



Enovix Cell Architecture Enables Multiple Advantages for EV OEMs

23rd Annual Advanced Automotive
Battery Conference

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Powering the Technologies of the Future

Improving performance through advanced cell design

Our goal is to create a Li-ion battery that can exceed the performance demands of the technologies of the future, from IoT devices and consumer electronics to EVs.

- New mechanical cell design with multiple advantages:
 - Enables materials with large volume changes (e.g. silicon)
 - Exceptional thermal performance enabling fast charge, reduced thermal gradients
- Headquartered in Fremont, CA with R&D and Manufacturing centers in India, Malaysia, and South Korea
- Shipping in consumer market starting in 2022
- >400 patents and patent applications
- Actively working with industry leading OEMs with a go to market focus of JV/Licensing



Enovix Journey to Commercialization

Founded in 2007 by Experts in 3D Architecture and Advanced Battery Technology



2007

2014

R&D Innovation to Proof of Concept; 100% Active Silicon Anode Battery

R&D Pilot Line Established for Prototype Batteries



2021

Listed on Nasdaq July 15, 2021 ENVX. Raised \$400M+

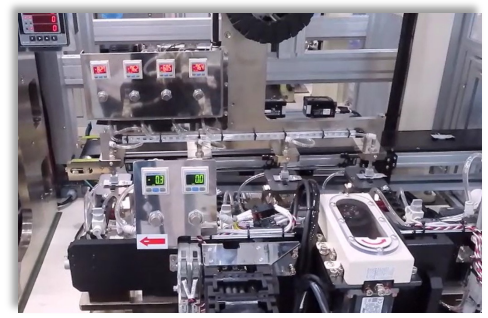


2022

Fab1 Continues Build Out; Prototype & Commercial Batteries in Fremont, CA

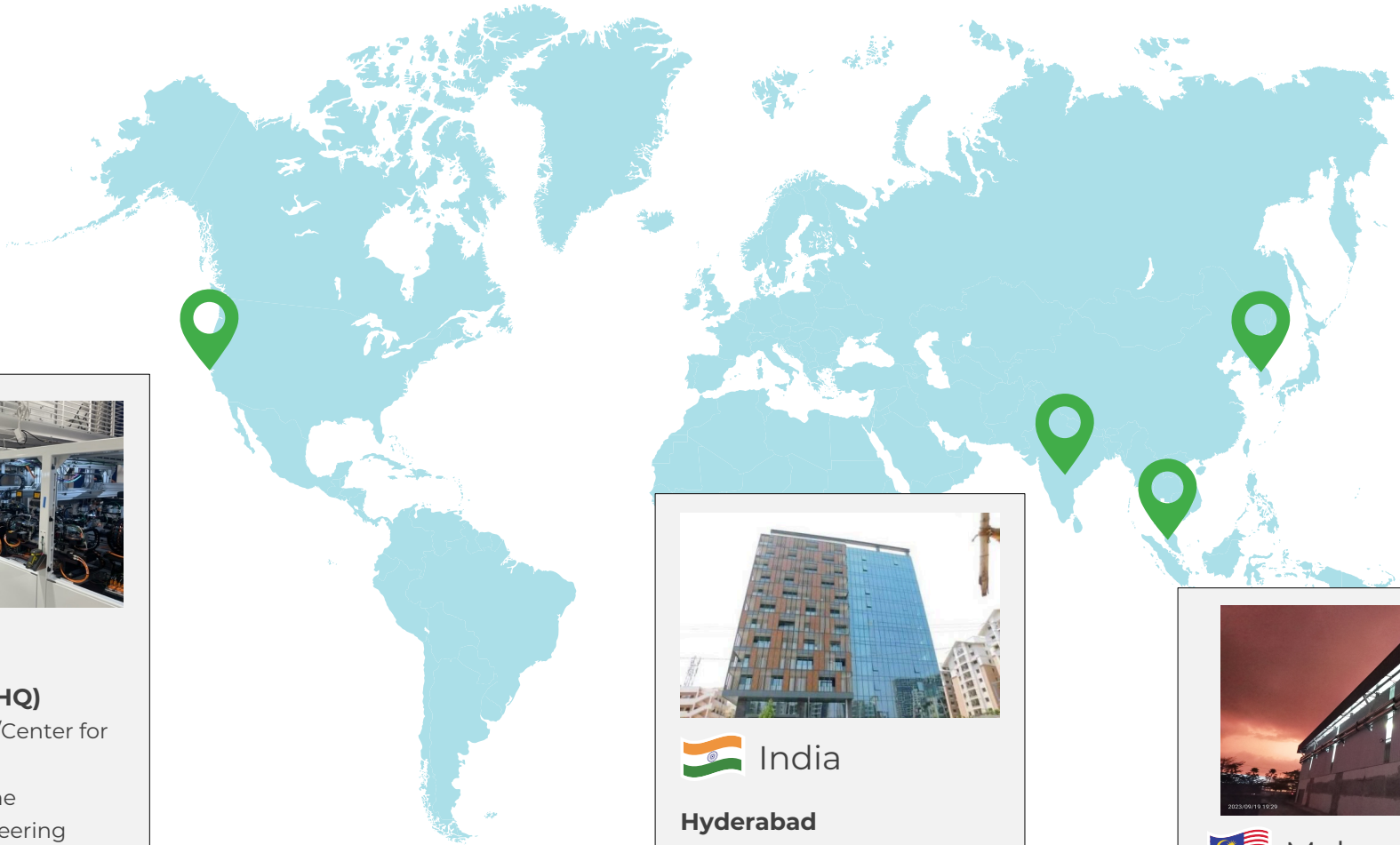
Journey to Scale:

