: Andrea Hörmann

Tel.: +49 (0)7128 386-160

Fax: +49 (0)7128 386-49160

E-mail: andrea.hoermann@schiller-  
automation.com

[www.schiller-automation.com](http://www.schiller-automation.com)

## Merck and SCHILLER AUTOMATION Unveil Innovative Solar Cell Edge Isolation Concept at PTS 2010 in Stuttgart

- **Etching paste isishape SolarEtch® offers a lower cost per watt alternative for edge isolation of silicon wafers**
- **Schiller and Merck present fully automated *SE lab* line for mass production**

Sonnenbühl / Germany, April 08, 2010 – The partnership announced last September between Merck KGaA and SCHILLER AUTOMATION GmbH & Co. KG has led to a new concept for edge isolation. SCHILLER AUTOMATION will present the prototype for this innovative equipment to the public for the first time at its stand at the Photon Technology Show 2010 being held in Stuttgart from April 27-29. The fully automated process for edge isolation of crystalline silicon wafers uses a product from the etching paste program developed by Merck – isishape SolarEtch® SiD.

The new concept, aimed at reducing per-watt production costs, has been tested in cooperation with various partners from industry and research. Based on the promising results, a prototype (**SE lab**) of the production equipment has been built for a pilot line, which will be presented to industry experts at the trade show.

The process designed by Merck and Schiller offers numerous advantages over traditional edge isolation methods, in particular comprehensive wet chemical isolation and laser isolation. With the newly developed application concept, isishape SolarEtch® SiD can be applied to the back of the wafer quickly and precisely. “We’re delighted that we have been able, in partnership with SCHILLER AUTOMATION, to implement our process for mass



**SCHILLER AUTOMATION  
GMBH & Co. KG**

Pfullinger Strasse 58  
D-72820 Sonnenbühl

Contact: Andrea Hörmann

Tel.: +49 (0)7128 386-160

Fax: +49 (0)7128 386-49160

E-mail: [andrea.hoermann@schiller-automation.com](mailto:andrea.hoermann@schiller-automation.com)

[www.schiller-automation.com](http://www.schiller-automation.com)

production in such a short time. With the **SE lab** pilot line, which will start operating in our applications laboratory in Darmstadt following the trade show, we will now be able to give cell manufacturers the opportunity to test the process and to confirm the advantages of our edge isolation process in a realistic production setting," said Dr. Ingo Köhler, Head of R&D Structuring Solutions at Merck.

During their collaboration in the project, SCHILLER AUTOMATION used its long experience in manufacturing processes to support Merck in developing a stable and reliable process. Top priority was placed on reducing total production costs per watt, i.e. on high productivity and yield.

"Now Merck is able to process customized wafers under mass production conditions. Through the cooperation with Merck, we can offer companies in the photovoltaic industry a lower-cost, future-oriented solution. In the next phase, plans call for the line to be scaled up for volume production with throughput of 3,000 - 4,000 wafers per hour," said Karl-Heinz Bahnmüller, Director of the Customer Center at SCHILLER AUTOMATION.

The equipment's flexible automation makes it easy to customize the machine for integration into the production of individual customers, and in addition to edge isolation, it also features great potential for other innovative cell concepts such as metal wrap through (MWT) cell design.

The SE lab line will be presented at the SCHILLER AUTOMATION exhibition stand (Stand J2) in Hall 4. Experts from Schiller and from Merck (Stand J1, Hall 4) will be available to answer any questions about the equipment or about the edge isolation process.



**SCHILLER AUTOMATION  
GMBH & Co. KG**

Pfullinger Strasse 58  
D-72820 Sonnenbühl

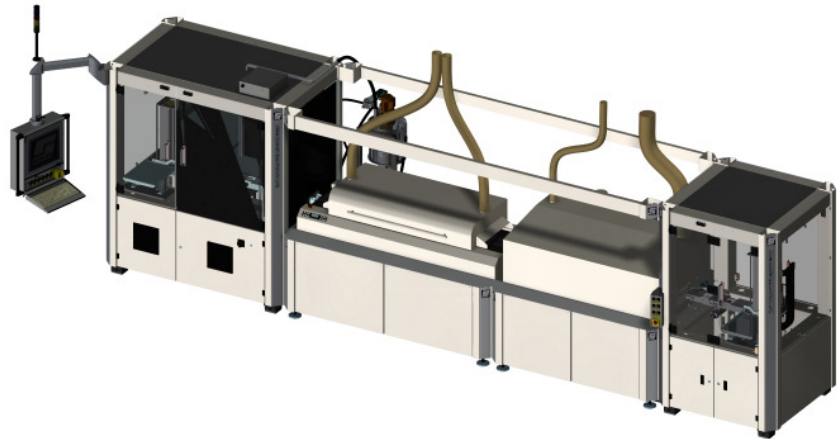
Contact: Andrea Hörmann

Tel.: +49 (0)7128 386-160

Fax: +49 (0)7128 386-49160

E-mail: [andrea.hoermann@schiller-automation.com](mailto:andrea.hoermann@schiller-automation.com)

[www.schiller-automation.com](http://www.schiller-automation.com)



**About Merck KGaA:**

Merck is a global pharmaceutical and chemical company with total revenues of € 7.7 billion in 2009, a history that began in 1668, and a future shaped by approximately 33,000 employees in 61 countries. Merck's success is characterized by innovations from entrepreneurial employees. Merck's operating activities come under the umbrella of Merck KGaA, in which the Merck family holds an approximately 70% interest and shareholders own the remaining approximately 30%. In 1917, the U.S. subsidiary Merck & Co. was expropriated and has been an independent company ever since.

All Merck press releases are distributed via e-mail at the same time they become available on the Merck website: Please go to <http://www.newsabo.merck.de> to register online, change your selection or discontinue this service.

**About Schiller Automation GmbH & Co. KG:**

Schiller Automation was established in 1978 and has since developed into a leading supplier of automation and system solutions, with operations worldwide. Its focal areas are integrated production and handling systems for the complete automation of production systems for the manufacture of thin-film solar cells, the production of crystalline solar cells and of complex microelectronics products and assemblies.

With the expertise that it has acquired over the years and a reliable eye for the feasible, Schiller Automation attaches great importance to an integrated approach to each task: The company accompanies clients from the idea, project planning, selection of efficient technologies and process equipment to the constructional design, production and industry-compatible solution. Its headquarters are in Sonnenbühl on the Swabian Alb; service subsidiaries are located in Bitterfeld-Wolfen (Saxony-Anhalt) and Suzhou (China).