



Investor Presentation

Update
David Jordan, CEO

27 August 2007

DISCLAIMER

This document has been prepared by BluGlass Limited to provide existing and prospective investors in BluGlass Limited with an update.

Any statements, opinions, or other material contained in this document do not constitute any commitments, representations or warranties by BluGlass Limited or/and associated entities or its directors, agents and employees. Except as required by law, and only to the extent so required, directors, agents and employees of BluGlass Limited shall in no way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatsoever nature arising in any way out of, or in connection with, the information contained in this document.

This document includes certain information which reflects various assumptions. The assumptions may or may not prove to be correct. Recipients of the document must make their own independent investigations, consideration and evaluations prior to making any decisions to invest in the Company.

Company Overview

- High technology semiconductor based commercial spin off from Macquarie University
- Developing novel technology to make low cost gallium nitride (GaN) epi wafers on glass substrate at low temperature for LED and RF/power electronics applications
- Oversubscribed IPO in September 2006 - ASX: BLG
- Based in Silverwater, Western Sydney
- 15 FTE employees

People

➤ **David Jordan – CEO**

David has 25 years experience in business and academic environments, primarily in the silicon and photovoltaic industries

➤ **Dr Michael Taverner – Chairman**

Michael is a company director and scientific consultant. His expertise is in corporate governance, biotechnology, research and development, innovation and training. Michael is a non-executive director of two other high-technology companies listed on the ASX

➤ **Dr Scott Butcher – CTO**

Scott Butcher is the originator of the IP and a founder of the business. He has held senior research and commercial roles for over 20 years

➤ **Geoff King – CFO**

Geoff is a CPA with 25 years' experience in multinational and Australian SMEs, the past 15 years as Finance Director in manufacturing and service industries

➤ **Giles Bourne – Commercial Manager**

Giles is a business development expert with over 10 years experience in developing high technology businesses both locally and internationally

What We Do

- The BluGlass business is based on the commercialisation of a novel technology for manufacturing low cost gallium nitride wafers
- Gallium nitride (GaN) is a semiconductor which emits light under an applied dc voltage
- GaN dominates the blue / green LED and UV Laser Diode market
- LEDs are used in a wide variety of places: mobile phone screen backlighting, torches, car displays, traffic signals and increasingly, general lighting

Our Strategy

To demonstrate and deliver a low cost GaN manufacturing technology to the global market by:

- process licensing
- supply of commercial equipment
- supply of specialised materials, and
- niche manufactured product

Progress – First 11 Months; In Line with 2006 Prospectus

Technology Development

Commercial Demonstration Tool Manufacture

State of the Art Pilot Plant Construction and Fitout

Collaborative Partnerships

Commercial Strategy Implementation and market development

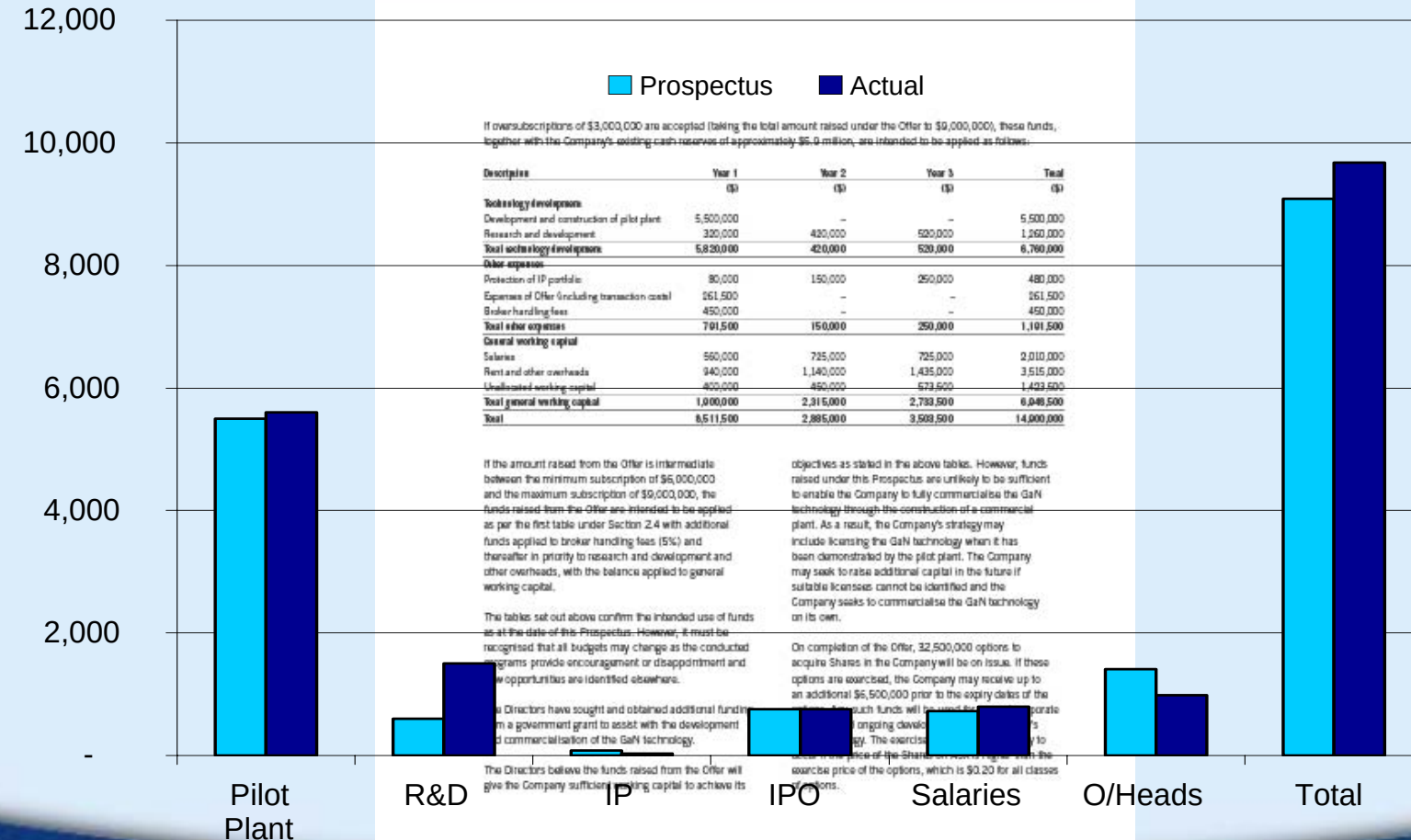
Infrastructure and Organisation planning

