Product Information 2012-09-27

LTM-PERC: SCHMID's Extremely Fast Laser Treatment with Breakage-Free Automation for PERC Cell Production

- Increased throughput of 30-100% compared to similar products
- Uninterrupted laser activity for the highest duty cycle
- High precision and accurate automation
- Lowest cost per wafer in the market
- Available in Q1/2013

SCHMID consistently promotes the industrial use of the SCHOTT Solar licensed PERC processes, which is backed up by the continuous increase in efficiency from the record level of 20.2% in summer 2012 to the current 20.74%.
A further process building block after the successful backside passivation using the APCVD is the opening of the passivation layer at the highest speed by SCHMID's Laser Treatment Machine for PERC (LTM-PERC).

SCHMID has designed the LTM-PERC with particular strong focus on cost effectiveness and yield. Dr. Jens Tobai, the product manager for laser technology, describes the principles of the development phase: "We know the cost structure of the manufacturers. We have, therefore, adapted the machine to consistently reach higher throughputs and accurate automation. With our measures we have been able to increase the throughput compared to standard systems by at least 30% and reduce the breakage rate to zero. We are also familiar with the structure of the newest high efficiency cells in detail, as we develop them ourselves in our own research centers. Through the intelligent use of our machine we are able to increase the throughput with particular cells by 100%."
The basic components of the machine are the picosecond laser from Lumera and a high precision automation belt. Neither are ever standing still which accounts for the high duty cycle of the laser and the high throughput. Supplying the machine with a customer specific laser is possible without any difficulty.
A precise camera system takes care of determining the exact position of a cell. The continuous movement of the cells takes place smoothly and using a gripper system is

completely avoided. Through these components error-free processing as well as error-free transport is guaranteed and high yields are achieved.
Maintenance work hardly reduces the high uptime of the machine, as robust components are exclusively used.

Changes to the process parameters are flexibly configurable. So the necessary settings are carried out by the user through the user friendly graphical interface. All the process residues of the laser work are effectively removed through an air knife and an exhaust system.

SCHMID's Laser Treatment for PERC is available from Q1/2013.

Characters (including spaces): 2580

Press Contact
SCHMID Group | Gebr. SCHMID GmbH

Christoph Kübler

Robert-Bosch-Str. 32-36
72250 Freudenstadt
Germany

Tel.: +49 7441 538-0
www.schmid-group.com
press@schmid-group.com
Follow us on twitter

产品信息 2012-09-27

SCHMID 的智能激光技术自动化使 PERC 电池生产提高了产量和产率

- 与同类产品相比，增加了 30-100%的产量
- 给最高负载率提供不间断激光作业
- 高精确度的自动化
- 在硅片市场中成本最低
- 在 2013 年第一季度可实现

SCHMID 一直促进肖特太阳能合格的 PERC 工艺的工业使用，其中突出的，通过效率的不断增加，在 2012 年夏季的 20.2%到目前的 20.74%的创纪录水平。

在使用 APCVD 成功背面钝化后的进一步进程构件，是依靠 SCHMID 的激光治疗仪以最高速度为 PERC（LTM-PERC）开启钝化层。

SCHMID 极其注重成本效益和产量来设计 LTM-PERC 的发展。Jens Tobai 博士，激光技术的产品经理，这样描述发展阶段的基础：“我们知道制造商的成本结构，因此，我们已经改装了机器使其一直达到更高的产量和准确的自动化。随着我们的安排，跟标准系统相比，我们已经能够增加至少 30%的产量，而且破损率降低为零。我们对最新的高效率电池结构的详细情况也很熟悉，因为我们在自己的研究中心研发他们。通过智能应用我们的机器，我们能够增加与特定电池 100%的产量。

机器的基本组成部分是从 Lumera 和高精密自动化频带的皮秒激光。无论是以往任何时候都保持不变，高负载率的激光和高产量。能够提供客户特定的激光机，是没有任何困难的。

一个精确的摄像系统负责确定一个电池的确切位置。电池顺利进行连续移动和使用夹持系统是完全可以避免的。无差错的工作，以及通过这些组件，保证无差错传输，实现高收益。

维护工作难以降低机器的高正常运行时间，因为强大的组件是专门应用。

变化的程序参数能够灵活配置。因此，由用户通过用户友好的图形界面进行必要的设置。通过气刀和排气系统除去激光工作所有程序残留的余渣。

SCHMID 激光治疗仪在 2013 年第一季度即可实现。

字符（包括空格）：2614

Press Contact
SCHMID Group | Gebr. SCHMID GmbH

Christoph Kübler

Robert-Bosch-Str. 32-36
72250 Freudenstadt
Germany

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