SEPTEMBER 2018

BluGlass Investor Presentation: 2018 Review of Operations

Giles Bourne, Managing Director & CEO

DISCLAIMER

This document has been prepared by BluGlass Limited to provide existing and prospective investors in BluGlass Limited with a summary of progress to date

No statements, opinions, or other material contained in this document constitute any commitments, representations or warranties by BluGlass Limited, 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 any nature whatsoever 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. These assumptions may or may not prove to be correct. Recipients of the document must consider and make their own independent investigations and evaluations prior to making any decisions to invest in the Company.

INTRODUCTION

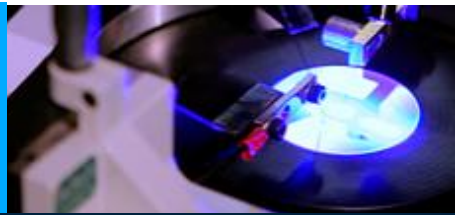
BLUGLASS VISION

Accelerate the commercial opportunities for the use of Remote Plasma Chemical Vapour Deposition (RPCVD) technology in the manufacture of high-performance devices, including high-brightness LEDs (HB-LEDs), microLEDs and power electronics

OUR VISION

BluGlass' vision is to be a global leader in the development and deployment of RPCVD technology, to enable device manufacturers to exploit its benefits, and adopt it as a preferred manufacturing option.

OUR OBJECTIVE



Our objective is to deliver high-growth commercial outcomes for the RPCVD technology in the LED and power electronics industries, using a diverse range of go-to-market options.

RPCVD PLATFORM TECHNOLOGY: MARKET OPPORTUNITIES

BluGlass has a diversified development strategy designed to address opportunities in a number of high-performance device categories

HB-LED

General Lighting
Automotive
Mobile devices & TVs

US$63.2B

LED market is expected to reach ***US$63.2 billion*** *by* 2025[1]

microLED

Mobile devices
Smart watches & wearables
Augmented & Virtual Reality

US$19.9B

microLED market is expected to reach ***US$19.9 billion*** *by* 2025[2]

POWER ELECTONICS

Consumer electronics
Power supply
Data centres
Automotive

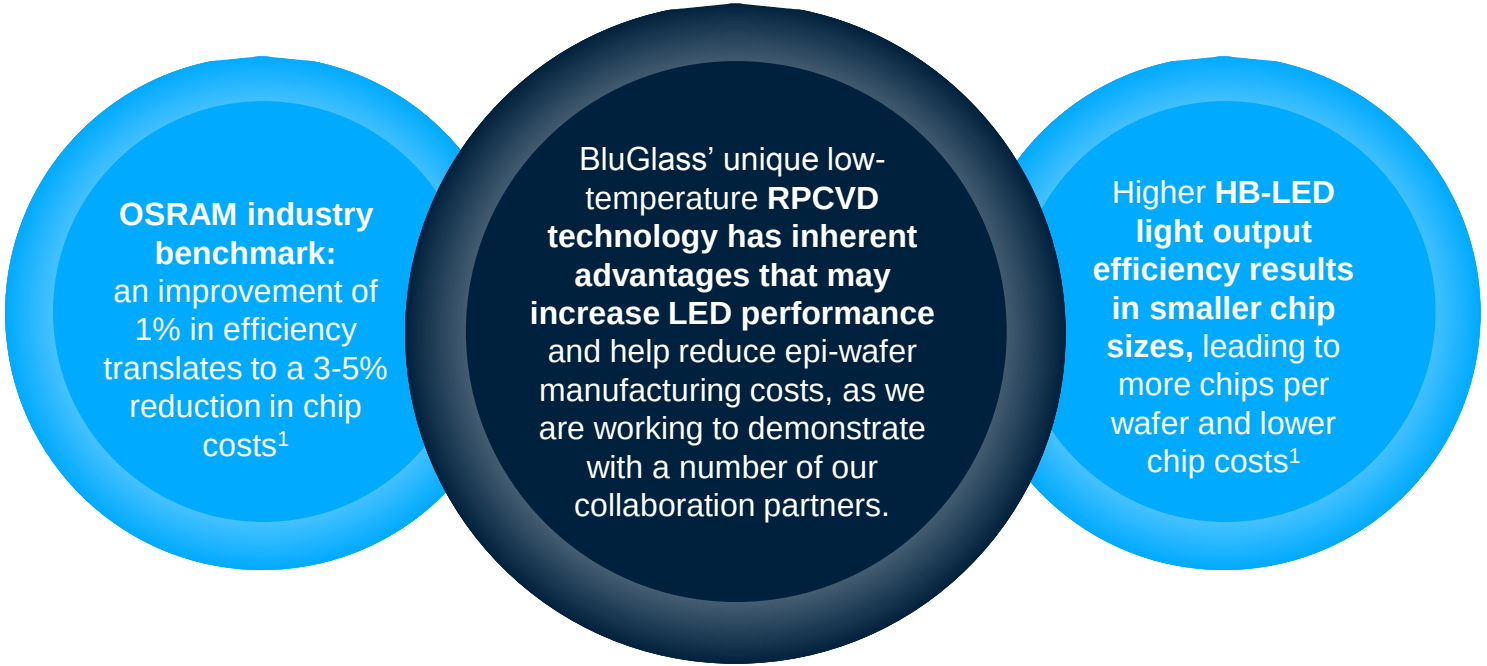
US$1.7B

The GaN power electronics market is expected to reach ***US$1.7 billion*** by 2027[3]

Sources: 1. Research and Markets Report Global Light-Emitting Diodes (LED) Market Analysis & Trends - Industry Forecast to 2025. 2. Navigant Research. marketsandmarkets.com, April 2017. 3. IHS Markets, SiC & GaN Power Semiconductors Report – 2018.

