

31 January 2025

December 2024 Quarter Activities Update

Highlights

- Entered a US\$1.925 million (A\$2.9 million) contract with the North Carolina State University as part of the CLAWS Hub sub-contract with US Microelectronics Commons
- Secured A\$1.2 million for the first phase of a multi-year Joint Development Agreement with a US venture-backed start-up company pioneering wide bandgap semiconductors and integrated photonics
- Partnered with Macquarie University on blue ocean LiDAR project as part of an *Australian Economic Accelerator* program
- Files three US patent applications for high-power tunable GaN lasers
- Showcases new product capabilities and performance data at SPIE Photonics West
- Received A\$5.7M R&D tax rebate

Global semiconductor developer BluGlass Limited (**ASX: BLG**) provides the following update and Appendix 4C Quarterly Report for the three months ended 31 December 2024 (Q2 FY25).

CEO Jim Haden said: “We have continued our record start to FY25, with an additional A\$4.1 million secured in contracts with world-leading innovators to accelerate our R&D into advanced prototyping and commercial production. Our second contract, valued at A\$2.9 million, under the US Department of Defence’s Microelectronics Program not only provides revenues to advance our laser portfolio but validates our proprietary technologies, novel device architectures, and end-to-end manufacturing capabilities.

“BluGlass is pushing the boundaries of visible laser capabilities, with its new US patents highlighting the groundbreaking innovation of our world-class team. These patents are strategic assets that protect our unique technologies, reinforce market leadership, and drive competitive advantage. These recent advances in visible GaN lasers, single-mode, near-single frequency, MOPA, and photonic integrated solutions are the key first steps in revolutionizing industries, including aerospace, defense, quantum computing, and biomedical applications. Our growing IP portfolio underpins our project to product commercialisation strategy.

“We continue to build our reputation as the industry partner of choice, as demonstrated by our A\$1.2 million joint development agreement for the first phase of development with a US venture-backed start-up company; to pioneer next-generation integrated photonics. This partnership reflects our ability to tackle complex challenges and deliver solutions that push the boundaries of visible lasers while unlocking significant commercial potential for both companies.

“Additionally, our blue ocean LiDAR partnership with Macquarie University and defence contractor, Aurizn, is seeing our lasers deployed in field testing within a highly strategic market. As one of the few global manufacturers of visible wavelength lasers ideal for underwater applications, BluGlass is combining our expertise with Macquarie’s research excellence and Aurizn’s defence capabilities, to deliver innovative solutions for maritime defence, environmental monitoring, and climate modelling.”

Files three US provisional patents for high-power, tunable GaN lasers

Subsequent to the end of the quarter, BluGlass has filed three US provisional patent applications for next-generation high-power, tunable gallium nitride (GaN) lasers.

The patents protect novel capabilities and device architectures designed to enhance power and versatility of visible gallium nitride (GaN) lasers and increase BluGlass' strategic capability to capitalise on the exciting growth markets of quantum sensing, communication, and computing. These advances will enable customers to solve complex problems such as atmospheric LiDAR detection of clear air turbulence, underwater communications and LiDAR, and GPS spoofing and jamming by creating localised quantum solutions

Showcases new product capability & performance at Photonics West, presented advanced GaN DFB paper

In January, the Company also showcased its novel device designs and advanced capabilities at an industry-leading conference, Photonics West, in San Francisco, USA. Senior Product Developer, Dr. Ryan Anderson presented a technical paper on BluGlass' advanced GaN DFBs demonstrating near single frequency emission, with a side-mode-suppression ratio of greater than 40 decibels (dB) and a peak full-width-half-maximum linewidth of under 3 picometers (pm).

The paper also showcased recent breakthrough results, demonstrating narrow-band high-power DFB lasers, with the successful demonstration of GaN master oscillator power amplifier (MOPA), with near-single frequency emission maintained, achieving 750 mW of power in a single spatial mode. This power from a wafer-level photographically defined single monolithic chip exceeds typical power outputs from the combination of discrete single-mode lasers, two lenses, and a semiconductor optical amplifier, which require complex optical alignments. BluGlass' GaN DFBs are being designed for wafer-scale fabrication to reduce downstream optical alignment costs and address critical challenges in quantum technologies and computing while enabling greater production volume and smaller device sizes.

Ultra-precision, near-single-frequency DFB lasers, and DFB gain chips such as MOPAs offer crucial benefits for emerging technologies; where their precise and stable performance is essential for quantum sensing, navigation, communication, and next-generation defense and aviation applications.

A\$2.9 million CLAWS Hub sub-contract

BluGlass entered a \$1.925 million (AU\$2.9 million) US Department of Defense (DoD) sub-contract with North Carolina State University (NCSU), for visible laser development activity as part of the Commercial Leap Ahead for Wide Bandgap Semiconductors (CLAWS) Hub, one of eight Microelectronic Commons innovation hubs established to develop next-generation defence and dual use technologies. Hub members include Coherent, MACOM, General Electric, Adroit, Kyma, and NCA&T State University.

By enabling key performance advantages such as ultra-precision and high-spectral purity GaN photonics for next-generation applications, BluGlass is accelerating the commercialisation of its innovative photonics for materials processing, sensing, communications, AI, future quantum technologies, and critical defence applications.

A\$1.2 million Joint Development Agreement

BluGlass secured an A\$1.2 million order for the first of a multi-phase joint development agreement with a leading US-based venture-backed start-up pioneering integrated photonics. The development agreement will see BluGlass and its collaboration partner develop novel photonic chips that combine highly complementary technologies for the production of Heterogeneously Integrated Photonic Integrated Circuits (HIPIC). The strategic partnership has the potential for a minimum of two additional phases of non-recurring engineering, each with a similar revenue potential for BluGlass.

