

RAYLASE introduces innovative scanning solutions for demanding laser production

At LASER World of Photonics 2023, RAYLASE presented its latest solutions for laser-based production lines

Wessling, Germany – August 1st, 2023 - RAYLASE, a renowned leader in laser technology with over 20 years of experience, took the opportunity of the world's leading photonics trade fair in Munich to showcase its latest laser deflection units. As a trusted partner in dynamic and demanding markets such as additive manufacturing, solar and PV production, and laser welding, RAYLASE works with customers and partners to achieve common goals.

For these very markets, RAYLASE introduced new approaches: The AXIALSCAN-FIBER-30-RD and BUSBAR WELDING MODULE for challenging welding applications in e-mobility, the AM-MODULE III for industrial additive production and the SUPERSCAN IV 20 SOLAR for efficient laser processing of M12 solar wafers.

Here, RAYLASE always offers complete solutions for dynamic positioning, which as a matching entity enable higher performance, lower failure rates and more efficient production. In this way, the company ensures that customers can fully exploit the potential of their laser scanning solutions.

At LASER World of PHOTONICS, visitors had the opportunity to experience our latest products and talk to our industry experts. There was a lot of encouragement and compliments here for the consistent focus on the specific customer challenges.

Whether high-speed and high-precision laser beam positioning for 3D printing, reliable and scalable laser processing for solar cells and modules or laser welding for automotive and e-mobility components - RAYLASE offers the right solution for many operators to establish or optimize laser-based production.

AM MODULE III – Get Ready for AM Production

Designed to meet the demanding requirements of additive manufacturing production, the new AM MODULE III combines the expertise from RAYLASE's AXIALSCAN FIBER series and AM MODULE NEXT GEN. Key features include superior productivity with in-Focus Zoom and multi scan head design, reduced spot variations, and compatibility for beam shaping and high laser powers.

SUPERSCAN IV 20 Solar – Laser Processing for Large M12 Wafers

Addressing the limitations of laser scanning systems in solar wafer production, the SUPERSCAN IV 20 Solar enables efficient processing of larger M12-size wafers. It offers a suitable field size, maintains spot size consistency, and provides high scanning speed, enhancing production throughput.

AXIALSCAN Fiber 20/30 RD – High Productivity for Battery & Fuel Cell Production

Developed for laser welding and cutting applications, the AXIALSCAN FIBER 30 RD uses the RAYVOLUTION DRIVE technology, enabling precise focus control and expanding processing speeds also in large field sizes. Its dust-proof housing and cleanroom production facilities make it suitable for high-power applications.

RAYGUIDE MATCH – Quality Assurance for Laser Applications with Automatic Laser Path Alignment

RAYGUIDE MATCH, a new feature of the RAYGUIDE software, revolutionizes laser application quality assurance. By automatically detecting representative marks on workpieces and adjusting scan patterns accordingly, RAYGUIDE MATCH streamlines production processes and ensures precision with component positioning tolerances.

SCAN FIELD CALIBRATOR 600 – Precise and Reproducible Laser Production

The SCAN FIELD CALIBRATOR 600 simplifies and accelerates the calibration process for laser systems. Offering fast and accurate calibration in multiple directions, it significantly reduces the time and effort required for maintaining a stable and reliable process.

BUSBAR WELDING MODULE - Optimized solution for precise laser welding of busbars

The BUSBAR WELDING MODULE is an application-specific system solution and combines the AXIALSCAN-FIBER-30-RD with RAYGUIDE MATCH and our new, self-developed RAYLASE DISTANCE MEASUREMENT SENSOR. In this combination, the BUSBAR WELDING MODULE enables automatic welding of busbars, as it independently detects the position and distance of the respective battery cells. This allows the laser process to be continuously adjusted and the narrow process window to be reliably maintained.

