BLG: EXECUTING ON GROWTH STRATEGY

BluGlass Limited (ASX:BLG), February 2024

BLUGLASS

FORWARD LOOKING STATEMENT

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Information on Service Addressable Markets (SAM) is based on internal BluGlass modelling and assumptions, both of which depend on successful R&D outcomes and results achieved within estimated timetables. BluGlass recommends a cautious interpretation be taken by investors.

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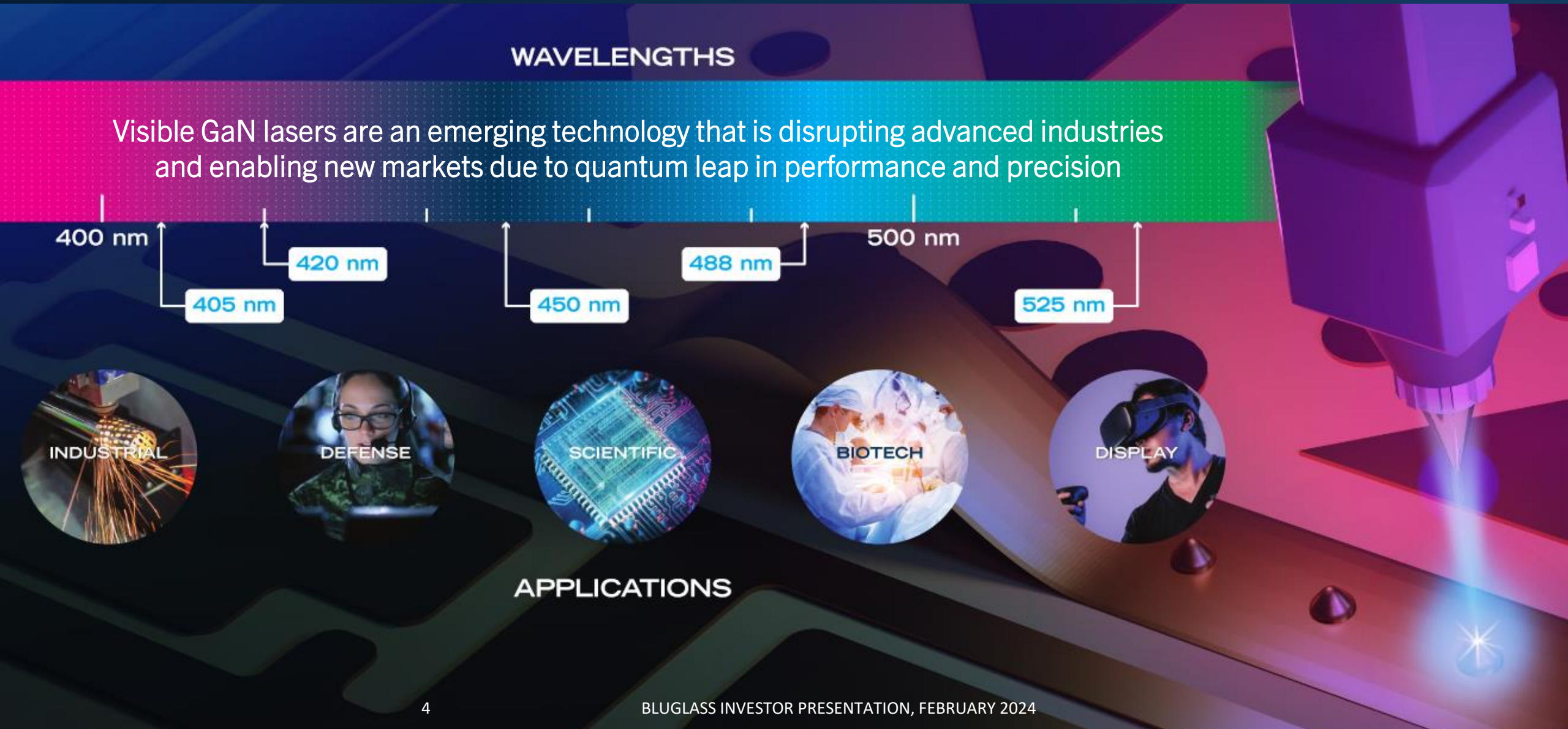
THIS INVESTOR PRESENTATION HAS BEEN APPROVED FOR RELEASE BY THE BLUGLASS BOARD OF DIRECTORS.

EXECUTIVE SUMMARY – POSITIONED TO TAKE MARKET SHARE

Leading GaN laser supplier	BluGlass is a leading supplier of gallium nitride (GaN) lasers to the global photonics industry. GaN laser diodes are essential semiconductor devices used in a wide range of industries and applications, including advanced manufacturing, automotive, bio-medical devices, AR/VR displays , quantum computing, and scientific research.
Large and growing markets with few competitors	Global laser revenue is forecast to surpass US$25B by 2025*. Driven by growth in high-tech applications, the GaN laser diode segment is rapidly expanding, predicted to reach US$2.5B in the same period. BluGlass is one of just a handful of GaN laser diode suppliers globally with significant unmet customer needs, and high barriers to market entry. *Source: Strategies Unlimited 2020
Key contracts and growing customer engagement	• Secured a key contract as part of the US Department of Defense's Microelectronics Commons CLAWS Hub, winning a AU$2.6M contract for development work in 2024 • Customers include industry leading OEMs, a national lab, industry pioneers to research organisations and disruptive start-ups across defence, quantum, industrial, medical, and scientific sectors
Unique competitive advantages to drive growth	BluGlass is establishing its reputation as a leading pure-play supplier of GaN lasers in the rapidly growing quantum, defence, scientific and industrial markets. BLG's unique offering meets significant unmet customer demand for flexible form factors, custom products, underserved wavelengths and novel architectures. BluGlass' proprietary RPCVD technology provides unique benefits over the incumbent technology with potential to enable novel devices and increase product performance.
Substantial revenue capacity & reduced production costs	BluGlass' full-suite production fab increases development speed, reduces production costs and improves profit margins. The fab scales operations, increasing annual wafer and revenue generation capability to US$170m revenue capacity.
Capital raise	BLG is undertaking a Capital Raise of up to A$13.3 million comprising; • A Placement to raise A$4.3 million ("Placement") under existing LR7.1 & LR7.1A placement capacity • A Share Purchase Plan of up to A$9.0 million to eligible shareholders on the same terms as the Placement ("SPP") Offer price of $0.037 per New Share. Offer includes a 1 for 1 free attaching option intended to be listed on the ASX with an exercise price of $0.046 and expiry of 28 Feb 2025. Every free attaching option exercised will include one fully paid BLG share and one Piggyback Option, exercisable at $0.06, expiring on 28 Feb 2027.
Use of funds	• Scaling Product Delivery • Capital Expenditure • General Working Capital

