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ROD BOSWELL

Rod talks about Blu-Glass' plasma source development



Dear Shareholder,

We have been busy over the last quarter, and as we look forward to our AGM, it is pleasing to note how many of our key year two objectives we have either met – or exceeded.

We are on track in our transition from a research-based proof of technology enterprise to a market focussed product development company, with the commissioning of our pilot plant in July. We have strengthened our intellectual property position

with four patents lodged, three in international filing, and one in the USA, South Africa and Singapore. A global tier-one electronics manufacturer is evaluating our technology and performance data, an important step towards finalising a deal. We are also in the fortunate position of having a cash reserve of \$4.8m.

Our most recently filed patent is highly significant for us, as it encompasses recent improvements in the Gallium Nitride (GaN) material. Filing this patent means we can discuss aspects of this technology breakthrough in greater detail with our potential customers – something that will make it easier for them to understand the full scale of our breakthrough.

As you may be aware we have

also recently appointed a Technology Council to ensure we can draw on world leading expertise to keep our technical team focussed on the industry's current – and emerging needs.

The council is chaired by Professor Jagadish, a world renowned expert in the fields of semiconductor optoelectronics and nanotechnology. The combination of skills and experience on the Technology Council should ensure we can continue to develop our technology towards commercialisation.

Giles Bourne
CEO

Technology Update

Prototype Production System:

The system has completed the operational testing phase and is now in the process development stage. We are in the middle of the development plan and are looking to be in a position to invite LED manufacturing companies to the Silverwater facility in Q1 / early Q2 next year to view the operation of the system.



BluGlass prototype production deposition system

Research and Development Deposition System

This tool forms the backbone of R&D at BluGlass and will be used to produce sample material which has been requested from LED manufacturers around the world. The system has recently undergone hardware upgrades which will further enhance the operation of the system. Process development on this tool is already mature, and production of sample material will run in parallel to the development of the process on the production system. Our expectations for this tool are that it will be utilised for other areas of research after the process has been successfully transferred onto the production system.



BluGlass Laboratory

The technology team recently had a successful marketing trip to Japan to further introduce BluGlass to the Japanese market. The trip adds to the global interest in the BluGlass RPCVD technology.

Industry News

As BluGlass investors will know, the network of patents and licensing deals in the LED semiconductor space is extremely complicated and there has been significant movement in the area over the past few months. Fortunately, through our novel RCPVD process for manufacturing GaN wafers – the material used to construct LEDs, BluGlass is able to operate in this industry and deal with any of its players without becoming embroiled at the LED device level. To give you a flavour of some of the complexities faces by our competitors/potential customers, here is the state-of-play in the industry today.

Toyoda Gosei, the major Japanese manufacturer reached an agreement with Cree, the American manufacturer, which provides both companies, including wholly owned affiliates, with access to each others' patented LED chip and packaged LED technology (including white LED technology.)

As the market continues to be very competitive we expect the existing players to take one of two approaches – agree to work in cooperation, as Toyoda and Cree have done – or to take a more confrontational approach as Nichia are taking with Seoul Semiconductor.

Seoul Semiconductor has recently won a case in Korea, declaring that they haven't infringed on Nichia's patents.

Nichia recently launched legal action in the UK, and the US claiming Seoul Semiconductor had infringed one of their most important patents.

Seoul Semiconductor however has officially announced it had the means to establish its non-infringement of any valid claim in a lawsuit brought by Nichia.

In other industry news ROHM has announced the acquisition of OKI Semiconductor Co. Ltd making it now a ROHM subsidiary.

ROHM had been looking for opportunities to improve its corporate value by developing its business as an integrated device manufacturer (IDM) with a broad and competitive product portfolio. For its part, OKI had been pursuing a series of company wide initiatives designed to revamp its business structure to increase corporate value and gain a competitive edge in the face of intensifying global competition, including by holding internal deliberations on how the company could expand its semiconductor business. Based on this background, the two companies agreed on the transfer of OKI's semiconductor business.

This activity proves the wisdom of BluGlass' approach to this highly complicated market. By staying out of the areas where there is so much contention we are in a position to be able to market our technology to all the players – without the patent issues faced by so many companies.

The major industry players

Toyoda Gosei

Established – 1949

Market Cap: 28 Billion Yen
(March 2008)

Employees – 6,727

Involvement in Industry:

Manufactures parts for Semiconductors and semiconductor applications

Cree

Established – 1987

Market Cap - \$1.64B USD
(October 2008)

Employees - 3,168

Involvement in Industry:

manufacturer of semiconductor materials and devices.

Nichia

Established: 1956

Market Cap: 32 Billion Yen

Employees - 4600

Involvement in Industry:

LED manufacturer

Insight into BluGlass Plasma Source Development



Rod Boswell is a Professor at the Australian National University and head of the Space Plasma, Power and Propulsion group of the Plasma Research Laboratory. He is active in the fields of plasma processing of surfaces for microelectronics and opto-

electronics, plasma thrusters, fuel cells as well as basic linear and non-linear processes in plasmas.

Over the past 15 years he has published over 100 papers in major international journals, been granted 7 patents, given about 50 invited lectures in international conferences and presented his group's work to many industrialists in many countries.

He is interested in discovering interesting phenomena and using them in practical ways. His helicon reactor is well known as a fascinating research experiment and an effective processing tool in the microelectronics industry. In recent years he has become interested in applying electric double layers to astrophysical phenomena and to space propulsion.

His group will be contributing to the hydrogen economy by deposition of nano-agregates of catalysts and new proton conducting membranes. He has been elected Fellow of the Australian Academy of Sciences. He is a keen skier and long board surfer and has been known to paddle a canoe down very long rivers.

The area of his work of particular relevance for BluGlass is his expertise in the design and implementation of cutting edge plasma sources.

His group has sold many of the low pressure helicon sources world wide but the R&D carried out for BluGlass is new and unexpected. In

general, it is difficult to design effective sources of activated nitrogen, since the gas is molecular and each atom in the molecule is held together with a triple bond making it very hard to energise.

Rod's work on plasma sources will be used by BluGlass for larger area processing and is the stepping stone toward the fully commercial large inductive plasma source which is capable of treating many wafers in parallel. Prof Boswell's group at the ANU has over 50 man years of experience in designing and operating a variety of plasma sources and this expertise will be used to ensure the success of the processing module for BluGlass. Additionally, they have more than 20 years experience in plasma enhanced chemical vapour deposition that is at the heart of BluGlass's technology.

The ANU team will be working intimately with the BluGlass team both in Sydney and in Canberra to optimize the sources and to work together to improve the GaN deposition processes. For the near future, all work by the ANU team will be concentrated on the source development: in Sydney in helping to determine the optimum operating conditions and in Canberra to investigate the details of the energisation of the nitrogen that makes BluGlass' technology so important.

To fully understand and control the plasma processing is of paramount importance as it is the details of this process which allows the necessary epitaxial growth to occur and for optical quality GaN to be grown in commercial volumes. Traditionally, this growth is done using MOCVD techniques, but BluGlass' technology is the next step in the evolutionary process of allowing mass production of GaN to be achieved and a quality, cost effective product to be brought to the market.