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Kyma Aluminum Nitride Templates Offer Device Wafer Fabrication Cost and Throughput Advantages

Raleigh, NC / May 1, 2008 – Kyma Technologies, Inc., a leading supplier of ultra-high purity crystalline gallium nitride (GaN) and aluminum nitride (AlN) materials and related products and services, has been supplying AlN and GaN templates to the nitride semiconductor device community for the past two years. Today the company announced that analysis of new data from multiple partners clearly shows that Kyma's AlN and GaN template products offer significant cost reduction and throughput enhancement opportunities for high volume epiwafers and device manufacturers.

"When our customers begin with a Kyma template instead of a bare foreign substrate such as sapphire or silicon carbide, they are able to achieve their target epiwafer specifications more rapidly and at a lower cost," commented Dr. Ed Preble, Kyma's Chief Operating Officer, who added, "The faster cycle time for device epitaxy translates directly to increased epiwafer fabrication capacity, representing a double win for our customers."

Kyma's AlN and GaN templates are fabricated using processes that are significantly less costly than MOCVD or MBE growth, which allows their customers to focus application of their expensive molecular beam epitaxy (MBE) and metalorganic vapor phase epitaxy (MOVPE) tools more closely on the device active region. The processes Kyma uses for manufacturing its GaN and AlN templates use less expensive starting materials, less expensive equipment, and faster growth rates than MBE and MOVPE.

"We are working with device and equipment partners to quantify the cost and throughput benefits. While each epiwafer fabrication scenario is different, it is clear that LED wafer fabrication cost savings up to 40% and throughput advantages up to 50% are possible, and the benefits are at least double-digit percentages for most high volume scenarios," said Dr. Keith Evans, Kyma's president and CEO.

Kyma's template related product offering includes materials, processes, and equipment. "We have some customers who are interested in our materials only, while other customers view our materials as a qualification step towards eventually bringing the template manufacturing equipment and processes in-house," added Dr. Evans.

Dr. Evans will give a presentation on the cost and throughput benefits of Kyma's AlN and GaN templates for high volume LED wafer manufacturing at Blue 2008, which will be held May 6-7 in Taiwan at the Ambassador Hotel - Hsinchu.

The manufacturing processes used by the company for template products benefit from intellectual property (IP) exclusively licensed from North Carolina State University, as well as additional patent-pending IP developed at Kyma.

About Kyma Technologies

Kyma was launched in 1998 as a spin out of North Carolina State University's Materials Science and Engineering Department to pursue the development of gallium nitride (GaN) and aluminum nitride (AlN) substrates for a broad range of high performance nitride semiconductor device applications.

Kyma's diversified product offering includes: ultra-low defect density native (free-standing) GaN in customer-defined orientation including polar (c-plane Ga-face or N-face) and non-polar (a-plane and m-plane), GaN and AlN templates grown on sapphire and other substrates, and ultra-high purity polycrystalline GaN.

The market for nitride semiconductor devices is expected to surpass \$9B by 2010. The combined addressable market for GaN and AlN substrates is expected to surpass \$500M by 2010.

For more information about Kyma Technologies, visit www.kymatech.com, e-mail info@kymatech.com, or call the company directly at 919.789.8880.

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