2008

- COMMERCIAL COMPETITIVE DEVICE
- PROOF OF PROCESS CAPABILITY
- MACHINE LICENSING AND SALES
- PROCESS LICENSING / ROYALTIES
- PRODUCT MANUFACTURE AND SALES
- CONTINUING INNOVATION AND TECHNOLOGY DEVELOPMENT
- INCREASING SHAREHOLDER VALUE

Funds Status & Cash Cover

(A\$'000)



Year 1 Prospectus vs Latest Estimate (Estimate includes actual spend to 30/06/07)

If oversubscriptions of \$3,000,000 are accepted (taking the total amount raised under the Offer to \$9,000,000), these funds, together with the Company's existing cash reserves of approximately \$5.0 million, are intended to be applied as follows:

Description	Year 1 (\$)	Year 2 (\$)	Year 3 (\$)	Total (\$)
Technology development				
Development and construction of pilot plant	5,500,000	—	—	5,500,000
Research and development	320,000	420,000	520,000	1,260,000
Total technology development	5,820,000	420,000	520,000	6,760,000
Other expenses				
Protection of IP portfolio	80,000	150,000	250,000	480,000
Expenses of Offer (including transaction cost)	161,500	—	—	161,500
Broker handling fees	450,000	—	—	450,000
Total other expenses	791,500	150,000	250,000	1,191,500
General working capital				
Salaries	560,000	725,000	725,000	2,010,000
Rent and other overheads	940,000	1,140,000	1,435,000	3,515,000
Unallocated working capital	400,000	460,000	673,600	1,493,600
Total general working capital	1,900,000	2,315,000	2,793,600	6,948,600
Total	8,511,500	2,885,000	3,508,600	14,905,100

If the amount raised from the Offer is intermediate between the minimum subscription of \$6,000,000 and the maximum subscription of \$9,000,000, the funds raised from the Offer are intended to be applied as per the first table under Section 2.4 with additional funds applied to broker handling fees (5%) and thereafter in priority to research and development and other overheads, with the balance applied to general working capital.

The tables set out above confirm the intended use of funds as at the date of this Prospectus. However, it must be recognised that all budgets may change as the conducted programs provide encouragement or disappointment and new opportunities are identified elsewhere.

The Directors have sought and obtained additional funding from a government grant to assist with the development and commercialisation of the GaN technology.

The Directors believe the funds raised from the Offer will give the Company sufficient working capital to achieve its

objectives as stated in the above tables. However, funds raised under this Prospectus are unlikely to be sufficient to enable the Company to fully commercialise the GaN technology through the construction of a commercial plant. As a result, the Company's strategy may include licensing the GaN technology when it has been demonstrated by the pilot plant. The Company may seek to raise additional capital in the future if suitable licensees cannot be identified and the Company seeks to commercialise the GaN technology on its own.

On completion of the Offer, 32,500,000 options to acquire Shares in the Company will be on issue. If these options are exercised, the Company may receive up to an additional \$6,500,000 prior to the expiry dates of the options. Such funds will be used for the Company's ongoing development and commercialisation of the GaN technology. The exercise price of the options is \$0.20 for all classes of options.

Progress against Prospectus Milestones

04

COMPANY AND TECHNOLOGY OVERVIEW

4.5 BUSINESS STRATEGY

4.5.1 Strategy overview

The Company's strategy for developing its business and commercialising its technology involves:

- further developing the technology to fully demonstrate its potential;
- further developing relationships and strategic alliances with current market players; and
- building a pilot manufacturing plant to fabricate GaN material and devices, demonstrate the technology and facilitate licensing.

4.5.2 Technology development

To help fund its technology development and commercialisation activities, Gallium Enterprises has successfully applied for \$643,196 in funding from the Commonwealth Government's Commercial Ready scheme, with matching funding from seed investors. The project on which this funding is based runs from 1 November 2006 to 31 January 2007 and includes two major milestones:

- demonstration of a blue LED grown on a small (2-4 inch) glass substrate; and
- scale-up of the technology to enable fabrication of a blue LED grown on a larger (6-8 inch) glass substrate.

Gallium Enterprises has already achieved several intervening milestones, including:

- deposition of high quality layers of n-type and p-type GaN onto glass;
- improved material crystallinity, reducing RMS surface roughness from 9-13 nm to less than 1 nm (see Figure 6, page 14);
- formation of GaN p-n junctions on glass;
- metallisation of GaN layers; and
- fabrication of an LED from GaN material grown at glass-compatible temperatures below 700°C.

The company's researchers are now working towards optimising the process to improve device performance and scaling up the process to accommodate 4-inch

and later 6-inch and larger wafers to demonstrate its expected scalability.

BLGlass has established a co-operative relationship with Macquarie University, one of Australia's leading universities. Macquarie University currently hosts a number of research centres across a range of areas including biotechnology, lasers, conservation, cognitive science, ancient history and astrophysics. The University has committed to providing continued support to the Company, including the provision of access to its research facilities.