WHO WE ARE: LEADING PURE PLAY GaN LASER SUPPLIER

BluGlass is one of only a handful of global GaN laser suppliers, with rapidly growing demand and high-barriers to entry



WHO WE ARE: LEADING PURE PLAY GaN LASER SUPPLIER

Launched suite of GaN Visible laser diodes

Products available in underserved wavelengths and flexible form factors to address key customer challenges.

Multiple customer orders

Initial orders from leading industrial and quantum OEMs, an international energy research institute, and medical device manufacturers. Revenue capacity of US$170M.

Proprietary technology; 53 patents

RPCVD manufacturing process enables novel, brighter and higher efficiency laser diodes.

Few competitors in rapidly growing US$2.5B market

One of just a handful of GaN laser manufacturers globally, with high barriers to entry. BluGlass is only pure-play GaN laser supplier not captive in commoditised markets.

Expert laser and manufacturing team

Highly experienced manufacturing team, led by laser diode veteran Jim Haden.

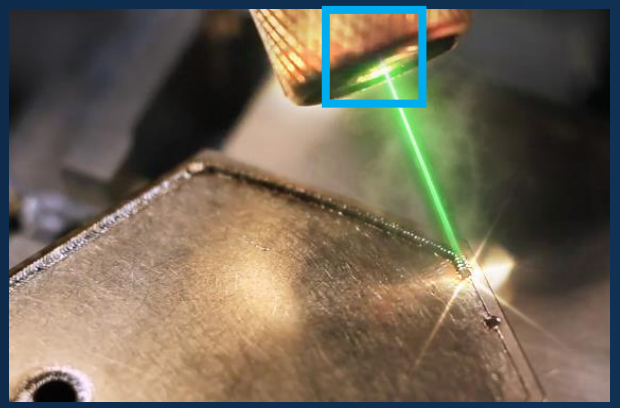
Global operations

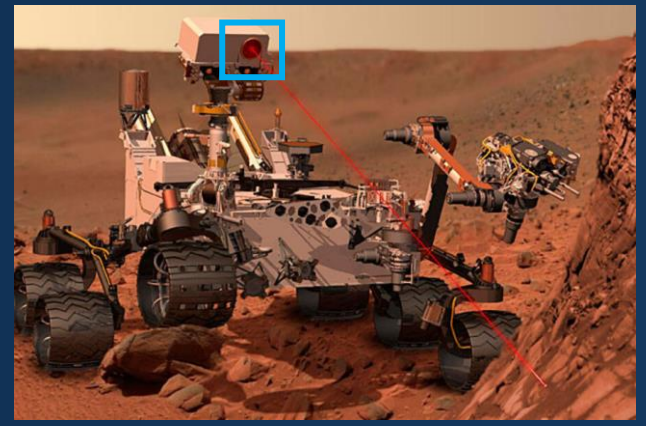
Vertically integrated across three production facilities:

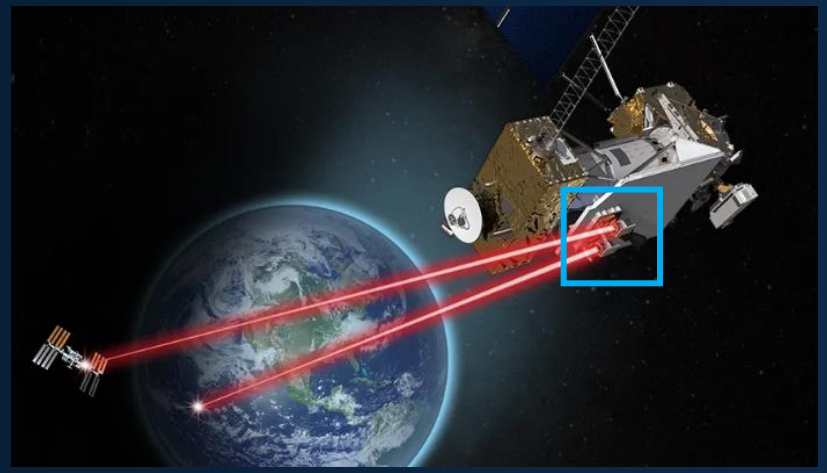
- Sydney, NSW, Australia
- Silicon Valley, California, USA
- Nashua, New Hampshire, USA