INDUSTRY PERSPECTIVE: KEY INDUSTRY INNOVATION REQUIREMENTS

Competitiveness in the HB-LED industry is largely driven by efficiency (light output) and manufacturing costs. Efficiency improvements can also lower cost.

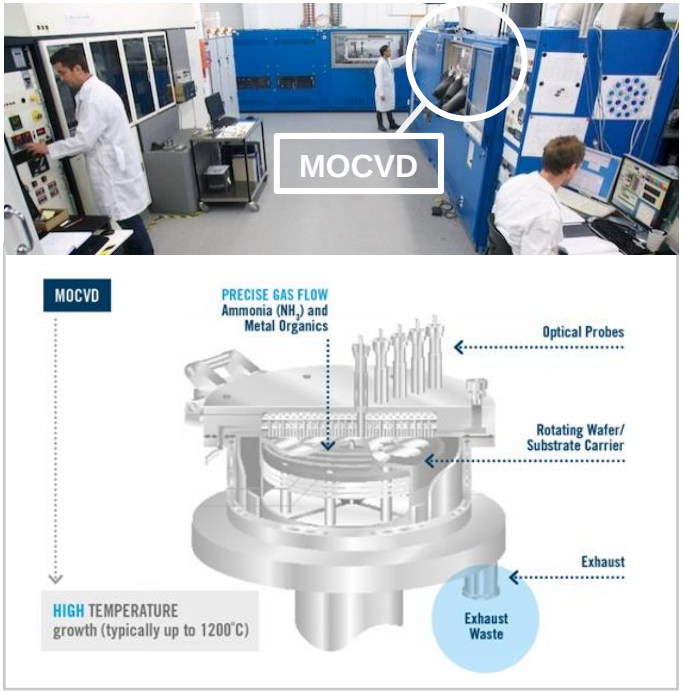


Sources: 1. OSRAM Analyst Day 2016 Presentation, January 2016.

INDUSTRY CHALLENGE: THE LIMITATIONS WITH INCUMBENT MOCVD TECHNOLOGY

MOCVD (Metal Organic Chemical Vapour Deposition) – the industry incumbent technology

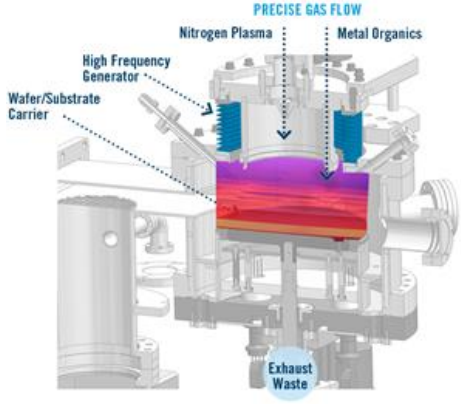
CHALLENGES	
	High temperature processes limits **performance** of the critical regions of the LED, microLED and power electronics devices
	Uses high volume of expensive **ammonia** as nitrogen source, produces toxic waste, more-difficult and costly to manage
	High temperature limits the choice of low-cost, larger silicon wafers for power electronics, microLEDs and LEDs



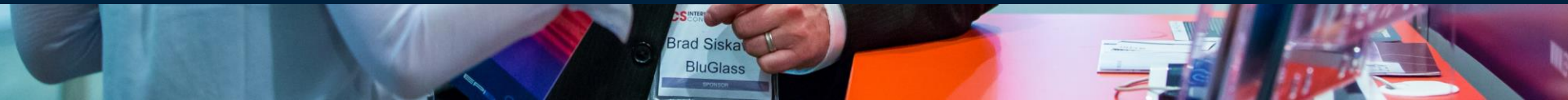
THE RPCVD SOLUTION: LOWER TEMPERATURE, HIGHER PERFORMANCE

RPCVD (Remote Plasma Chemical Vapour Deposition) – the breakthrough alternative

OUR SOLUTION	
	Lower-temperature manufacturing processes
	Lower cost inputs
	Higher-**performing devices**
	Environmentally friendlier & more-sensitive



2018 REVIEW OF OPERATIONS



2018 FINANCIAL SUMMARY

CURRENT POSITION

AU$17.7M Cash position at 30 June 2018

AU$11.2M Raised in placement & SPP during FY2018

AU$525k Gross burn rate/month **$420k net** burn rate/month

AU$714k Custom epitaxy (foundry) revenue for 2018 (up 30% from 2017)

POSITION FORECAST

AU$2.1M Anticipated R&D tax rebate to be received in 2018

TOP 10 SHAREHOLDERS	
1	SPP Technologies Co. Ltd
2	Access Macquarie Limited
3	HSBC Custody Nominees (Australia) Limited
4	JP Morgan Nominees Australia Limited
5	BluGlass Employee Incentive Plan Pty Limited
6	HSBC Custody Nominees (Australia) Limited
7	Swansea Innovations Limited
8	Citicorp Nominees Pty Limited
9	Strategic Development Partners (Aust) Pty Ltd
10	Boundary Nominees Pty Ltd