4.5.3 Pilot manufacturing plant

To demonstrate its technology and facilitate licensing, BLGlass plans to build a pilot manufacturing plant to fabricate GaN material and devices using funds raised pursuant to this Prospectus. The pilot plant is likely to be located near Macquarie University's main campus in Sydney's north-western 'technology corridor'.

BLGlass has established a co-operative relationship with M+W Zander, a world leading service provider in all aspects of clean room technology for the electronics, solar, pharmaceutical and food-processing industries. M+W Zander employs 7,200 staff worldwide and generates annual turnover of about US\$2 billion. M+W Zander has agreed to assist the Company in designing and building the pilot manufacturing plant to help develop and commercialise the GaN technology.

4.5.4 Licensing and manufacturing

GaN materials are manufactured under clean, ultra-high vacuum conditions, which require production of ultra-high vacuum chambers and the use of commercially-available ultra-high vacuum pumps, load locks, remote robotic handling equipment and associated electronic and instrumentation systems. The GaN technology also includes the application of specific materials, processing conditions, and processing and handling equipment in the GaN deposition chamber.

Technology - Milestone Deliverable

RPCVD epi-wafer on buffered glass producing commercially competitive performance LED devices by 1Q08

Manufacturing - Milestone Deliverable

Manufacturing demonstration plant construction completion 1Q08

Commercial Reactor - Milestone Deliverable

Commercial reactor acceptance Ireland 4Q07, installation Silverwater 1Q08

Strategic Alliances - Milestone Deliverable

Development and implementation of commercial and strategic alliances - ongoing

Milestone Deliverable

RPCVD epi-wafer on buffered glass producing commercially competitive performance LED devices by 1Q08

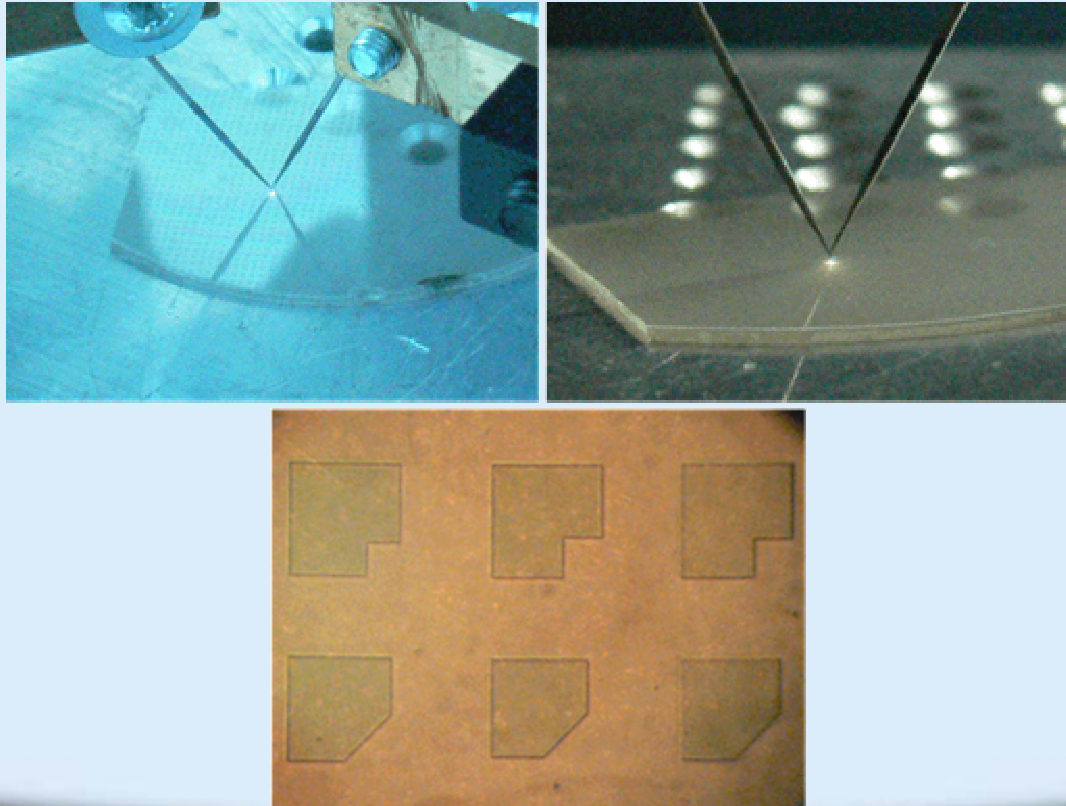
Progress to date –

- Laboratory established & research reactor and technology team relocated from Macquarie University to Silverwater
- Electroluminescent p/n and heterojunction LED epi-wafer layers deposited on buffered glass / sapphire
- Uniform electroluminescent GaN deposition on large area 6" buffered glass
- Electronic device fabrication capability implemented, test electroluminescent LED devices fabricated & operational

✓ **Technology development program on track for 1Q08 deliverable**

Technology – Test Device Fabrication

- Heterojunction LED test devices operating on wafer at 20mA, > 4 hours continuous