ASX: BLG

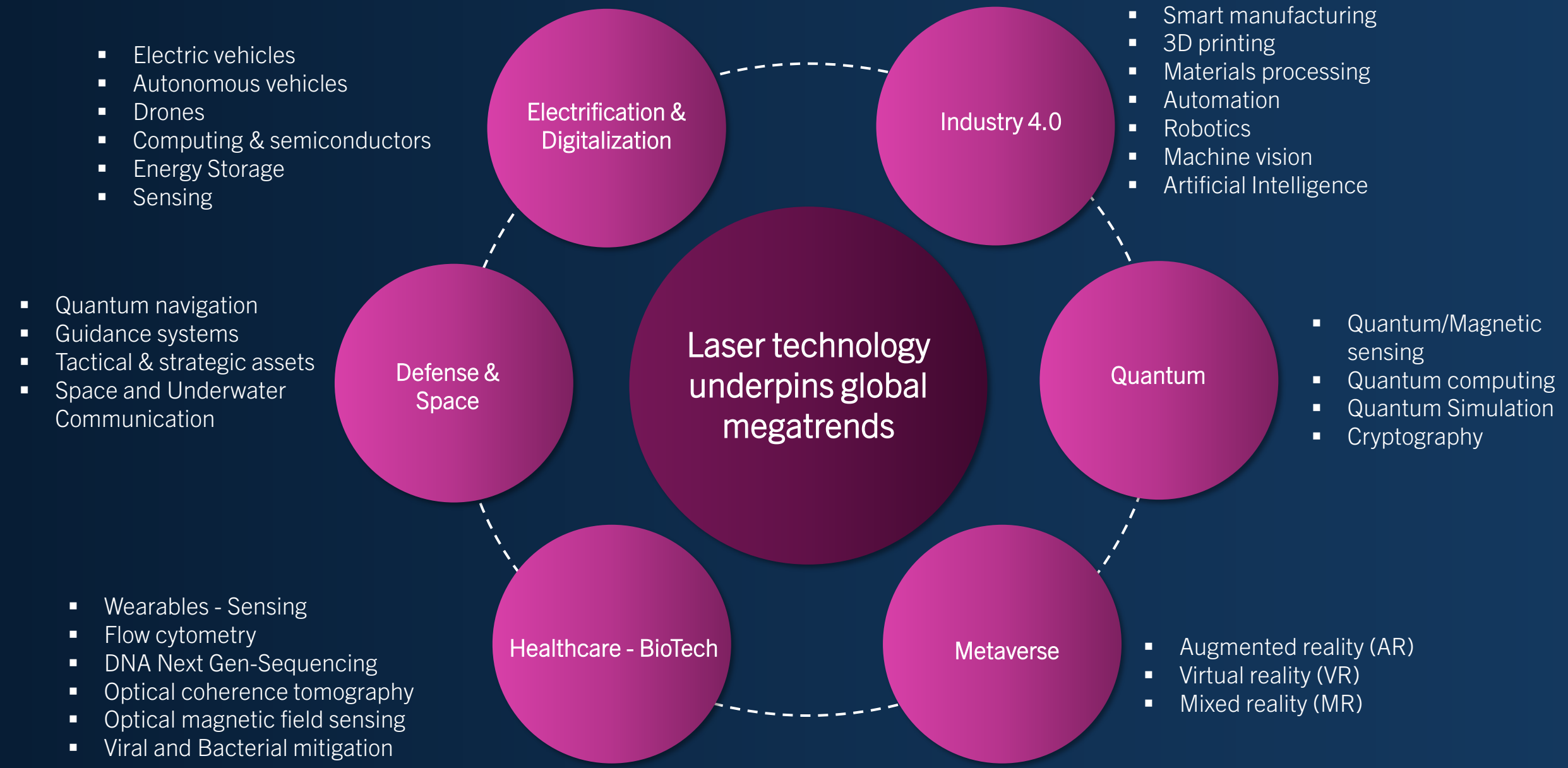
LASER DIODE APPLICATIONS – ENABLING NEXT GENERATION TECHNOLOGIES







GLOBAL MEGATRENDS DRIVING ADVANCED LASER APPLICATIONS



- Electric vehicles
- Autonomous vehicles
- Drones
- Computing & semiconductors
- Energy Storage
- Sensing

- Smart manufacturing
- 3D printing
- Materials processing
- Automation
- Robotics
- Machine vision
- Artificial Intelligence

- Quantum navigation
- Guidance systems
- Tactical & strategic assets
- Space and Underwater Communication

- Quantum/Magnetic sensing
- Quantum computing
- Quantum Simulation
- Cryptography