2018 FINANCIAL SUMMARY: CAPITAL RAISE

2018 Capital Raise

AU$11.2M

Raised in placement & SPP during FY2018
for major facility & technology upgrade

RAISE SUMMARY
50% of funds received from **global institutional investors**
Investment and support from **sector experts**
Validation of BluGlass' RPCVD technology and business strategy

CAPITAL RAISE USE OF FUNDS: FACILITY UPGRADE

Facilities & technology upgrade

Funds raised from the Institutional Placement and SPP are being used to:

- Acquire a commercial-scale MOCVD platform to retrofit with manufacturing-scale RPCVD hardware (demonstrate commercial scaling capability)
- Undertake major facilities upgrade to expand current infrastructure
- Facilitate acceleration of RPCVD development and meet requirements of emerging commercial applications
- Strengthen the company's balance sheet to exploit market opportunities and help fund increased activity

CAPITAL RAISE USE OF FUNDS: STRENGTHENING OUR TEAM

New strengths and perspectives on the BluGlass board and management team

BluGlass' increasing project demands and expanding global commercialisation focus required leadership and team expansion:

- Appointed two technology commercialisation specialists to the BluGlass Board of Directors - Stephe Wilks & James Walker
- US-based industry experts Dr. Mike Krames & Brad Siskavich appointed to help exploit the market opportunities of RPCVD
- Appointed new process engineer

JAMES WALKER
Non-Executive Director

STEPHE WILKS
Non-Executive Director

DR. MIKE KRAMES
Advisor

BRAD SISKAVICH
VP of Business Development

EPIBLU: SPECIALIST CUSTOM EPITAXY & CONTRACT R&D SERVICES

BluGlass' service business EpiBlu provides custom epitaxy and contract R&D services to the nitrides industry. New global VP Business Development appointed April 2018

AU$714K REVENUE

Custom epitaxy (foundry) revenue for 2018
(up 30% from 2017)

EPIBLU

	**Revenue**-generating business & lead-in RPCVD opportunities
	Growing customer pipeline for **RPCVD** and MOCVD services
	**Highly-strategic** vehicle

EPIBLU: SPECIALIST CUSTOM EPITAXY & CONTRACT R&D SERVICES

Growing global market presence and reputation with repeat contracts

APPLICATIONS & CUSTOMER INTEREST AREAS

PHOTONICS
LEDs
microLEDs
Laser diodes
Detectors

ELECTRONICS
Power electronics
RF electronics

SOLAR
InGaN-based
concentrator
photovoltaics
(CPV)

KEY COLLABORATIONS: UPDATEs

LUMILEDS

Continuing partnership with Lumileds, a global leader in automotive LED lighting products, remains one of our priorities.

In March 2018, BluGlass agreed with Lumileds to extend the Phase II collaboration.

The extension was specifically designed to accelerate the development of experimental iterations, including shortening turnaround times.

IQE

Continued focus by IQE on the potential for applying RPCVD to crystalline rare-earth oxide (cREO™) epitaxy.

Potential for commercial application in a wide range of electronic devices.

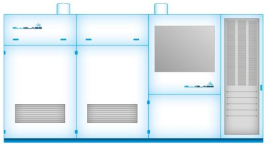
MICROLED OPPORTUNITY

BluGlass provides development services to a number of microLED companies interested in a combination of MOCVD and RPCVD capabilities to develop and prototype their innovative devices.

These customers are each developing unique microLED technology, and seek to exploit the potential benefits of RPCVD. The primary interest is in high-performance green LEDs.

THE LED VALUE CHAIN

BluGlass has collaborations and commercialisation opportunities in different segments of the LED value chain



Deposition Equipment
Specialist MOCVD or RPCVD equipment is used to conduct the necessary chemical reaction in the deposition chamber to grow GaN.

BLUGLASS
AMEC Veeco AIXTRON

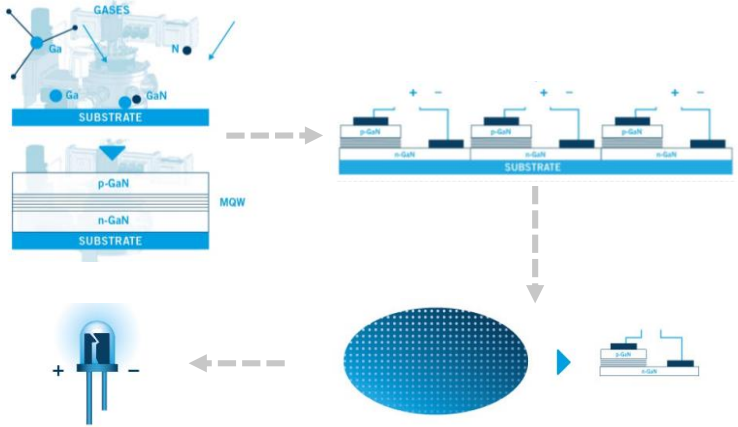


Diagram not to scale

EPIWAFER
Chemicals undergo a reaction in a deposition chamber to produce the required semiconductor material, on a substrate (approx 5 hours) to create epi-wafer