Manufacturing Demonstration Plant

Milestone Deliverable

Construction completion 1Q08

Progress to date -

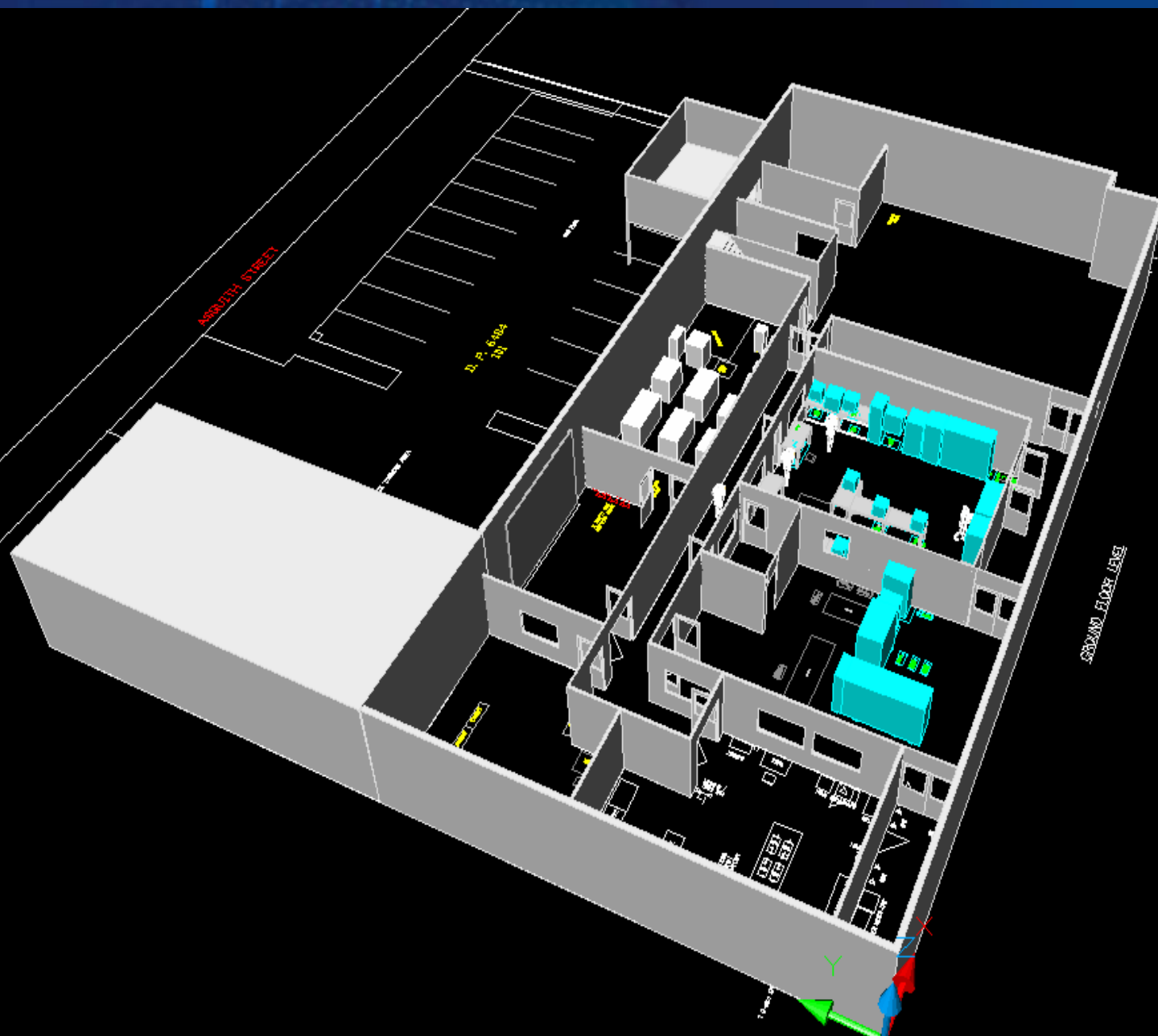
- Silverwater site selection completed & leased
- Phase 1 - offices, research clean lab and machine shop designed & constructed with M+W Zander, completed March 2007
- Electricity augmentation to 1,000kVA by 1Q08
- Phase 2 – manufacturing demonstration cleanroom “detailed design” phase complete (M+W Zander)
- Construction start is now due