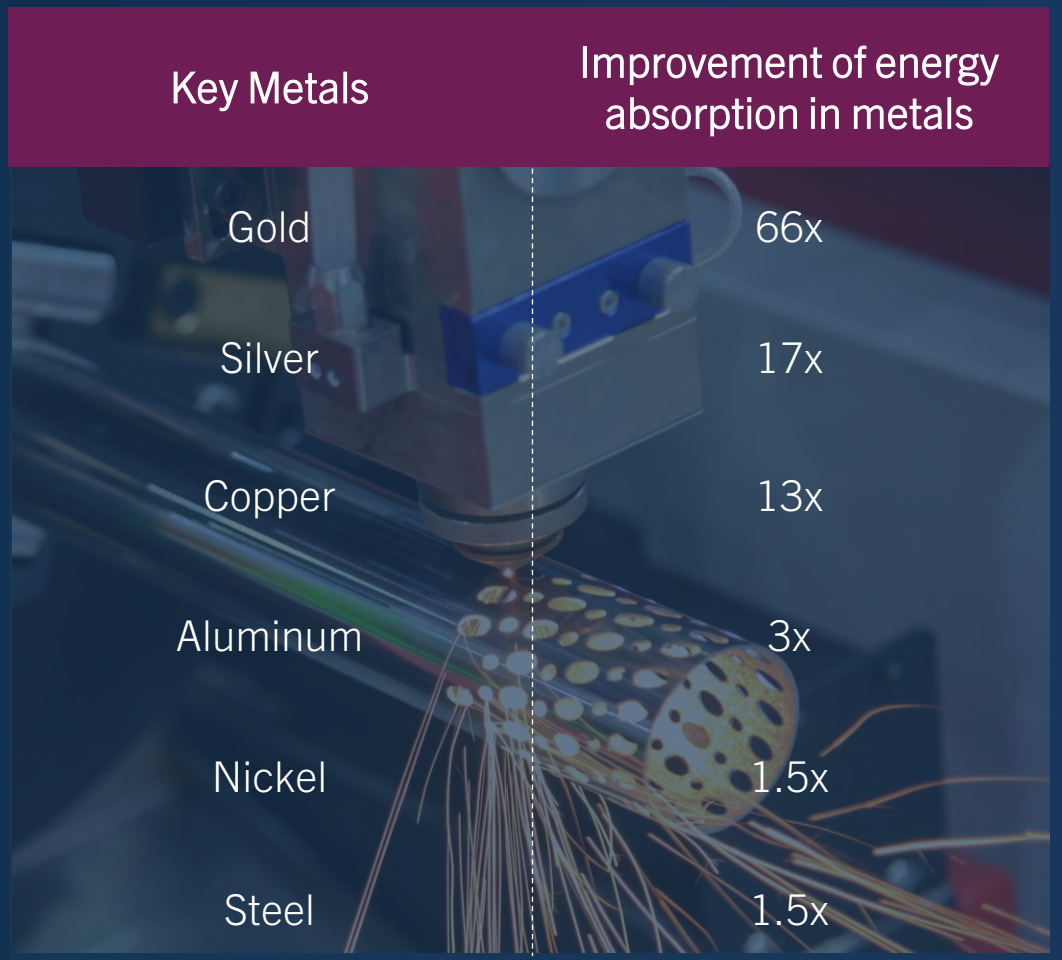
- Wearables - Sensing
- Flow cytometry
- DNA Next Gen-Sequencing
- Optical coherence tomography
- Optical magnetic field sensing
- Viral and Bacterial mitigation

- Augmented reality (AR)
- Virtual reality (VR)
- Mixed reality (MR)

MARKET DRIVERS - THE ADVANTAGES OF GaN LASER DIODES

Visible GaN laser diodes have many advantages over traditional infrared lasers

- Visible light has higher absorption in key industrial metals
- Cleaner, faster welding, 3D-printing, and materials processing
- Tighter beam focus and improved efficiency
- Higher precision manufacturing, enabling increasingly advanced technology applications
- Visible and UV light interacts favorably with quantum and organic materials (viruses, bacteria, cancer cells)



Source: NASA, 1969

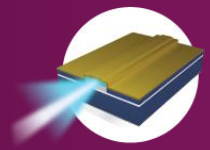
WHAT WE DO: OFFERING THE WORLD'S EASIEST TO USE GaN LASER LIGHT

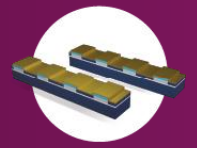
BluGlass' vertically integrated laser offering has been designed to meet the market and solve our customers biggest challenges

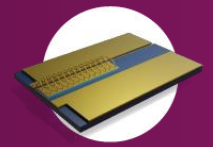
- Plug & Play & Custom Lasers
- Offering underserved and custom wavelengths from 400nm-525nm
- Single-mode and multi-mode products
- Enhanced designs and novel device architectures for higher-power, higher-brightness lasers
- Vertically integrated from design and epitaxy to packaging and testing

Flexible form factors will revolutionize how our customer use GaN laser light

BluGlass' Form Factor Offerings

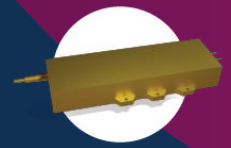

Single emitters


Laser diode bars


Chips-on-submounts (CoS)


TO Cans (various sizings)

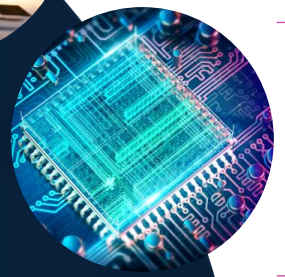

C-Mounts, F-Mounts, Butterfly Pins


Multi-chip Arrays

KEY INDUSTRY PLAYERS BY SEGMENT

INDUSTRIAL

COHERENT
NUBURU
TRUMPF
IPG PHOTONICS
MITSUBISHI ELECTRIC
AIRBUS
TERADIODE NEXT GENERATION INDUSTRIAL LASERS
nLIGHT



QUANTUM & SCIENTIFIC

BOSCH
TOPTICA PHOTONICS
IPS Innovative Photonic Solutions
Fraunhofer
Laser Quantum INNOVATIVE RELIABLE INTELLIGENT

DISPLAY (AR/VR)

Google
Panasonic
LG
Meta
SAMSUNG

BIOTECH

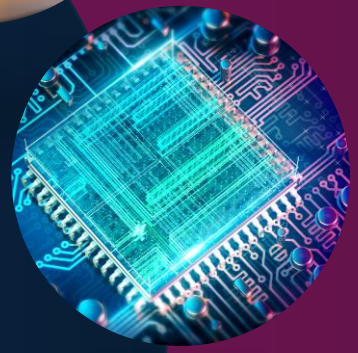
modulight
BIOLASE Advancing Dentistry
Alcon
IRIDEX

DEFENCE

DEPARTMENT OF DEFENSE UNITED STATES OF AMERICA
DARPA
Raytheon Technologies
NORTHROP GRUMMAN
LOCKHEED MARTIN
BOEING

WORKING WITH CUSTOMERS ACROSS OUR TARGET VERTICALS

INDUSTRIAL



QUANTUM & SCIENTIFIC

BIOTECH

DEFENCE/ ENERGY & R&D

Multiple leading OEM customers

BluGlass' customers include leading OEMs across the industrial, medical, quantum & scientific sectors, and national labs and research organisations

