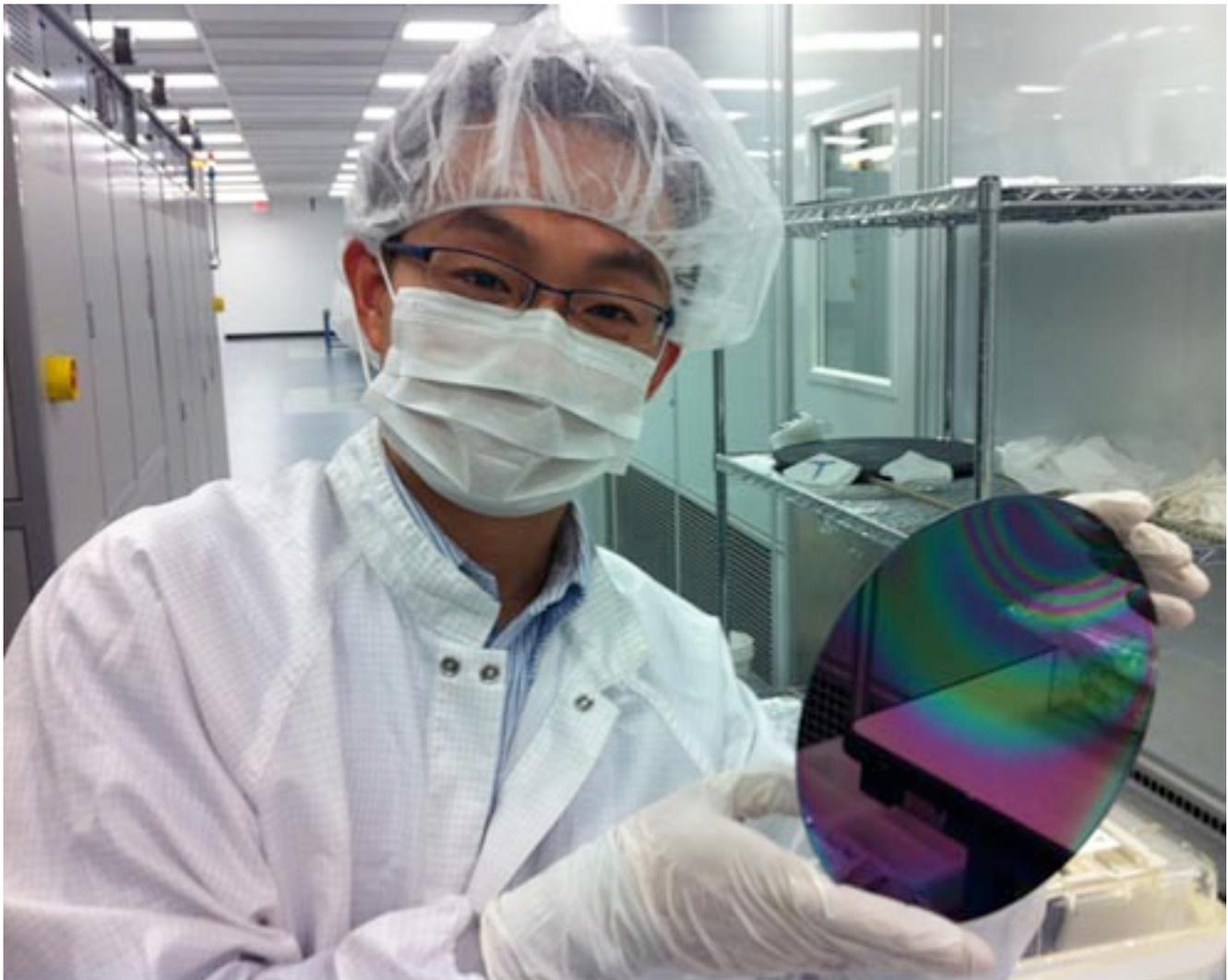


Company achieves 135 lumens per watt with Silicon-based LED

Bridgelux Inc. announced today that it has achieved a major breakthrough with the demonstration of 135 Lumens per Watt GaN-on-Silicon based LED Technology. This represents the industry's first commercial grade performance for a Silicon-based LED.

When grown at scale, most LED epitaxial wafers use sapphire or silicon carbide substrates as the starting material. But large diameter sapphire and silicon carbide substrates are costly, difficult to process, and not widely available. As a result, production costs have inhibited the widespread adoption of LED lighting in homes and commercial buildings. But growing GaN on larger, low-cost silicon wafers that are compatible with modern semiconductor manufacturing can deliver a 75% improvement in cost over current approaches.



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The 135 Lumen per Watt performance was achieved at a CCT of 4730K using a single 1.5mm power LED operated at 350mA. These LEDs have extremely low operating voltages, requiring just 2.90V at 350mA and <3.25V at 1 Amp. The low forward voltage and excellent thermal resistance of the devices make them ideally suited for high-performance, illumination-grade applications. Optimization of the epitaxy process on 8-inch Si wafers will make LED manufacturing compatible with existing automated semiconductor lines.

The move to a Silicon substrate will be a revolutionary step for the LED industry, and Bridgelux is well- positioned to take full advantage of the introduction of this technology. Over the past 5 years, Dr. Steve Lester, one of the industry's pioneers in LED Research and Development, has fostered a world-class team of Bridgelux materials scientists and chip design engineers dedicated to GaN-on-Silicon R&D. Concurrently, industry-wide research and development of GaN growth on Silicon has increased rapidly. And as a result, the GaN on Silicon performance levels reported by Bridgelux today are comparable to state-of-the-art sapphire-based LEDs available 12-24 months ago. The company anticipates the delivery of its first commercially available GaN-on-Silicon products over the course of the next two to three years.

Bridgelux, which maintains an asset-light operating model, will leverage its strong R&D and Intellectual Property position in LED epitaxy to jointly manufacture silicon based LEDs. The company is currently in discussions with a number of established semiconductor companies regarding the utilization of the many fully depreciated 8-inch semiconductor fabrication operations available around the globe.

"Bridgelux's achievement is a significant reflection of the strength of our leadership in Silicon materials and epitaxial process technology, said Bill Watkins, Bridgelux CEO. "The significantly reduced cost-structures enabled by Silicon-based LED technology will continue to deliver dramatic reductions in the up-front capital investment required for solid state lighting. In as little as two to three years, even the most price-sensitive markets, such as commercial and office lighting, residential applications, and retrofit lamps will seamlessly and rapidly convert to solid state lighting."

For more information about the company, please visit www.bridgelux.com [1]

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