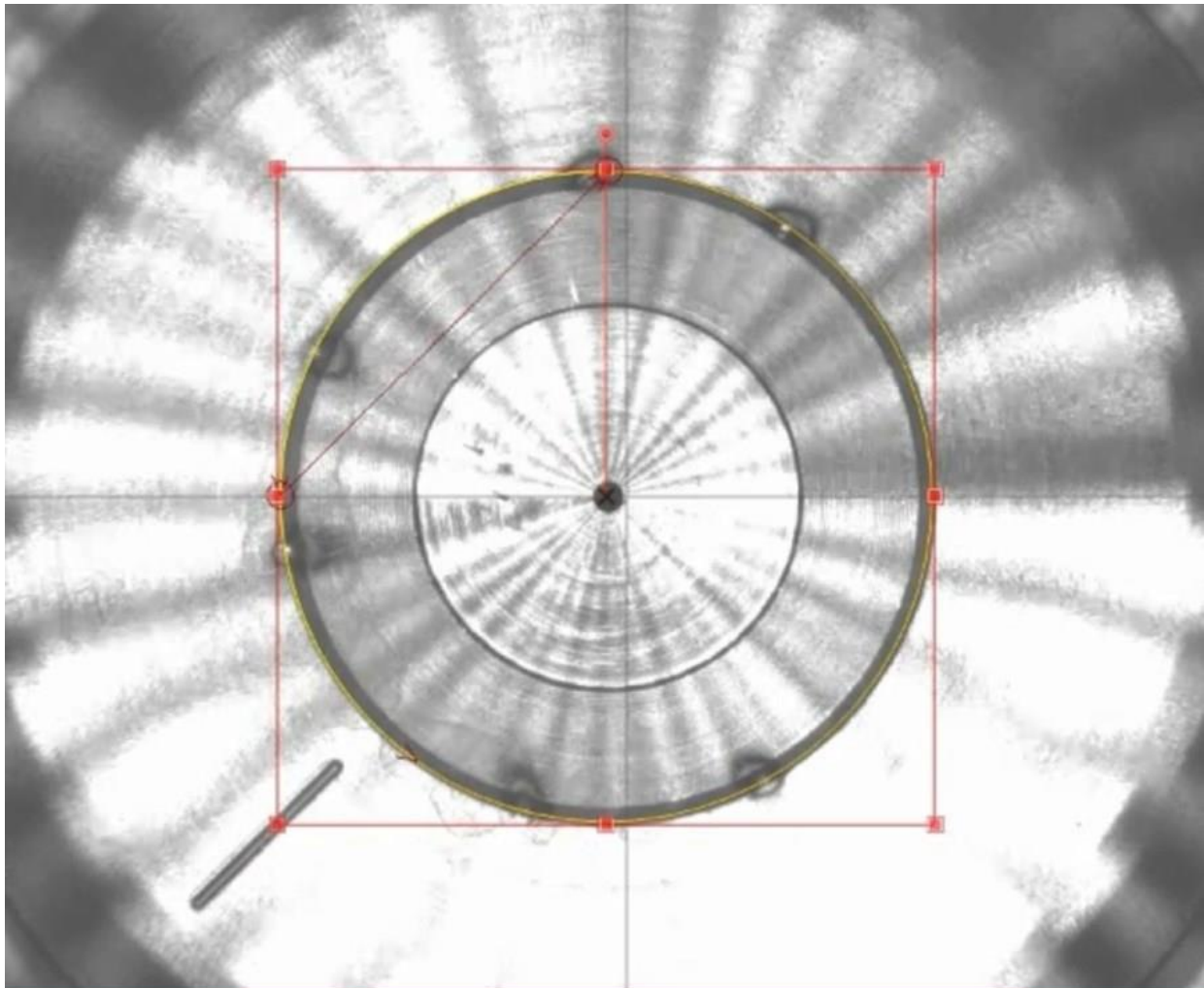
About RAYLASE

RAYLASE GmbH is the solution provider for laser applications in industrial environment. Since 1999, the Bavarian company from Wessling near Munich, provides innovative laser deflection systems for precise and efficient laser material processing. By combining opto-mechanical scanners with sensor technology and intuitive software, it enables optimized laser systems that are made for industrial production.

RAYLASE has its focus in the e-mobility and AM market as well as in the solar and electronic sector. With its subsidiary and its own additional production facility in Shenzhen, China, it offers a high production depth and optimized delivery times. Together with several international representatives in the US, Italy, Japan, Korea, and Taiwan, the RAYLASE group with its 170 employees supports customers worldwide with industrial solutions for laser cutting, laser welding and laser surface processing.



The AXIALSCAN-FIBER-30 RD is our latest scanning solution for demanding laser welding applications. With its new fast and precise z-axis, the RAYVOLUTION DRIVE, the AXIALSCAN-FIBER-30 offers the same dynamics in the z-direction as in the xy-plane. This eliminates dynamic defocusing and keeps the laser focus in the correct z-plane even at the highest welding speeds.



RAYGUIDE MATCH

The new position recognition plug-in MATCH of the RAYGUIDE software acquires and analyses images of representative markings of the workpiece. Based on this information, MATCH then adapts the laser process automatically.



Our new AM MODULE III is the next evolutionary step for the additive manufacturing market. With its consistent focus on industrial manufacturing, it enables our customers to achieve high productivity, both in terms of exposure time and overall system availability. With the AM MODULE III, the step from rapid prototyping to additive manufacturing is now possible!



The SUPERSCAN IV 20 SOLAR is our innovative scanning solution for economical wafer production. In combination with suitable optics, the beam deflection unit can process large field sizes of up to 210 x 210 mm² while ensuring the required spot size and scanning speed for M12 wafer production.