BLUGLASS
SEOUL
EPISTAR
II-VI EPIWORKS

DEVICES
Epiwafer is etched and processed to make many LEDs

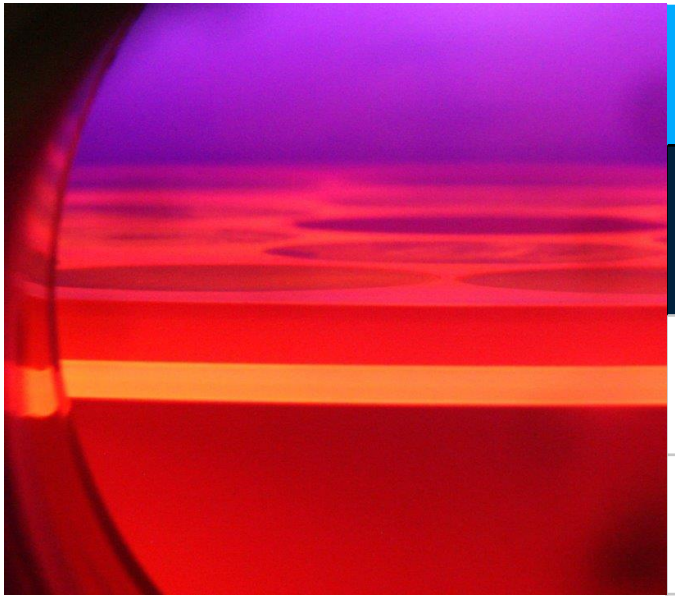
DICING
The processed epiwafer is sliced into tiny chips (approx 10,000 per 2” wafer)

PACKAGED DEVICES
The chip is then packaged into an LED device and inserted into a fitting

Integrated manufacturers
NICHIA
LUMILEDS
OSRAM
SAMSUNG
CREE

THE LED VALUE CHAIN – GO TO MARKET OPPORTUNITIES

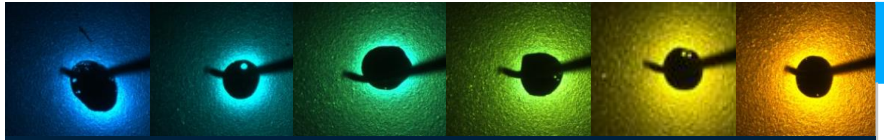
BluGlass intends to license its unique RPCVD technology and provide the RPCVD deposition equipment via one or more of these delivery options:



THREE GO-TO-MARKET OPTIONS
1. In partnership with **device manufacturer(s)** (e.g. Lumileds) *Most immediate path to market that we are pursuing*
2. In partnership with semiconductor **equipment manufacturer(s)**
3. Retrofit existing MOCVD platforms with RPCVD technology **by BluGlass**

MICROLED OPPORTUNITIES

BluGlass is collaborating with multiple microLED companies that are interested in the benefits of RPCVD



The microLED market segment builds on our established LED know-how.
Low-temperature RPCVD could be key to unlocking high performance of longer-wavelength LEDs (green and red LEDs) and be part of an enabling technology solution.

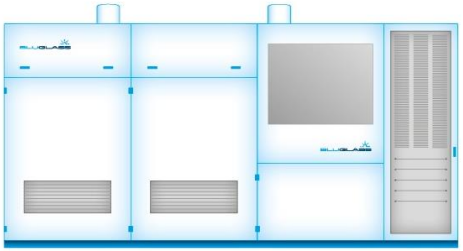
US$19.2B

Multiple sources predict a market growth of 53-54% CAGR to 2025

RPCVD FOR microLEDs
Low-temperature growth of the active layer and top layers of an LED may enable **indium-rich InGaN** (the key performance material in the 'active' layers)
RPCVD's inherently low growth temperature has potential for **high quality** growth of indium-rich InGaN for long wavelength LEDs (yellow, red **and green**)
RPCVD has potential to grow high indium content InGaN with its low temperature advantages for **LEDs and solar applications**

THE microLED VALUE CHAIN

The next generation of displays will be microLED - with major players now investing in microLED development



Deposition Equipment
Specialist MOCVD or RPCVD equipment is used to conduct the necessary chemical reaction in the deposition chamber to grow GaN.

BLUGLASS
Veeco
AIXTRON
AMEC

EPIWAFER — Chemicals undergo a reaction in a deposition chamber to produce the required semiconductor material, on a substrate (approx 5 hours) to create epi-wafer

DEVICES — Epiwafer is etched and processed

DICING — The processed epiwafer is sliced into tiny chips

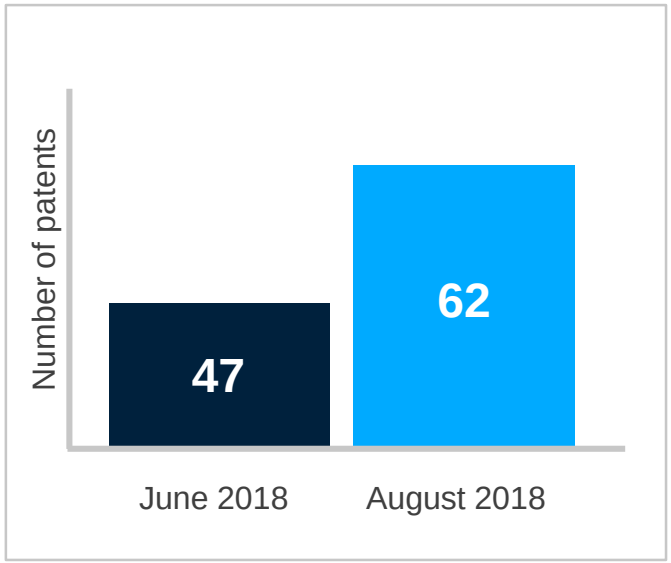
PACKAGED DEVICES — The chip is then packaged into an LED device and inserted into a fitting