✓ **Completion on track for 1Q08**

Manufacturing Demonstration Plant – Asquith St, Silverwater



Manufacturing Demonstration Plant – Asquith St, Silverwater



Commercial Reactor

Milestone Deliverable

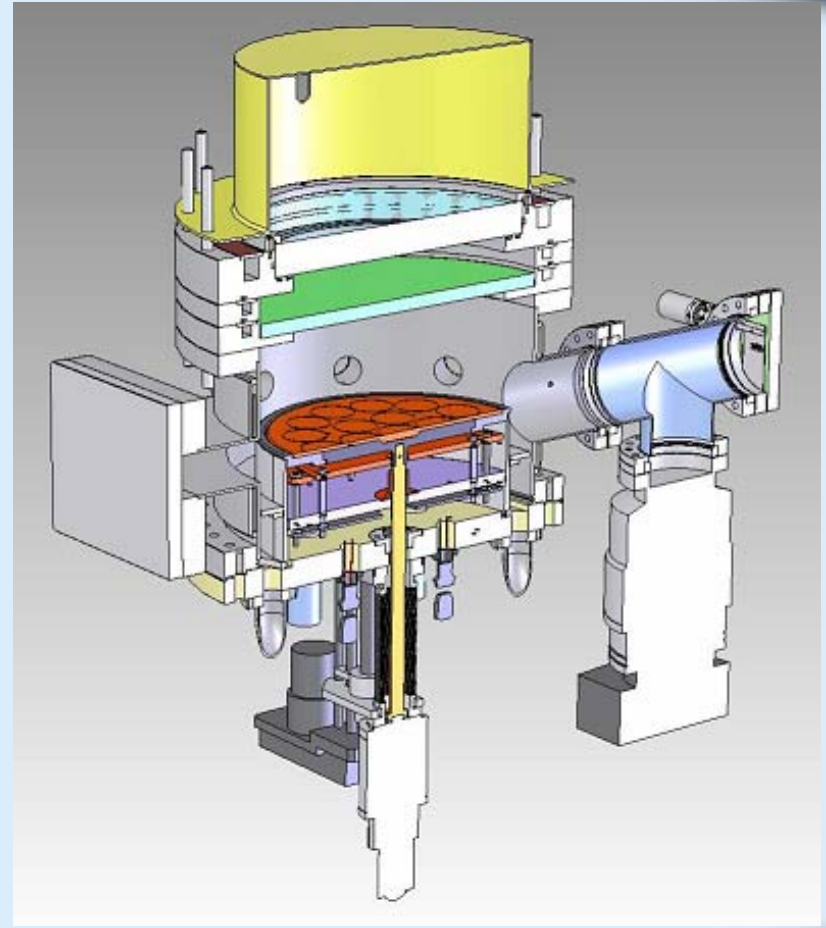
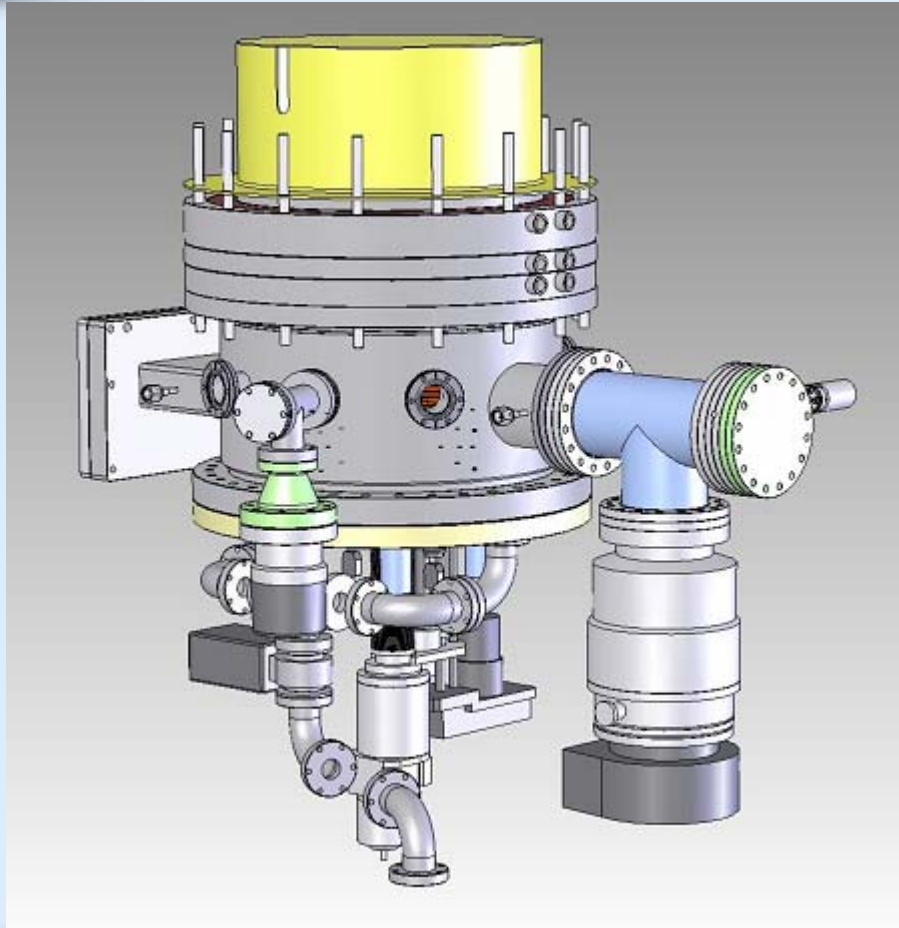
Commercial reactor acceptance Ireland 4Q07, installation
Silverwater 1Q08

Progress to date -

- Computational Fluid Dynamics (CFD) modelling capability introduced (Conor Martin / ACE+)
- Research & commercial reactor CFD modelling completed
- Commercial reactor build partners selected (EMF / Brooks)
- Commercial reactor support platform designed, on order, nearing build completion in USA / Ireland
- Reactor chamber in design – BluGlass + Australian National University + EMF

✓ **On track for 1Q08 installation**

Commercial Reactor Design – Process Chamber CAD Assembly



Intellectual Property

**Strong IP position, managed by Spruson&Ferguson,
reviewed at IPO by Blake Dawson Waldron**

Two patents lodged and now in National Filing, and the first of several planned R&D derived provisional patents lodged.

National Filing Patents:

- Process for Manufacturing a Gallium Rich Gallium Nitride Film
- Method and Apparatus for growing a group (III) metal nitride film and a group (III) metal nitride film
- Provisional 2007 – “Buried Contact Devices for Nitride Based Films and the Manufacture Thereof”

Strategic Alliances

Milestone Deliverable

To develop and implement commercial and research alliances as necessary to deliver the corporate strategy and business plan

Progress to date -

- St Gobain (France) Joint Development Agreement, 4Q06
- M+W Zander manufacturing plant design & construct, 4Q06
- EMF SS (Ireland) commercial reactor development, 2Q07
- Wright, Williams & Kelly (USA) competitive cost model, 1Q07
- Global “roadshows” to representative industry players in LED manufacturing, equipment and materials supply 1Q07, 3Q07
- IP portfolio revaluation, Dr David Randerson, Accuity 3Q07
- Discussion with and visits from selected industry specialised device manufacturers 3Q07