LiDAR project

BluGlass signed an agreement with Macquarie University (project lead) and defence company Aurizon to develop and test a new laser-based method to measure subsurface water temperature and depth. BluGlass will provide visible gallium nitride (GaN) lasers to the project. The project will develop and run commercial trials of blue ocean

LiDAR (Light Detection and Ranging) technology to enhance maritime situational awareness in defense and dual-use subsea applications, such as detecting underwater objects and improving climate modelling.

Chinese ban on semiconductor manufacturing components

In December, China announced a ban on the export of key components in semiconductor manufacturing, including gallium. BluGlass uses multiple gallium sources to manufacture its GaN laser devices at its Australian epitaxial wafer manufacturing facility in Sydney. No gallium is required in the company's US downstream wafer processing facilities.

Further, BluGlass sources its gallium materials from US and Japan suppliers and maintains several months of supply on-site to minimise supply-chain disruptions. The Company has been in contact with its primary gallium suppliers, who have indicated no short-term impact to supply. The Company is monitoring the situation closely with its suppliers and will update the market should there be any material change.

Financials

December quarter revenue of \$1.31 million comprised of the NCSU contract revenue, laser orders, foundry services for a European wafer developer, and the Semiconductor Australia Conference Revenue, along with a \$5.37 million Research & Development Tax Incentive (R&DTI) rebate from the Australian Federal Government, for development activities carried out across its Australian and US facilities in FY24.

BluGlass' quarterly research and development expenses were \$2.89 million, inclusive of salaries, materials, and fabrication costs. Payments to related parties in Q1 FY25 were \$109k encompassing Chair and Non-Executive Director fees.

Activity Undertaken	Amount paid during the quarter \$'000
Laser product development	\$2,845
RPCVD development	\$48
Total direct expenditure	\$2,893

Outlook

BluGlass continues to advance our ambitious technology and commercialisation roadmap, driving our ability to win market share and position the business as the global partner of choice in our rapidly growing target verticals.

During the quarter, the Company won large revenue generating projects, enhanced its novel capabilities, showcased new performance data at the industry's leading conference, SPIE Photonics West, and filed critical new Intellectual Property.

Together, these milestones continue to position BluGlass as the industry partner of choice and lay the foundations to win market share in strategic markets, grow revenues and win large revenue generating projects, and achieve higher product margins and average selling prices (ASPs).

CEO Jim Haden said "We continue to build on the significant momentum of the first half of FY25, leveraging our position as the only pure-play visible GaN laser supplier in the market. Our focus remains on building valuable strategic relationships, winning non-dilutive revenues, enhancing our product portfolio, and moving the Company towards growth and profitability."

This announcement has been approved for release by the BluGlass Board.

For more information, please contact:

Stefanie Winwood | +61 2 9334 2300 | swinwood@bluglass.com

About BluGlass

BluGlass Limited (ASX:BLG) is a leading supplier of GaN laser diode products to the global photonics industry, focused on the industrial, defense, bio-medical, and scientific markets.

Listed on the ASX, BluGlass is one of just a handful of end-to-end GaN laser manufacturers globally. Its operations in Australia and the US offer cutting-edge, custom laser diode development and manufacturing, from small-batch custom lasers to medium and high-volume off-the-shelf products.

Its proprietary low temperature, low hydrogen, remote plasma chemical vapour deposition (RPCVD) manufacturing technology and novel device architectures are internationally recognised, and provide the potential to create brighter, better performing lasers to power the devices of tomorrow.

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

BluGlass Limited

ABN

20 116 625 793

Quarter ended ("current quarter")

31 December 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1,847	4,220
1.2 Payments for		
(a) research and development	(1,871)	(3,305)
(b) product manufacturing and operating costs		
(c) advertising and marketing	(154)	(189)
(d) leased assets	(321)	(696)
(e) staff costs	(2,026)	(4,616)
(f) administration and corporate costs	(450)	(890)
1.3 Dividends received (see note 3)		
1.4 Interest received	52	52
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	5,373	5,373
1.8 Other (provide details if material)		
1.9 Net cash from / (used in) operating activities	2,450	(51)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment	-	(441)
(d) investments		
(e) intellectual property		

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
	(f) other non-current assets (security deposits)	(1)	(16)
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		7
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	(1)	(450)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	6	6
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings	1,499	1,499
3.6	Repayment of borrowings	(2,648)	(2,648)
3.7	Transaction costs related to loans and borrowings	(169)	(169)
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	(1,312)	(1,312)
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,629	5,573
4.2	Net cash from / (used in) operating activities (item 1.9 above)	2,450	(51)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1)	(450)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(1,312)	(1,312)
4.5	Effect of movement in exchange rates on cash held	29	35
4.6	Cash and cash equivalents at end of period	3,795	3,795

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	3,576	2,441
5.2	Call deposits	219	188
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,795	2,629

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	109
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities		
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 Total financing facilities		
7.5 Unused financing facilities available at quarter end		
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered or are proposed to be entered into after quarter end, include a note providing details of those facilities.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	2,450
8.2 Cash and cash equivalents at quarter end (item 4.6)	3,795
8.3 Unused finance facilities available at quarter end (item 7.5)	
8.4 Total available funding (item 8.2 + item 8.3)	3,795
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	N/A
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer:	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2025

Authorised by: By the Board
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.