Qualifying products across full portfolio

Customers are purchasing underserved and in-demand wavelengths across our full portfolio in single and multi-mode devices

Received first repeat customer order

BluGlass lasers are being qualified in customer applications to validate performance and lifetime

Validated our differentiated product offering

Our customers are purchasing both off-the-shelf standard products and highly customized products in flexible form factors, validating our flexible manufacturing offering and full-suite capability

US DoD ESTABLISHES MICROELECTRONICS COMMONS, INVESTS $2B

BLG IS COMMERCIAL PARTNER IN CLAWS

- 8 Regional Hubs established
- CLAWS Hub awarded US $39.4M for development work in FY24

AU$2.6M

Contract awarded to BluGlass for initial core development. To be refreshed in September ‘24

Five-year program established to accelerate the Lab-to-Fab transition & produce microchips at scale

Strategic alignment with our advanced roadmaps to deliver next gen materials processing, sensing, quantum applications, and critical defence capabilities

CLAWS HUB LEAD & MEMBERS

LEAD

NC STATE UNIVERSITY

MEMBERS

ADROIT MATERIALS

BLUGLASS

COHERENT

kyma technologies

North Carolina Agricultural and Technical State University

Wolfspeed

LEADERSHIP TEAM: DEEP LASER INDUSTRY EXPERTISE

BOARD OF DIRECTORS

James Walker
NON-EXECUTIVE CHAIR
Experienced technology commercialisation leader; Chartered Accountant

Jean-Michel Pelaprat
NON-EXECUTIVE DIRECTOR
Co-founder of blue-laser pioneer, NUBURU; 30 years' semiconductor experience

Stephe Wilks
NON-EXECUTIVE DIRECTOR
Seasoned corporate executive; proven track record in high growth and disruptive industries

Vivek Rao
NON-EXECUTIVE DIRECTOR
Global semiconductor equipment specialist; Executive VP and COO of SPT Micro-Technologies

MANAGEMENT TEAM

Jim Haden
CEO
Veteran laser expert with 30 years' experience; demonstrated experience transforming advanced tech businesses

Dr Ian Mann
COO & CTO
Product development and technology commercialisation specialist with experience through-out photonics industry

Brad Siskavich
EXECUTIVE VP
More than 25 years' experience developing and commercialising new compound semiconductor and laser technologies

Samuel Samhan
CFO
Highly-credentialled finance executive with more than 20 years' experience

Stefanie Winwood
HEAD OF CORPORATE & IR
Strategic marketing and Investor Relations professional with more than 15 years' experience in high-tech and semiconductor sector

Martin Aguilera
DIRECTOR OF OPERATIONS
More than 25 years' international experience in managing semiconductor manufacturing operations

CY24 UPCOMING MILESTONES

- Complete vertical integration in Silicon Valley wafer fab
- Ongoing repeat orders from customers
- Integrate commercial packaging, testing & reliability equipment
- Improve yield and reliability performance to increase shipments
- Launch brighter & more efficient lasers in core wavelengths (405-450nm)
- Sign distribution agreements with regional distributors
- Qualify BLG lasers in customer products
- Scale to volume orders, grow revenues
- Demonstrate green lasers
- Demonstrate higher-value multiple-function solutions – multi-chip modules

TIMETABLE:
Indicative SPP Offer Timetable

Event	Date
Lodgement of Prospectus with ASIC	14 February 2024
Lodgement of Appendix 3B, Announcement and Prospectus with ASX	14 February 2024
Offer Opens	21 February 2024
Issue of Notice of Meeting	29 February 2024
Offer Closes	13 March 2024
Issue of New Shares	15 March 2024
Expected Date of Quotation of New Shares	22 March 2024
General Meeting Held	4 April 2024
Issue and Allotment of New Options	5 April 2024
Expected Date of Quotation of New Options	12 April 2024
Last Date to exercise New Options	28 February 2025
Issue and Allotment Date of Shares and Piggyback Options following Exercise of New Options	3 March 2025

The above timetable is indicative only and subject to change without notice

KEY RISKS

Risk	Risk Description
Loss of key management personnel	BluGlass' ability to effectively execute its business strategy depends upon the performance and expertise of its key management personnel. Any loss of key management personnel, any delay in the replacement of any key management personnel, or any extended period where key management personnel are unable to work will adversely affect BluGlass' operations and future performance.
Development and commercialisation of technologies	The success of BluGlass will be impacted by the successful development and commercialisation of its technologies. For instance, BluGlass' RPCVD technology may fail to meet competitive specifications. Should the development not be completed in accordance with BluGlass' specifications or should the results of further testing indicate technology performance is below market requirements, BluGlass will have to expend additional time and resources to rectify any outstanding issues which will delay the commercialisation of the company's advanced roadmaps. BluGlass may also experience difficulty in raising capital if such technology-related milestones are not achieved.
Product liability and uninsured risks	BluGlass is exposed to potential product liability risks, inherent in the research and development, manufacturing, marketing and use of its products or products. Further, BluGlass is exposed to the risk of catastrophic loss to necessary laboratory equipment, computer equipment or other facilities, which would have a serious impact on BluGlass' operations.
Intellectual property	BluGlass relies upon a combination of patents, know-how, trade secret protection and confidentiality agreements to protect its technologies. Legal standards relating to the validity, enforceability and scope of protection of intellectual property rights are uncertain. Effective patent, trade mark, copyright and trade secret protection may not be available to BluGlass in every country in which its products may be sold. Accordingly, despite its efforts, BluGlass may not be able to prevent third parties from infringing upon or misappropriating its intellectual property.
Competition	The industry in which BluGlass is involved is subject to increasing domestic and global competition which is fast-paced and fast-changing. For instance, new technologies could result in BluGlass not being differentiated to other similar offerings. The size and financial strength of some of BluGlass' competitors may make it difficult for it to maintain a competitive position in the technology market. In particular, BluGlass' ability to acquire additional technology interests could be adversely affected if it is unable to respond effectively and/or in a timely manner to the strategies and actions of competitors and potential competitors or the entry of new competitors into the market. This may in turn impede the financial condition and rate of growth of BluGlass.