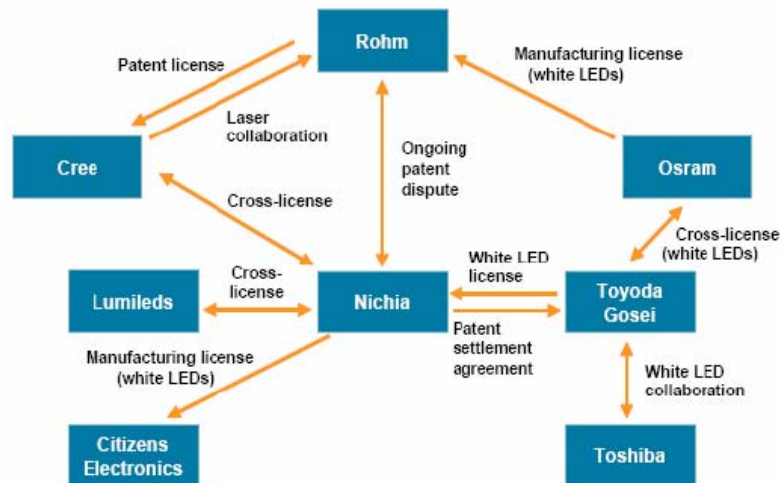
✓ **Pursuing an aggressive approach to developing key commercial relationships**

Business Planning - Strategy

- Primary focus on the major GaN market in specialised blue / green LEDs and general lighting
- A “packaged JV” process technology based licensing model incorporating delivery of:
 - process, with performance guarantee
 - equipment, with global support
 - specialised materials
- Facilitation and early market entry by development of a research reactor
- Licensing model avoids the current complex IP environment
- A secondary focus on the specialised GaN devices and substrate market
- Expert local and global input - Strategies Unlimited, Spruson&Ferguson and top tier global business strategy company

BluGlass strategy avoids complex industry IP landscape

The Original 2002 Agreement



Business Planning – Revenue Model

Revenue Model – 3 key drivers

1. **Market Size** - forward projection by segment size
2. **Share** – BluGlass penetration of that market
3. **Return** – BluGlass revenue on that share

Business Planning – Revenue Model

1. Market - forward projection US\$4B (2007) - US\$10B (2012)

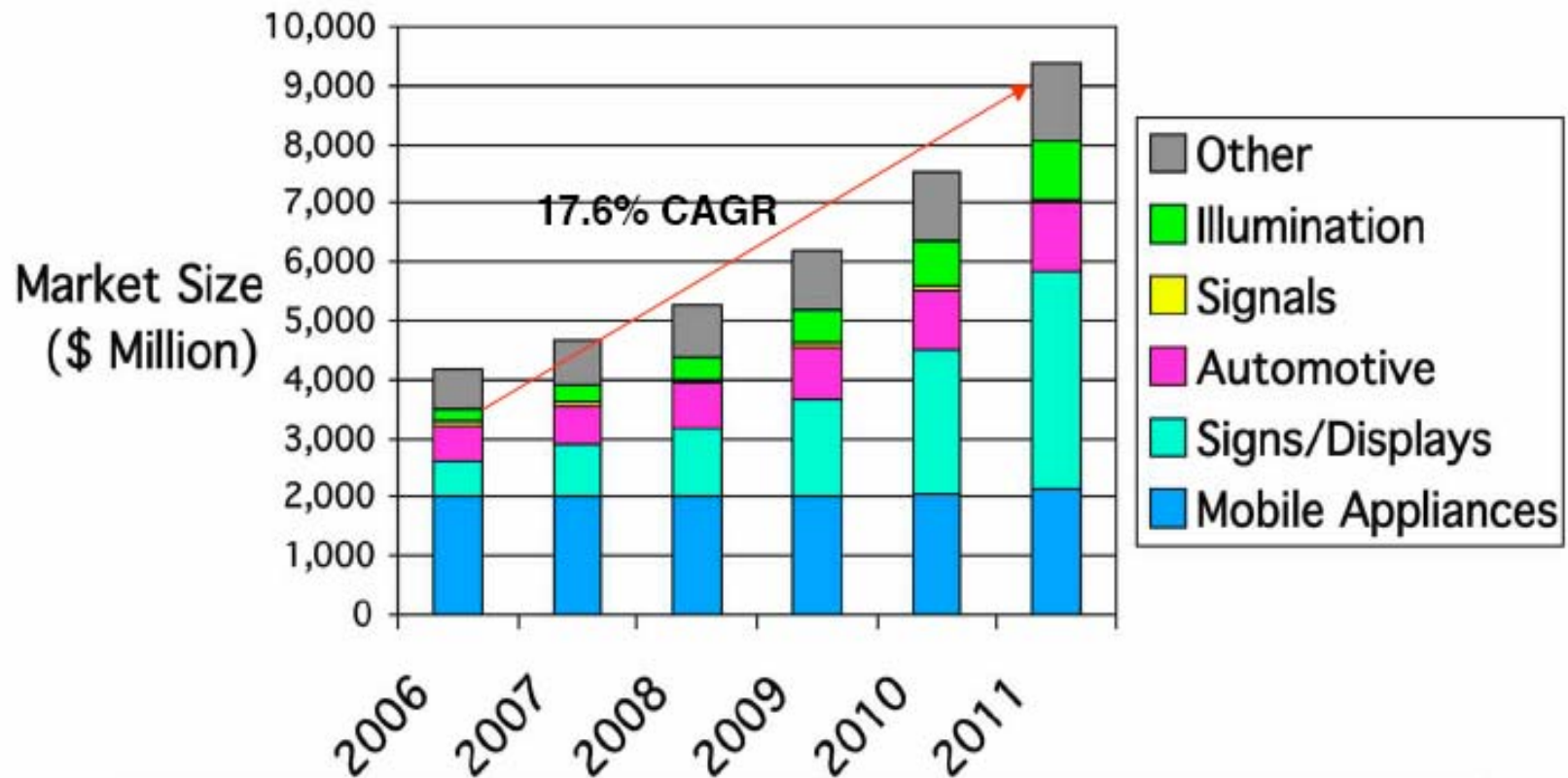
Strategies Unlimited, USA

- Market Analysis Report,
“The Market for High-Brightness LEDs in Lighting, Application Analysis and Forecast, 2007”
- Company presentation, Dr Robert Steele, 20Aug07

