

Quarterly Update – 1 October to 31 December 2020

- **Laser Diode product development**
 - Initial tests of unpackaged, coated laser diode devices are demonstrating target performance
 - The Company remains on track to launch its 405nm laser diode product in early 2021
- **Total revenue for the quarter totalled \$187,000**

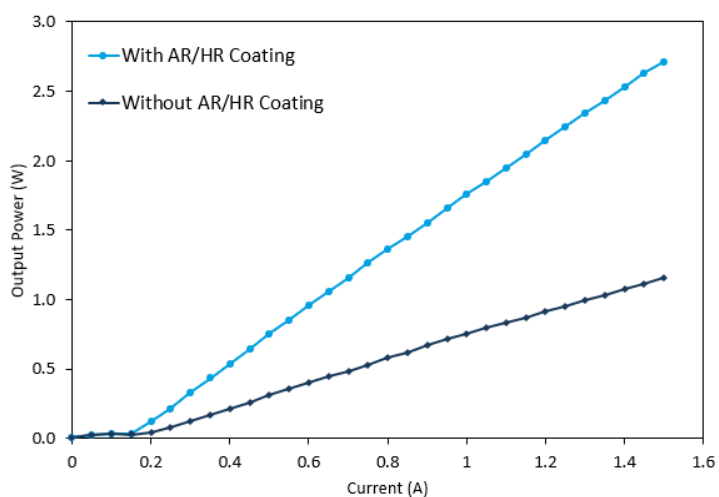
Australian semiconductor developer, BluGlass Limited (ASX: BLG), is pleased to provide this Quarterly Update to accompany its Appendix 4C Quarterly Report for the three months ended 31 December 2020.

Laser Diode Development Progress

During the quarter, activity in both standard laser diode and RPCVD tunnel junction laser diode designs continued to progress in line with the Company's published roadmap.

In particular, BluGlass advanced the development of its first standard laser diode product, with successful completion of the optical coating step for several 405nm laser devices. As published in the Company's [Business Update](#) earlier this month, BluGlass' 405nm laser design has demonstrated initial performance results of coated, unpackaged devices in line with our target specifications.

405nm Light Output with/without AR-HR Coating



Unpackaged device
10µm x 1200 µm ridge
Pulsed Measurement using 5% Duty cycle and 500ns pulse width

LIV Data at 0.5 A operating current		
Parameter	Uncoated	AR/HR Coated
Light Output Power (W)	0.31	0.75
Voltage (V)	4.4	4.5
Conversion Efficiency (%)	14.1	33.6

LIV Data at 1.0 A operating current		
Parameter	Uncoated	AR/HR Coated
Light Output Power (W)	0.76	1.76
Voltage (V)	5.9	6.0
Conversion Efficiency (%)	12.9	29.3

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These devices are now being packaged and assembled in the US, after which they will be put through rigorous reliability testing.

Additional laser diode designs of other wavelengths and product specifications are also progressing through the Company's development pipeline and supply chain.

BluGlass recently released a laser diode data pack under NDA to a number of customers who have expressed an interest in our products. The Company remains on track to meet its technical and commercial milestones and launch its first laser diode product in early 2021.

Financial Summary

In accordance with ASX LR 4.7C.1, the following amounts were paid in relation to the material activities undertaken during the quarter:

Activity Undertaken	Amount paid during the Quarter \$'000
Laser Diode product development	1,508
Micro LED and LED research and development	33
RPCVD equipment development	80
Total direct expenditure	1,621

In accordance with ASX LR 4.7C.3, during the quarter an amount of \$157,000 was paid to related parties, representing managing director and non-executive director fees.

Customer revenue totalled \$187,000 for the December quarter; of which \$89,000 was laser diode revenue. This revenue was made up by the Yale University and US Defense Advanced Research Projects Agency (DARPA) contract to deliver advanced laser diode development.

Other foundry revenue totalled \$98,000 for the quarter. This was due to a return of microLED and LED customer orders, following a lengthy hiatus due to COVID impacts in Europe and the US.

Cash at end of the quarter was \$4.3M.

This announcement has been approved for release by the Board.

About BluGlass

BluGlass Limited (ASX: BLG) is a global leader commercialising a breakthrough technology using Remote Plasma Chemical Vapour Deposition (**RPCVD**) for the manufacture of high-value semiconductor devices such as **laser diodes**, next generation **LEDs** and **microLEDs**. BluGlass has invented a new process using RPCVD to grow advanced materials such as gallium nitride (GaN) and indium gallium nitride (InGaN). These materials are crucial to the production of high-efficiency devices used in next-generation devices from lighting, displays, virtual reality systems and industrial cutting and welding.

RPCVD's unique low temperature, low hydrogen growth platform offers many potential benefits to electronics manufacturers over existing growth techniques; including higher efficiency, lower cost, greater substrate flexibility and has the potential to enable novel applications.

In 2019, BluGlass launched its direct-to-market Laser Diode business unit to exploit its unique tunnel junction technology capability in the high-value and high-margin laser diode market. BluGlass expects to launch its first laser diode commercial product in 2021.

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Appendix 4C

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

Name of entity

BluGlass Limited

ABN

20 116 825 793

Quarter ended ("current quarter")

December 2020

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	187	220
1.2 Payments for		
(a) research and development	(1,035)	(2,038)
(b) product manufacturing and operating costs	(55)	(55)
(c) advertising and marketing	(15)	(19)
(d) leased assets	(99)	(178)
(e) staff costs	(941)	(1,650)
(f) administration and corporate costs	(301)	(497)
1.3 Dividends received (see note 3)		
1.4 Interest received	3	5
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	2,939	3,173
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	683	(1,039)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(10)	(64)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(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	(10)	(64)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
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	-	(16)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	(16)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,626	5,430
4.2	Net cash from / (used in) operating activities (item 1.9 above)	683	(1,039)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(10)	(64)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	(16)
4.5	Effect of movement in exchange rates on cash held	(8)	(20)
4.6	Cash and cash equivalents at end of period	4,291	4,291

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	44	181
5.2	Call deposits	4,247	3,445
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)	4,291	3,626

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	157
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 <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
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 into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	683
8.2	Cash and cash equivalents at quarter end (item 4.6)	4,291
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	4,291
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?	
	Answer:	
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: 28 January 2021

Authorised by: Emmanuel Correia
(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.