THANK-YOU & QUESTIONS

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E: investors@bluglass.com.au

BLUGLASS

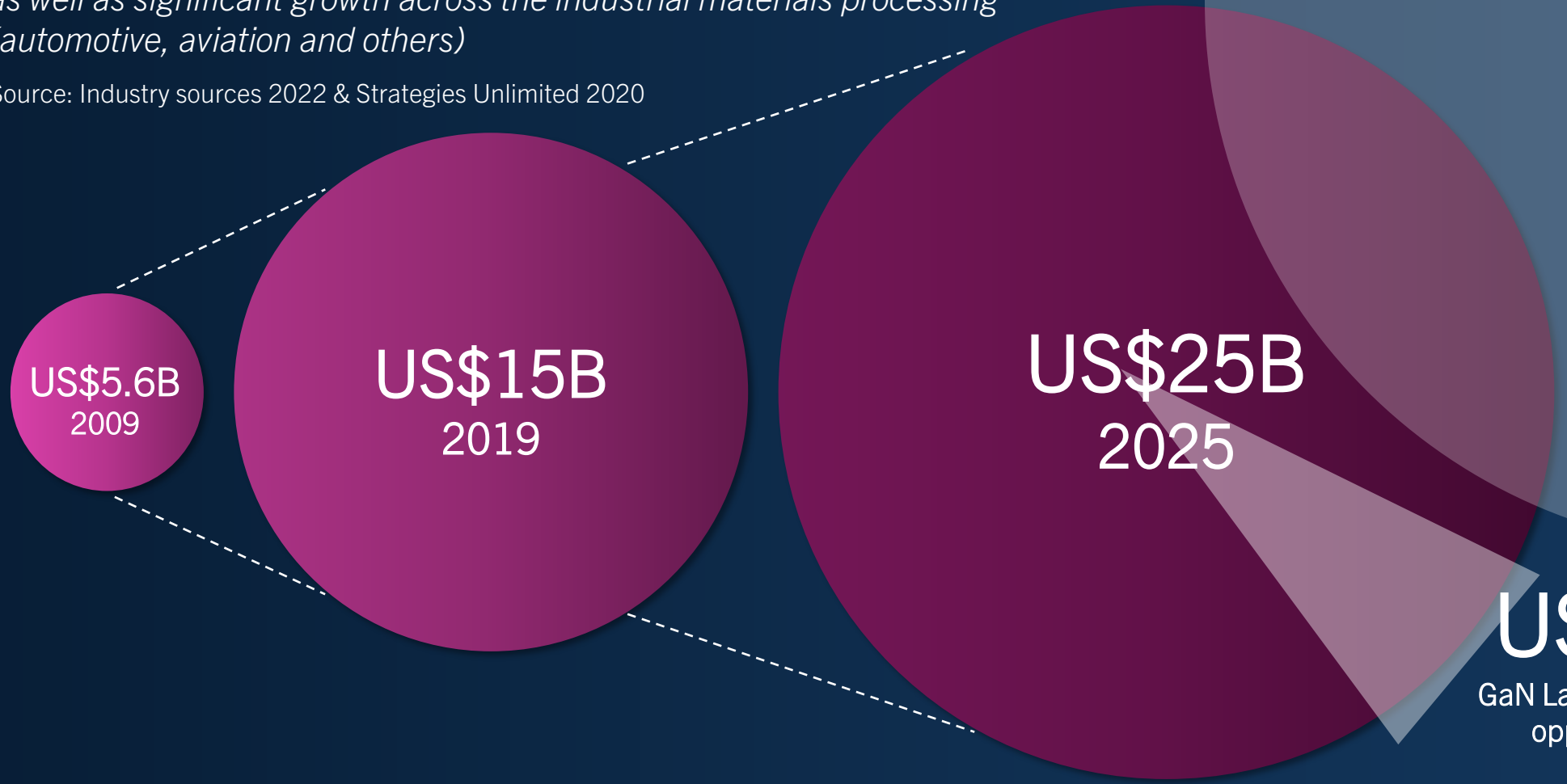
APPENDIX:

LASER REVENUE GROWTH FORECAST

Laser revenue has almost tripled in past decade

Driven by the adoption of high-tech applications globally such as *smart phones and TV's, 3D printing, electric vehicle and renewable energy storage, as well as significant growth across the industrial materials processing (automotive, aviation and others)*

Source: Industry sources 2022 & Strategies Unlimited 2020

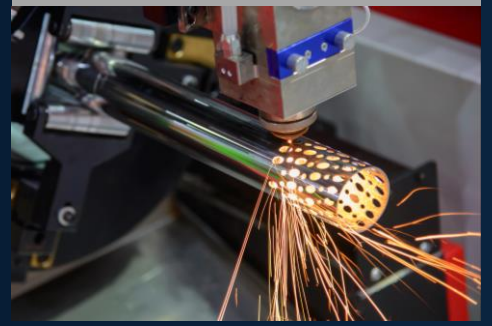


Growth is expected to increase pace over the next decade

US$2.5B
GaN Laser Systems Revenue opportunity by 2025

GaN LASER MARKET VERTICALS (2025)