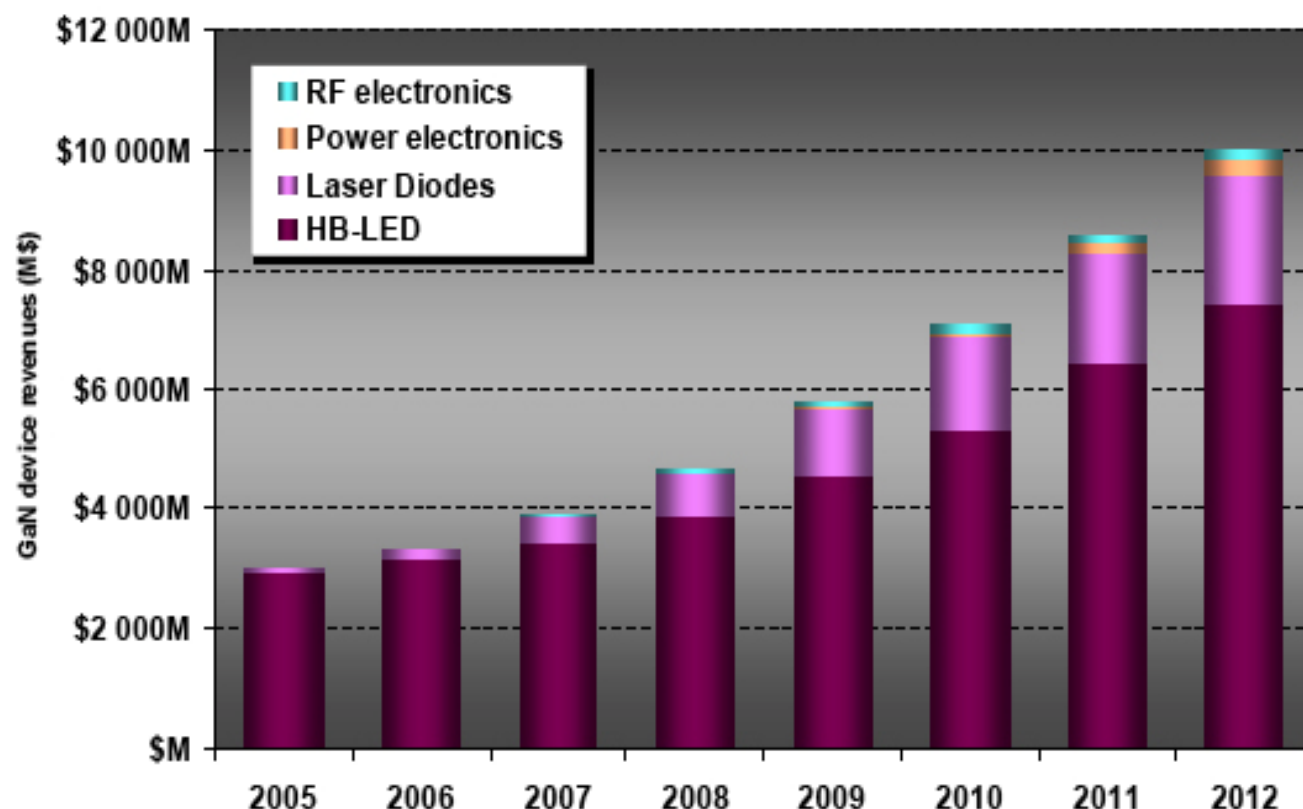
Yole Développement, France

- Market Analysis Report, 2007
“GaN’07 – New perspectives for nitride materials and devices”

HB LED Market Forecast Summary



2005-2012 GaN devices revenues in M\$ for LED, Laser, RF & power electronics



GaN devices revenues	2005	2006	2007	2008	2009	2010	2011	2012
HB-LED	\$2 964M	\$3 192M	\$3 458M	\$3 876M	\$4 560M	\$5 358M	\$6 460M	\$7 448M
Laser Diodes	\$5M	\$139M	\$428M	\$731M	\$1 131M	\$1 518M	\$1 824M	\$2 136M
Power electronics	\$M	\$M	\$5M	\$23M	\$33M	\$78M	\$172M	\$264M
RF electronics	\$M	\$4M	\$9M	\$25M	\$50M	\$101M	\$130M	\$180M
Total	\$2 969M	\$3 334M	\$3 899M	\$4 655M	\$5 774M	\$7 055M	\$8 586M	\$10 028M

Business Planning – Revenue Model

3. Return – BluGlass revenue on market share

IP Licensing Commercialisation Norms

- **Industry Benchmark Practice** - as the basis for negotiation, or
- **No Established Benchmark** – other measures of assessment

“Use of the 25 Per Cent Rule in Valuing IP”
Robert Goldscheider, John Jarosz & Carla Mulhern
LES, les Nouvelles, December 2002, page 123

Use Of The 25 Per Cent Rule In Valuing IP

BY ROBERT GOLDSCHIEDER, JOHN JAROSZ AND CARLA MULHERN*



Introduction

As the importance of intellectual property ("IP") protection has grown, so has the sophistication of tools used to value it. Discounted cash flow,¹ capitalization of earnings,² return on investment,³ Monte Carlo simulation⁴ and modified Black-Scholes option valuation methods⁵ have been of great value. Nonetheless, the fairly simple "25 Per Cent Rule" ("Rule") is over 40 years old and its use continues. Richard Ranzgaitis has called it the "most famous heuristic, or rule of thumb, for licensing valuation."⁶

The Rule suggests that the licensee pay a royalty rate equivalent to 25 per cent of its expected profits for the product that incorporates the IP at issue. The Rule has been primarily used in valuing patents, but has been useful (and applied)

in copyright, trademark, trade secret and know-how contexts as well. Since the Rule came into fairly common usage decades ago, times, of course, have changed. Questions have been raised on whether the factual underpinnings for the Rule still exist (i.e., whether the Rule has much positive strength) such that it can and should continue to be used as a valid pricing tool (i.e., whether the Rule has much normative strength).