BLUGLASS
LuxVue
SAMSUNG
SONY
nth degree
oculus
ITRI Industrial Technology Research Institute
VUEREAL
Ostendo Technologies, Inc.
Aledia
PLAYNITRIDE

INTELLECTUAL PROPERTY

A strategic asset for BluGlass, creating global opportunities and protection

- Investment in IP continues, in method and application patents worldwide
- Strategic foundation of licence business model
- Protects existing and new RPCVD IP investment by minimising “invent around” competition



MARKET STRATEGY, SENIOR MANAGEMENT & BOARD

MARKET STRATEGY: DIVERSE COLLABORATION AGREEMENTS

Established collaboration agreements with industry leaders across multiple market segments in HB-LED, microLED and power electronics applications and segments

Gain Industry Acceptance

- Demonstrate applications in key segments
- Improve device performance
- Complete industry evaluation with multiple partners in the LED value chain (including equipment and device segments)

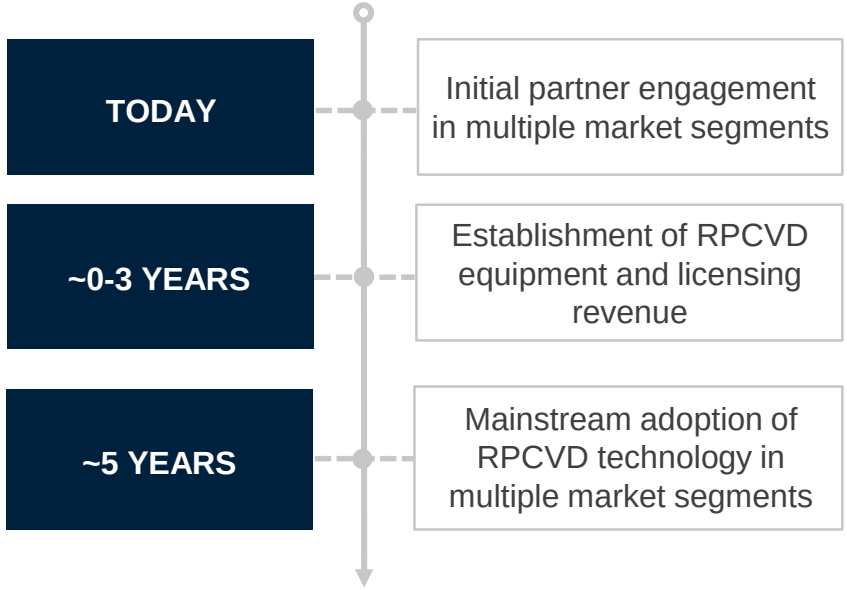
Drive Commercialisation

- Continuously evaluate commercialisation options for RPCVD: JVs, partnerships, licensing, foundry, customer sales

Grow EpiBlu Business

- Continue to work with MOCVD & RPCVD customers to provide custom wafer services & contract R&D and prototyping

NOTIONAL TIMETABLE



CORPORATE OVERVIEW: SENIOR TEAM

GILES BOURNE
Managing Director &
Chief Executive Officer

Appointed to Board in 2014, CEO in 2008. Twenty years' experience in cleantech & manufacturing. Business development & commercialisation specialist

DR IAN MANN
Chief Operations &
Technology Officer

Appointed in 2009. Twenty years' experience in product development, tech team management, materials sciences and photonics. Former CEO of Bandwidth Foundry

DR MARIE WINTREBERT
Chief Scientist

Founding scientist and co-inventor of the BluGlass RPCVD process. Device design, fabrication, modeling and measurement expert

BRAD SISKAVICH
Vice President of
Business Development

Appointed in 2018. Twenty years' experience in developing and commercialising new technologies in start-up and high-growth companies in the compound semiconductor, PV and opto-electronics industries

STEFANIE WINWOOD
Investor Relations and
Marketing Manager

Appointed in 2009. Strategic marketing and communications professional. Fifteen years' experience in technical communications & brand management

CORPORATE OVERVIEW: BOARD

WILLIAM JOHNSON
Chairman

Appointed to Chair in 2017, Board in 2010. Deep global industry experience in the high-technology and semiconductor manufacturing sectors, covering M&A, operations. Former President & CEO, SPTS Technologies.

GILES BOURNE
Managing Director & CEO

Appointed to Board in 2014, CEO in 2008. Twenty years' experience in cleantech & manufacturing. Business development & commercialisation specialist.

VIVEK RAO
Non-Executive Director

Appointed in 2016. Semiconductor capital equipment specialist with more than 23 years' experience in the global industry. Technology leadership specialist. President and COO of SPT Microtechnologies.

JAMES WALKER
Non-Executive Director

Appointed in 2017. Experienced executive with track record in successfully commercialising cutting-edge technology in emerging global markets. Finance, M&A, IPO and strategic management specialist.