Industrial



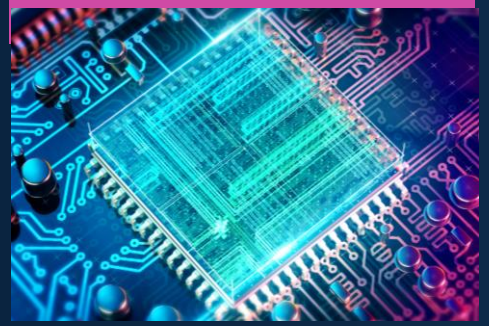
(405nm, 450nm, 525nm)

US $400M

Applications:
Materials processing, Machine vision & sensing, 3D printing, Semiconductors

OEM Customer Landscape:
IPG Photonics, nLight, NUBURU, Coherent

Quantum & Scientific



(405nm, 420nm, 450nm, 490, 525nm)

US $100M

Applications:
Quantum computing, Quantum sensing & navigation, florescence microscopy

OEM Customer Landscape:
Coherent, Toptica, AOSense, Modulight

Biotech/Life Sciences

(405nm, 420nm, 450nm, 490, 525nm)

US $60M

Applications:
Flow cytometry, Next-Gen DNA Sequencing, Photodynamic therapy

OEM Customer Landscape:
10X Genomics, Pac Bio, Lumencor, Element Biosciences

Display (AR/VR)

(450nm, 525nm)

US $60M

Applications:
Augmented reality, Virtual Reality & Mixed Reality, Pico projectors, Heads-up display

OEM Customer Landscape:
Apple, Google, META, Samsung

Defense & R&D

(405nm, 420, 450nm, 488nm, 525nm)

US $115M

Applications:
Navigation & guidance systems, Detection & sensing, Advanced materials processing

OEM Customer Landscape:
DARPA, Lockheed Martin, Northrup Grumman, Boeing

Source: Strategies Unlimited and Internal BluGlass modelling based on industry sources

HIGHLY CONSTRAINED MARKET:

The GaN laser diode industry is an emerging market growing rapidly.

Challenged by constrained supply

Only a handful of captive global GaN laser suppliers in an emerging market with combined GaN laser systems revenue in excess of $1B and set to grow to $2.5B in 2025

Competitors are largely focused on LEDs

Most competitors are not dedicated GaN laser suppliers; they are captive in larger organizations with large differentiated product portfolios focused on LED and micro-LED markets

Low mix/high volume business models

Limited form factor flexibility, customisation and manufacturing agility in current business models Is creating significant unmet needs in quantum, scientific defence, and biotech verticals

High barriers to market entry

BLG IS SOLVING CUSTOMER CHALLENGES

Manufacturing flexibility

BluGlass' laser offering addresses underserved markets, wavelengths and delivered in flexible form factors.

Dedicated GaN laser supplier

A dedicated GaN laser supplier targeting the industrial, scientific, biotech, defence and display markets.

Differentiated offering

Proprietary Remote Plasma Chemical Vapour Deposition (RPCVD) platform and Tunnel Junction technology provide competitive advantages, enabling brighter and better performing lasers.

Development capability

Supporting customer product roadmaps with development capability to power innovative new applications.

The world's easiest to use GaN laser light

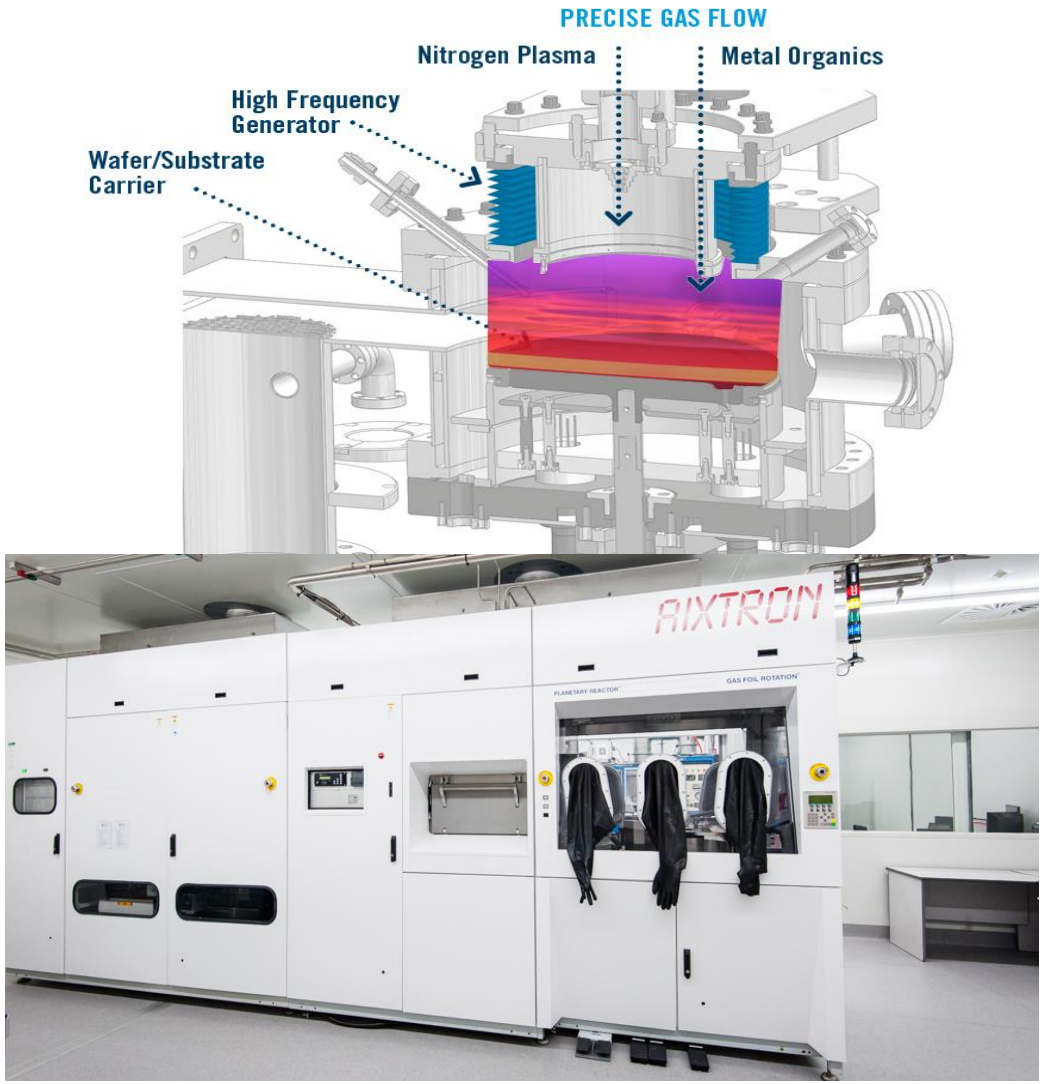
Packaging and customisation flexibility to reduce customer integration costs, solving key challenges.