In this paper, we describe the Rule, address some of the misconceptions about it and test its factual underpinnings. To undertake the latter, we have examined the relationship between real-world royalty rates and real-world industry and company profit data. In general, we have found that the Rule is a valuable tool (rough as it is), particularly when more complete data on incremental IP benefits are unavailable. The Rule continues to have a fair degree of both "positive" and "normative" strength.

History of the Rule

One of the authors — Robert Goldschieder⁷ — did, in fact, undertake an empirical study of a series of commercial licenses in the late 1970s.⁸ This involved one of his cli-

ents, the Swiss subsidiary of a large American company, with 18 licensees around the world, each having an exclusive territory. The term of each of these licenses was for three years, with the expectation of renewals if things continued to go well. Thus, if any licensee "turned sour," it could promptly be replaced. In fact, however, even though all of them faced strong competition, they were either first or second in sales volume, and probably profitability, in their respective markets. These licenses therefore constituted the proverbial "win-win" situation. In those licenses, the intellectual property rights transferred included: a portfolio of valuable patents; a continual flow of know-how; trademarks developed by the licensor; and copyrighted marketing and product description materials. For those licenses, the licensees tended to generate profits of approximately 20 per cent of sales on which they paid royalties of 3 per cent of sales. Thus, the royalty rates were found to be 25 per cent of the licensee's profits on products embodying the patented technology.⁹

*Robert Goldschieder, Chairman, International Licensing Network; John Jarosz and Carla Mulhern, Principals, Analysis Group/Economics.

We would like to thank the following individuals for their hard work and useful comments on earlier drafts of this paper: Jaime Bain, Laura Bechtman, Jeff Kinrick, Jennifer Price, Chris Vellione and Robert Vigil. The views expressed here are ours and do not necessarily represent those of others at the International Licensing Network or Analysis Group/Economics.

7. See, e.g., Richard S. Toikka, In Patent Infringement Cases, the 25 Per Cent Rule Offers a Simpler Way to Calculate Reasonable Royalties, *After Kambh Tire, Chances are the Rule Faces Challenges to its Descent Reliability*, *Legal Times* 54 (August 10, 1999).

8. Robert Goldschieder, *Litigation Backgrounds for Licensing* 39 (Nov 1978) 50, 25 (March 1994); Robert Goldschieder, *Royalties as Measure of Damages* 31 (Nov 1978) 113, 119 (September 1994).

1. D.J. Neill, *Realistic Valuation of Your IP*, 32 *Int Novelties* 182 (December 1997); Stephen A. Degean, *Using Financial Models to Get Royalty Rates*, 33 *Int Novelties* 39 (June 1998); Daniel Burns, *DCF Analysis in Determining Royalty*, 30 *Int Novelties* 165 (September 1995); Russell L. Farr & Patrick H. Sullivan, *Technology Licensing: Corporate Strategies For Maximizing Value* 233-46 (1994); Richard Ranzgaitis, *Early-Stage Technologies: Valuation and Pricing*, 121-38 (1999).

2. Robert Heilly & Robert Saberswa, *Valuing Intangible Assets* 159-66 (1998).

3. Farr and Sullivan, pp. 223-33.

4. V. Walt Hratio et al., *Monte Carlo Analysis Aid Negotiation*, 33 *Int Novelties* 47 (June 1998); Ranzgaitis, pp. 160-77.

5. Dr. Nir Kossuthsky & Dr. Alex Aronov, *TRULU™ Method: Measuring The Value and Risk of Intangible Assets*, 35 *Int Novelties* 130 (September 2000); F. Peter Horv, *The Valuation of Technology: A Business and Financial Issues In Review*, 302-06 (1999).

6. Ranzgaitis, p. 98.

The licensor should receive from the licensee around one quarter of the gain accruing to the licensee from the use of the licensed right

- operating profit in the case of goods
- "gain" may be a cost saving in an industrial process

Based on a notional "fair" apportionment of gain

- licensee undertakes greater investment, risk

Tested in survey published by LES

- Vol XXXVII No. 4 December 2002, p123
- median royalties are typically clustered around 25% of median gross profit for successfully licensed products

2. Share – BluGlass market penetration

- Given our active plan to develop and launch a research reactor into the market during 2008, initial revenue could result as early as next year and should ramp up from 2009.
- Given the significant cost savings this technology provides and assuming the market size projections noted, a royalty based return within the bounds discussed, and our internal projections of market penetration, our modelling suggests a revenue range of between A\$5 - 8M by 2010, with strong growth thereafter.

The above information does not constitute a company profit forecast or projection and is provided for indicative economic purposes only

Upcoming Deliverables

- ❑ Technology - commercially competitive LED 1Q08
- ❑ Manufacturing demonstration plant - construction completion 1Q08
- ❑ Commercial reactor - installation 1Q08
- ❑ Strategic alliances - continued development of key commercial relationships
- ❑ Revenue - FY08/09 onwards



Thank You

www.bluglass.com.au