STEPHE WILKS
Non-Executive Director

Appointed in 2018. Professional company director and executive. Led successful global technology companies in high growth and disruptive industries. Extensive tech leadership, strategic finance, M&A and governance expertise.

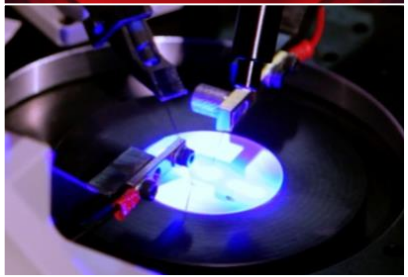
THANK YOU

bluglass.com.au

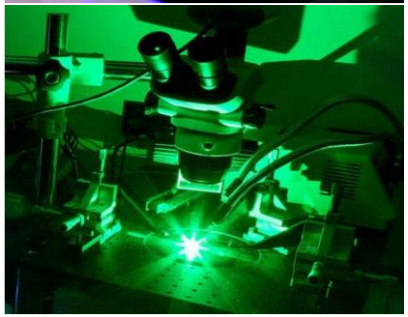
APPENDIX

BLUGLASS VIRTUAL TOUR

Plasma nitrogen source, provides low temperature manufacturing process

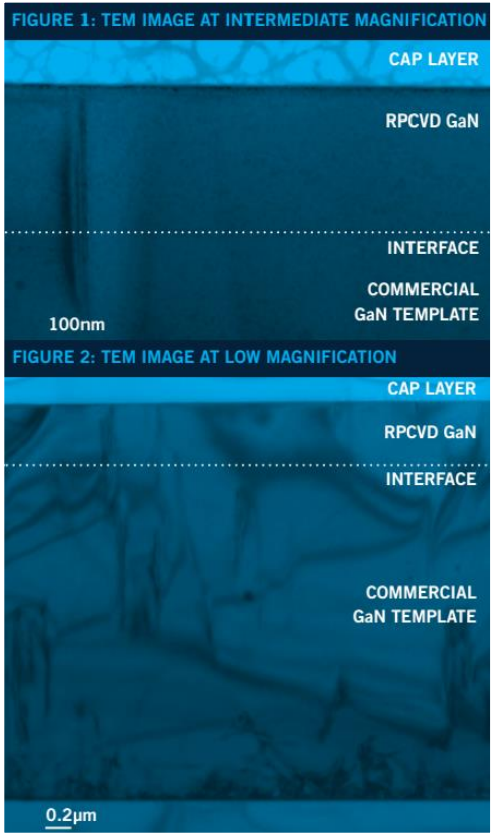


Low temperature process has potential for performance improvement of active layers in devices such as LEDs



Low temperature process can potentially create better performing, longer wavelength LEDs (green, red, yellow)

RPCVD can produce high quality crystalline material, with low defect density



RPCVD FOR LEDs: DEMONSTRATED PERFORMANCE IMPROVEMENT

RPCVD FOR LEDs

Demonstrated advantage:
+35% **performance** improvement with RPCVD p-GaN for green LEDs**

Increased LED efficiency may be achieved by reducing the degradation caused by high-temperature growth of the ‘active’ layer of the LED

Low-temperature RPCVD has the potential to **reduce bowing and cracking of large silicon wafers** during growth.
Silicon wafers are significantly cheaper than current high-temperature-capable sapphire wafers

2017 GREEN LED DATA

MOCVD EL DATA	20 mA	50 mA	100 mA
Light Output (mW)	1.3	3.3	6.2
V, (V)	3.1	3.7	4.6
Peak Wavelength (nm)	514	511	508
FWHM (nm)	28	31	33
RPCVD	**20 mA**	**50 mA**	**100 mA**
Light output (mW)	1.9	4.5	8.1
V, (V)	3.0	3.6	4.5
Peak Wavelength (nm)	515	512	510
FWHM (nm)	30	30	33
% Performance improvement of RPCVD compared to MOCVD (light output / (1 x Vf)	**+47 %**	**+39%**	**+35%**

**Both RPCVD and MOCVD data obtained from p-GaN overgrown on the same partial LEDs grown by MOCVD up to and including the Electron Blocking Layer (EBL). All measurements taken at wafer level using indium dot contacts. These wafers were not processed.

