PRESS RELEASE

AIXTRON
Our technology. Your future.

Plessey chooses AIX G5+ C MOCVD tool for GaN-on-Silicon monolithic microLEDs display innovation

Herzogenrath/Germany, September 19, 2018 – AIXTRON SE (FSE: AIXA), a worldwide leading provider of deposition equipment to the semiconductor industry, has received an order from Plessey Semiconductors for the company's AIX G5+ C Planetary Reactor®. The metal organic chemical vapor deposition (MOCVD) system will boost Plessey's manufacturing capability of gallium nitride on silicon (GaN-on-Si) wafers targeting next-generation microLED applications.

With an automatic cassette-to-cassette (C2C) wafer transfer module, the new AIXTRON reactor will be installed and operational during Q1 of 2019 at Plessey's 270,000 square feet fabrication facility located in Plymouth, UK. The AIX G5+ C MOCVD system has two separate chamber set-up options, which enables configurations of 8x6 inch or 5x8 inch GaN-on-Si wafers to be automatically loaded and removed from the system in an enclosed cassette environment. The system will be an addition to the company's existing metal organic chemical vapor deposition (MOCVD) reactors, also supplied by AIXTRON, which provide configurations of 7x6 inch or 3x8 inch with manual loading.

Productivity is further enhanced by the new reactor's automated self-cleaning technology, which helps to deliver a very low level of wafer defects by ensuring the reactor is clean on every run, significantly reducing downtime for maintenance. The new equipment also provides faster ramp and cool down along with a high susceptor unload temperature to reduce the recipe time.

The AIX G5+ C reactor will support Plessey's extensive production roadmap to increase R&D capacity of its monolithic microLEDs based on its proprietary GaN-on-Si technology. Plessey's microLEDs offer extremely low power consumption, high brightness and very high pixel density to create the potential for disruption in many existing application areas that use conventional display technologies such as LCD and OLED.

Plessey's mission is to become the world's leading company developing innovative illuminators for display engines and full-field emissive microLED displays. The complex devices combine very high-density RGB pixel arrays with high-performance CMOS backplanes to produce very high-brightness, low-power, and high-frame-rate image sources for head-mounted displays, and wearable electronics devices for augmented reality and virtual reality systems.

Mike Snaith, Chief Operating Officer at Plessey, explained: "Our continued and valuable relationship with AIXTRON allows Plessey to rapidly bring to market its monolithic microLEDs. To help us achieve this, our latest acquisition of AIXTRON's AIX G5+ C planetary system combines outstanding on-wafer uniformity and run-to-run performance at the lowest cost of ownership – aspects that are critical for efficient high-volume GaN-on-Si microLED displays."

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

Dr. Frank Schulte, Vice President of AIXTRON Europe, said: “We are confident that the AIX G5+ C will support Plessey’s requirements in the best way possible to address the most stringent requirements for microLED production. While offering more productive configurations, the tool meets the toughest requirements from the silicon industry in terms of uniformity and particles.”

Addressing all of the challenges involved in manufacturing microLEDs, including high-volume and cost-effective production capability, Plessey is actively engaging with potential customers to use its cutting-edge production-ready microLED technology platform.

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 Laser and LED applications, display technologies, data transmission, SiC and GaN power management and conversion, communication, signaling and lighting as well as a range of other leading-edge technologies.

For further information on AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6) please visit our website at: www.aixtron.com.

About Plessey
Plessey is a UK-based leading developer of advanced optoelectronic technology solutions. The company provides volume processing of its unique and proprietary GaN-on-Silicon platform for a wide range of optoelectronic devices and systems.

With headquarters located in Plymouth, England, Plessey operates leading-edge 150mm and 200mm wafer processing facilities to undertake design, test and assembly of products, and a comprehensive suite of photonic characterisation and applications laboratories.

Plessey is an award-winning provider of innovative illuminators for display engines (DMD and LCOS) and full-field emissive microLED displays that combine very high-density RGB pixel arrays with high-performance CMOS backplanes to produce very high-brightness, low-power and high-frame-rate image sources for head-mounted displays (HMDs), and augmented reality (AR) and virtual reality (VR) systems.

For further information and datasheets, please visit www.plesseysemiconductors.com or email sales@plesseysemi.com. You can also follow Plessey on Twitter, Facebook and LinkedIn.

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

PRESS RELEASE

AIXTRON
Our technology. Your future.

Contact for editorial information
Nayl D'Souza, Account Director, Publitek
Tel: +44 (0)20 3813 6423
Email: nayl.dsouza@publitek.com

Contact for Plessey company information
Sam Langridge, Marketing Manager, Plessey
Email: sam.langridge@plesseysemi.com

Contact for AIXTRON company information
Henning Marburger, Senior PR Manager, AIXTRON SE
Email: h.marburger@aixtron.com

Forward-Looking Statements
This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON. These statements may be identified by words such as "may", "will", "expect", "anticipate", "contemplate", "intend", "plan", "believe", "continue" and "estimate" and variations of such words or similar expressions. These forward-looking statements are based on our current assessments, expectations and assumptions, of which many are beyond control of AIXTRON, and are subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Should these risks or uncertainties materialize, or should underlying expectations not occur or assumptions prove incorrect, actual results, performance or achievements of AIXTRON may materially vary from those described explicitly or implicitly in the relevant forward-looking statement. This could result from a variety of factors, such as actual customer orders received by AIXTRON, the level of demand for deposition technology in the market, the timing of final acceptance of products by customers, the condition of financial markets and access to financing for AIXTRON, general conditions in the market for deposition plants and macroeconomic conditions, cancellations, rescheduling or delays in product shipments, production capacity constraints, extended sales and qualification cycles, difficulties in the production process, the general development in the semi-conductor industry, increased competition, fluctuations in exchange rates, availability of public funding, fluctuations and/or changes in interest rates, delays in developing and marketing new products, a deterioration of the general economic situation and any other factors discussed in any reports or other announcements , in particular in the chapter Risks in the Annual Report, filed by AIXTRON. Any forward-looking statements contained in this document are based on current expectations and projections of the executive board based on information available the date hereof. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law.

This document is an English language translation of a document in German language. In case of discrepancies, the German language document shall prevail and shall be the valid version.