GaN-on-Si expert ALLOS Semiconductors sold its high power electronics and RF business to AZUR SPACE

Heilbronn and Dresden, Germany – 8th July 2020 – The leading provider of III-V epitaxy for solar cells AZUR SPACE and GaN-on-Si epiwafer expert ALLOS Semiconductors have announced that AZUR SPACE has acquired the electronics business of ALLOS Semiconductors. AZUR SPACE will use the acquired technology to expand its III-V epi business into the booming market for GaN-on-Si high power electronics and RF epiwafers. ALLOS Semiconductors will continue its optoelectronics business with the focus on the emerging micro LED display market.

AZUR SPACE’s entry into the business of supplying III-V-epiwaferes to the high power electronics (HPE) market follows several years of working in stealth mode with careful preparation and investments. Beyond the supply of GaN-on-Si epiwafers, the company is also engaged in the field of GaAs for the HPE market. According to the CEO of AZUR SPACE, Juergen Heizmann, this extension is natural: “We are the leading provider of high efficiency multijunction space solar cells based on III-V epitaxy with a capacity of 500 000 wafers/year and with multiple MOCVD reactors running 24/7. Our skills and know-how are a perfect match to the requirements of the quickly emerging III-V HPE epiwafer market.”

Figure 1: 200 mm GaN-on-Si epiwafer example for HPE application to be supplied by AZUR SPACE based on ALLOS’ technology.
With investments of more than 10 million Euro, AZUR SPACE underlines the seriousness of its ambition to grow HPE into a second business line leveraging the company’s III-V manufacturing expertise and facilities. A driving force behind the decision of AZUR SPACE to enter the HPE epiwafer market is the strongly growing demand for energy efficient power systems in electric or hybrid vehicles, all kinds of charging solutions, renewable energies, server farms, electric motors and many other HPE applications. “With ever increasing electrification and novel applications, the HPE market continues to grow – and the climate challenge is increasing the need for energy efficiency” adds Mr. Heizmann while continuing “With the two inherently high-efficient III-V technologies GaAs and GaN-on-Si, AZUR is addressing the huge demand to contribute to the energy revolution, replacing less efficient technologies and at the same time participating in this booming market.”

Since its formation, ALLOS Semiconductors had developed its GaN-on-Si epiwafer technology for both high power electronics and micro LED applications. “We attained leading positions in two very attractive markets. However, customers’ required technologies and business models are different in both markets” says Burkhard Slischka, co-founder and CEO of ALLOS Semiconductors and adds “Due to its skills and resources AZUR SPACE is the right company to bring the technology into mass production and to serve a global customer base. Thanks to the booming demand for GaN-on-Si HPE epiwafers, the timing is right as well and through the deal, we will participate in the long-term market success.”

With the transaction ALLOS Semiconductors has ceased to service the markets of high power electronics and RF but retains the technology and rights for the optoelectronics market. In the latter ALLOS Semiconductors sees its 200 and 300 mm epiwafer technology as being crucial in meeting the uniformity, crystal quality and manufacturability requirements of the novel micro LED display applications. “We can now fully focus on the rapidly evolving micro LED market where our technology provides huge yield and cost advantages throughout the entire value chain and where we have direct access to the companies driving the development” completes Mr. Slischka the rational of the deal.

AZUR SPACE and ALLOS Semiconductors will complete the transfer of the HPE and RF business and technology by the end of September 2020. Ahead of the start of manufacturing, AZUR SPACE is already open to customer enquiries.

About AZUR SPACE
AZUR SPACE is the global leader in the development and production of multi-junction solar cells for space and terrestrial concentrated photovoltaic applications. Based on more than 55 years’ experience in space solar cells and more than 25 years in III-V epitaxial technology with development and high volume production, AZUR SPACE is now supplying GaAs and GaN-on-Si structures for the high power electronics market as well.
About ALLOS Semiconductors
After selling its electronics business to AZUR SPACE, ALLOS is focusing purely on its GaN-on-Si micro LED epiwafer technology for up to 300 mm. ALLOS continues to make its technology available to its customers through IP licensing and transferring the technology to its customers’ MOCVD reactors. Additionally ALLOS is working with partners to continue to advance the technologies needed for micro LED mass production.

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