END MARKETS LEDs

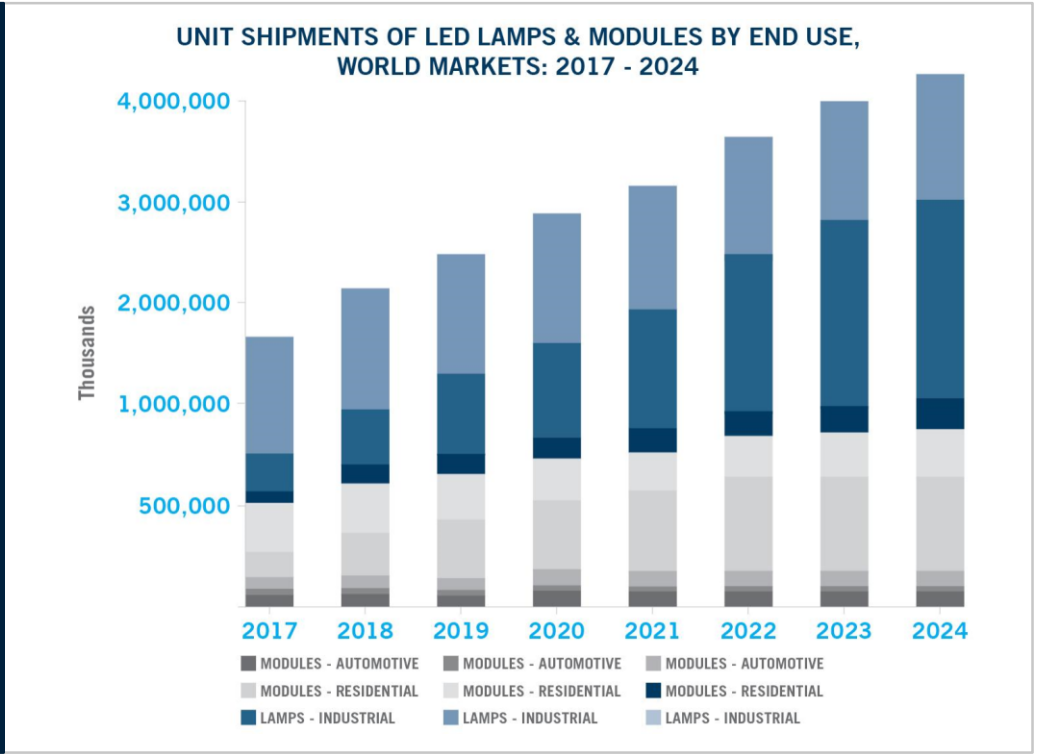
10.4%

The LED market is expected to experience ***CAGR of 10.4%*** through to 2025

US$63.2B

LED revenues are expected to reach ***US$63.2 billion*** by 2025

Source: Research and Markets Report Global Light-Emitting Diodes (LED) Market Analysis & Trends - Industry Forecast to 2025; and Navigant Research



RPCVD FOR microLEDs

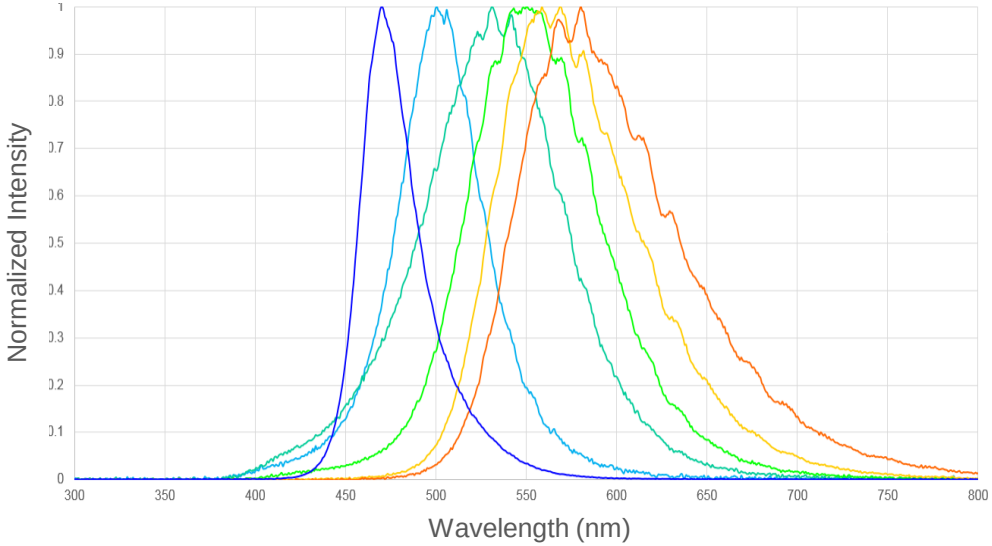
RPCVD FOR microLEDs

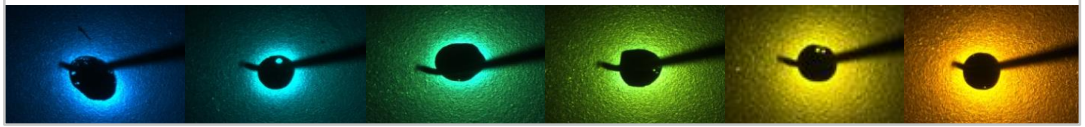
Low temperature growth of the active layer and top layers of an LED may enable **indium-rich InGaN** (the key performance material in the ‘active’ layers)

RPCVD’s inherently low growth temperature has potential for high quality growth of indium-rich InGaN for long wavelength LEDs (yellow, red **and green**)

RPCVD has potential to grow high indium-content InGaN with its low temperature advantages for LEDs and solar applications

