

Lumcore relies on AIXTRON systems for high-power lasers

Order for MOCVD systems for the production of GaAs- and InP-based epi-wafers / High product yield / Low production costs

Herzogenrath/Germany, November 19, 2020 – Lumcore Optoelectronics Technology relies on the MOCVD system [AIX 2800G4-TM](#) of AIXTRON SE (FWB: AIXA), a worldwide leading provider of deposition equipment to the semiconductor industry, to decisively advance its corporate development. "We at Lumcore are now taking the next important strategic step in the company's development to provide excellent products to our customers worldwide. To do so, we need reliable partners with excellent technology at our side," says Mr. Xu Tianyou, Chairman of Lumcore, the Chinese specialist for high-power lasers based on semiconductor compounds.

"AIXTRON's core technology is epitaxy equipment for the growth of high-end compound semiconductor materials and is widely appreciated by industry experts and technical specialists worldwide. According to our assessment, AIXTRON's product is the worldwide leading equipment in the production of high-end semiconductor laser epitaxial materials. With highly competitive high-power lasers, we can make a significant contribution to supporting China's development," he adds.

Best homogeneity in crystal growth

With AIX 2800G4-TM, Lumcore has selected AIXTRON systems, which are specifically designed for the production of gallium-arsenide and indium-phosphide semiconductor crystal structures. These two semiconductor compounds GaAs and InP are particularly suitable for optoelectronic components such as high-power laser diodes. Diode lasers are used for material processing, welding, cutting and for additive manufacturing of various materials, but also for optical communication via fiber optics, or for 3D sensor technology such as face recognition in smartphones or for fast and precise spatial detection of the environment in autonomous vehicles.

For the production of these special epi-wafers, the necessary chemicals are radially injected into the reactor chamber of AIXTRON Planetary® systems by means of a carrier gas in a special process, which enables the desired uniformity in crystal growth and the required high chemical efficiency. Furthermore, the yield, i.e. the number of usable components per wafer, is optimal in the AIXTRON system, enabling Lumcore to achieve high productivity at low operating costs, which in turn benefits Lumcore's market position.

For further information please contact

Corporate Communications
AIXTRON SE, Dornkaulstr. 2, 52134 Herzogenrath, Germany
PHONE +49 (2407) 9030-444 **FAX** +49 (2407) 9030-445
E-MAIL info@aixtron.com **WEB** www.aixtron.com

Epi-wafers for future technologies

Last but not least, AIX 2800G4-TM systems feature a graphite process chamber and automated satellite loading at high temperatures, which ensures very high throughput and extremely low particle count. The high flexibility also enables Lumcore to produce epi-wafers from 2 to 8 inches, depending on the requirements.

Dr. Felix Grawert, President of AIXTRON SE, comments: "With our Planetary Reactor Technology® we offer a convincing solution even for very demanding high volume production. Its hallmarks are high productivity and performance gains at low cost of ownership. With epi-wafers grown on our systems, our customers are well prepared for the growing but increasingly competitive market for high-power laser applications in areas such as consumer electronics, automotive and communications".

To download photos please click [here](#).

Contact person

Guido Pickert
VP Investor Relations & Corporate Communications
PHONE +49 (2407) 9030-444
MAIL g.pickert@aixtron.com

About AIXTRON

AIXTRON SE is a leading provider of deposition equipment to the semiconductor industry. The Company was founded in 1983 and is headquartered in Herzogenrath (near Aachen), Germany, with subsidiaries and sales offices in Asia, United States and in Europe. AIXTRON's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and opto-electronic applications based on compound or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include LED applications, display technologies, data storage, data transmission, energy management and conversion, communication, signaling and lighting as well as a range of other leading-edge technologies.

Our registered Trademarks: AIXACT®, AIXTRON®, Atomic Level SolutionS®, Close Coupled Showerhead®, CRIUS®, Gas Foil Rotation®, OVPD®, Planetary Reactor®, PVPD®, TriJet®

For further information on AIXTRON (FWB: AIXA) please visit our website at www.aixtron.com/en.

For further information on Lumcore please visit the company website at www.lumcore.com.

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