

RAYLASE presents itself at the leading photonics trade fair in Shanghai

Laser components "made in Germany" increase efficiency in e-mobility.

From 17 to 19 March, LASER World of PHOTONICS CHINA will open its doors once again. It is Asia's leading trade fair for photonics and optical technologies and at the same time the world's leading trade fair for the entire photonics product spectrum. RAYLASE GmbH, an innovative supplier of laser deflection units, control electronics and the associated laser process software for industrial production, will be showing a range of new products this year at Stand 2305 in Hall W2, particularly for the e-mobility market.

Above all, the AXIALSCAN-FIBER series with the RAYSPECTOR are helping e-mobility on its advance. For Asian integrator, machine builders, the RAYLASE laser components offer the opportunity to make their battery cell production even more efficient. The focus here is on the difficult process of welding, such as tab welding and cell connector welding, in which the poles of the battery cells are connected by means of a laser beam, thus enabling series connection. Or the laser welding of aluminium components on battery packs. Because from cell production to the assembled, ready-to-install battery pack, there are an enormous number of individual production steps in e-mobility, each of which influences the overall productivity and the output of finished units.

The RAYSPECTOR optimally complements the AS FIBER as an opto-mechanical platform for crucial process monitoring. It offers two parallel optical paths for camera and welding sensor technology. The camera, which is tracked highly dynamically in the focus, is used here for production set-up and monitoring. Other welding monitoring systems can also be connected to the second sensor path. In combination, the two products prove to be an unbeatably efficient unit for these important process steps in e-mobility.

Another new addition to the Bavarian company's portfolio is the RAYGUIDE software power package. Together with the powerful SP-ICE-3 control electronics, it offers high functionality for solar applications and perfect solutions for the process of welding in battery production and fuel cell manufacturing. The software is also used in numerous other applications, such as marking, perforating, surface and MOTF processing. RAYGUIDE also optimises the laser cutting of electrode foils and current conductor lugs in battery production.

The Bavarian parent company has been represented by its own subsidiary RAYLASE China in Shenzhen since 2007. Production for the Asian market has been taking place there for over 10 years. The analogue MINISCAN II series with the RL-III and RS-III series, which are also analogue, are often in demand, also thanks to the good price-performance ratio, which can compete with Chinese manufacturers. Those who like it more sophisticated, however, opt for the new digital MINISCAN III, which offers even more precision and stability in the laser process.

However, the specialist public for electric mobility applications will also find what they are looking for in RAYLASE's standard digital range. For example, the SUPERSCAN IV product series with different mirror apertures also offers many possibilities for e-mobility. The 30mm aperture is often used with an F-Theta lens and camera adapter as a high-power welding module. The special advantage here is the high-power compatibility up to 8kW for infrared wavelength and the additional possible wavelengths in green and blue. The series is characterised by high dynamics and very high speeds with precise beam guidance.

In summary: RAYLASE's digital opto-mechanical laser deflection units significantly optimise and improve numerous laser processes. They can be easily integrated into machine builders' production lines and allow

easier scaling at high production speeds and outstanding precision. As a result, they lead to greater output in less time and reduce costs in many currently relevant production steps in the e-mobility, solar and additive manufacturing sectors.



The AXIALSCAN-FIBER with the connected RAYSPECTOR monitoring unit.

About RAYLASE

RAYLASE GmbH is a highly innovative, international laser company based in Wessling near Munich. Founded in 1999, the Bavarian company offers high-precision opto-mechanical components, control cards and software for the rapid deflection and modulation of laser beams for laser material processing in industrial manufacturing. With over 130 employees worldwide, the RAYLASE Group stands for innovative technology of the highest quality. Since 2007, the company has a subsidiary and its own production facility in Shenzhen, China, as well as several international representatives in the US, Italy, Japan, Korea, and Taiwan.

The laser deflection units comprise opto-mechanical scanners and digital control electronics with an intuitive software interface. These form the core of industrial laser systems and enable more flexible, economical, and precise processing of a wide variety of materials such as metal, plastic, paper, textiles and many more. Opto-mechanical deflection units also offer excellent image processing for better calibration, simple automation, and exact monitoring of a range of laser processes.

Customers come from the electronic, automotive, photovoltaic, textile and packaging industries. RAYLASE's current focus markets are electromobility, for example, in battery production, solar wafer production for photovoltaics in the solar industry and additive manufacturing. RAYLASE supports its customers primarily in four core applications: laser cutting, laser welding, laser surface processing and selective laser sintering or welding for additive manufacturing. In each of these areas, the company drives digital innovations by combining these with established technologies.

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