BLUGLASS' PROPRIETARY GaN GROWTH TECHNOLOGY: RPCVD

Remote Plasma Chemical Vapour Deposition (RPCVD) offers many potential benefits in the manufacturer of GaN laser diodes

BENEFITS OF RPCVD

- **Low-temperature, low hydrogen** manufacturing processes, several hundred degrees cooler than the industry standard MOCVD
- These unique benefits enable **novel device architectures** for the development of **higher-performing** devices
- Performance advantages **for longer and shorter wavelength** GaN lasers
- **Lower cost inputs** and cleaner manufacturing process (ammonia free growth)



BLUGLASS TECHNOLOGY ROADMAP

Launched GaN Products (Core Capabilities)

- Portfolio spanning 405, 420nm & 450nm in Single-mode & multi-modes
- Continued improvement in performance & reliability
- **Initial sales - Working to qualify lasers in customer applications**

Add Novel Capabilities

- Launch Distributed FeedBack (DFB) lasers for quantum applications
- DFB lasers are not commercially available at present
- **Unique product positioning growing presence in higher ASP quantum and medical imaging markets**

Establish as Partner of Choice

- **BLG positioned for break-out success as the only pure-play GaN laser provider**
- Enhanced packaging and manufacturing flexibility
- Industry-leading performance and stand-out technology capabilities

Increase unique capabilities and technology to capture greater value over time

1 — 2 — 3 — 4 — 5

Enhance & Extend Product Portfolio

- Extend Wavelengths to ultra-violet (390nm) & green (525nm)
- Improve power conversion & reliability
- Offer greater form factor flexibility adding fiber-coupled packages
- **Increasing sales and BLG reputation**

Higher Value Offering (Integrated Functionality)

- Higher ASP product offering such as Photonic Integrated Circuits (PICs) and multi-chip modules (MCMs)
- **Ease of system integration for high-power material processing and quantum applications**

CUSTOM PROJECTS SPEED PATH TO PROFITABILITY

- Large custom laser projects are a key commercial strategy pillar; provide path to profitability
- Won commercial partnership as CLAWS Hub member as part of $238M Microelectronics Commons
- Projects provide substantial and recurring revenues and can span multiple years
- Complements direct-to-market visible laser offering
- Builds reputation as the industry's partner of choice
- Fast-tracks and funds advanced roadmaps and next-gen product timelines
- Projects to occur alongside scaling GaN laser production & development

Custom projects form a key pillar of commercial strategy and path to profitability

GLOSSARY

Term	Definition
Gallium Nitride (GaN)	Gallium nitride (GaN) is an important semiconductor material used in billions of electronics devices around the globe. GaN is a direct bandgap semiconductor commonly used in blue light-emitting diodes and laser diodes for a wide range of commercial applications due to its high-power and high-frequency properties.
Laser Diode	A Laser Diode is a semiconductor device similar to a light-emitting diode (LED). It uses a p-n junction and AR and HR coatings to emit focused coherent light, where the simulated light waves are the same frequency and phase.
Wavelength	Light waves can be described by the distance between two successive peaks of the wave - a length known as the wavelength. Different wavelengths of light appear to our eyes as different colours. Shorter wavelengths appear blue or violet, and longer wavelengths appear red.
Form Factor	Form factor is the hardware design and package of the laser diode ready for customer integration. BluGlass provides flexible integration options, such as combining our laser diode components with heatsinks, sealed environments, and even optical components to provide easier to use solutions for our customers
Single-mode Laser	A single mode laser contains one output beam mode, measured by beam quality. Single mode lasers are harder to achieve, but their high-quality beam is highly desirable in many applications where high precision and highly focused power is required such as medical and quantum applications.
Multi-mode Laser	A multimode laser has multiple modes in the output beam mode with a beam quality of >2.0. Multi-mode lasers have great application in high power applications such as material processing and defence applications.
RPCVD	BluGlass' proprietary technology, Remote Plasma Chemical Vapour Deposition (RPCVD) works in a similar way to the industry incumbent technology, MOCVD, where gases are introduced into a reaction chamber for deposition (growth) of thin-films. Whereas MOCVD uses thermal decomposition of ammonia (NH_3) to provide active nitrogen, RPCVD uses a nitrogen (N_2) plasma source which allows for the growth of GaN at much lower temperatures while maintaining the critical crystal quality necessary for high performance devices.
MOCVD	Metal Organic Chemical Vapour Deposition (MOCVD) is a technology that is used to deposit very thin layers of atoms onto a semiconductor wafer (wafers are thin disks mostly made of sapphire or silicon). It is the industry standard method of manufacture of gallium nitride semiconductors.