EL SPECTRA OF LEDs GROWN USING RPCVD MQWS





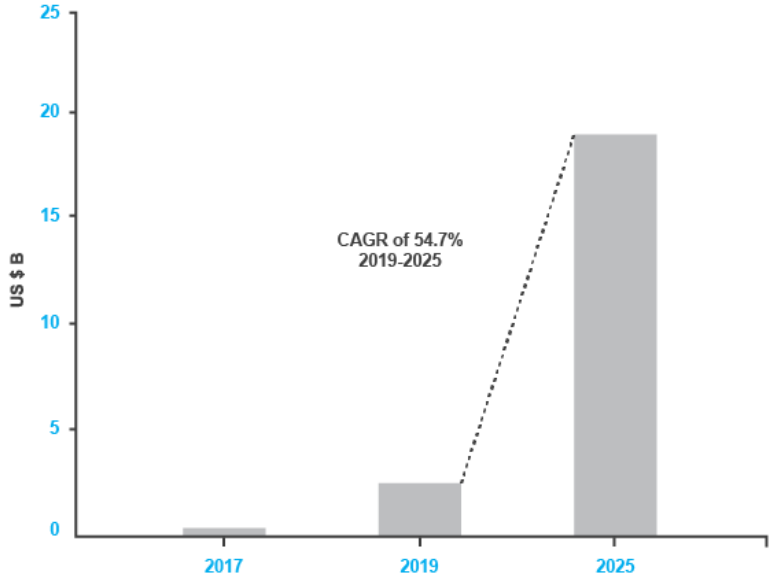
END MARKETS microLEDs

Market forecasts for microLED growth vary, but future growth seems assured, and rapid

US$19.2B

Multiple sources predict a market growth of 55% CAGR to 2025

Source: marketsandmarkets.com, microLED market by offering, April 2017



RPCVD FOR POWER ELECTRONICS

RPCVD FOR POWER ELECTRONICS

Low-temperature RPCVD p-GaN enables reduced magnesium diffusion in high electron mobility transistors (HEMTs), which helps enable normally ‘off’ HEMTs

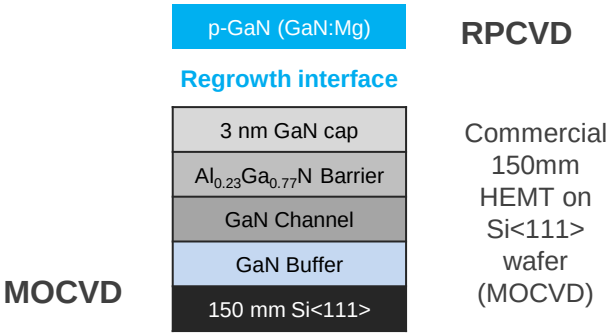
Normally ‘off’ HEMTs are safer, and more commercially-desirable for GaN transistors

Low-temperature RPCVD has the potential to reduce bowing and cracking of large silicon wafers during nitride growth

RPCVD’s inherently low growth temperature has potential to reduce the complexity of strain management

Mg DIFFUSION	RPCVD p-GaN	MOCVD p-GaN
Mg Diffusion into AlGaN - SIMS	**11 nm**	49 nm
Mg Diffusion and Turn on - SIMS	**16 nm**	18.5 nm
Total Mg Diffusion Width	**27 nm**	67.5 nm

RPCVD VS. MOCVD p-GaN: Mg DIFFUSION IN HEMTs



Experiment conducted on Veeco HEMT wafers and published with their permission

END MARKETS POWER ELECTRONICS

The Power Electronics market also presents a growing opportunity for the RPCVD technology

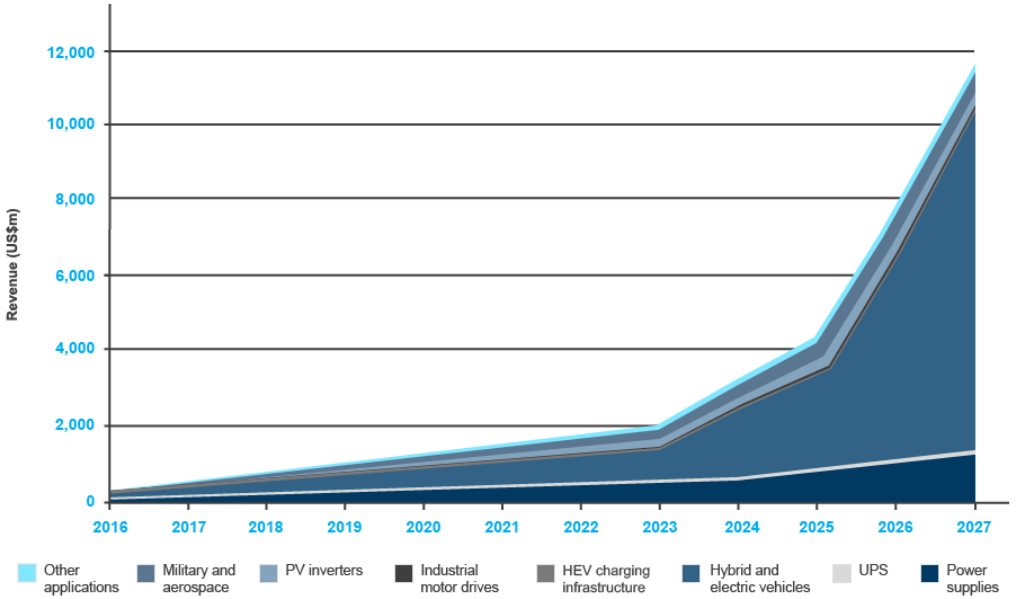
US$1.7B

The GaN power electronics market is expected to reach $600m in 2024, and climb to over $1.7bn in 2027

The combined GaN and SiC power electronics market will grow with a **CAGR of 35%** from 2017-2027

The combined market is expected to be worth ***US$10B*** by 2027, with GaN increasingly taking market share from 2020

Source: IHS Markets, 'SIC & GaN Power Semiconductors Report – 2018'



NOTES

bluglass.com.au