- HVM in Malaysia; Fab2
- India R&D Center
- Routejade Acquisition



2023+

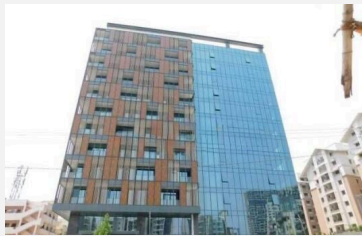
Global Footprint to Support World-Class Manufacturing and R&D



 USA

Silicon Valley (HQ)

- ✓ Corporate HQ/Center for Innovation
- ✓ R&D Agility Line
- ✓ Process Engineering
- ✓ Materials Research
- ✓ Customer Qualification
- ✓ Automotive R&D




 India

Hyderabad

- ✓ R&D
- ✓ AI/ML Modeling to Support Materials Research



 South Korea

Nonsan City (Routejade)

- ✓ Electrode Coating and Battery Production
- ✓ Two factories
- ✓ Four battery production lines and two coating lines



 Malaysia

Penang (Fab2)

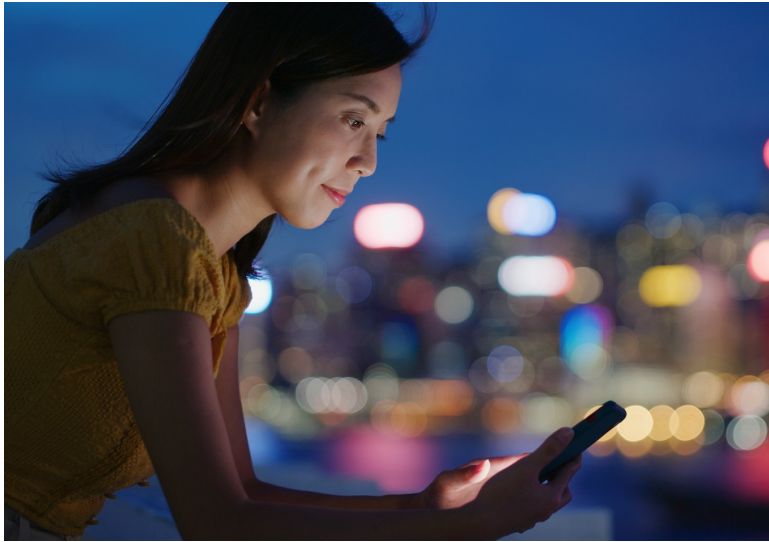
- ✓ High-Volume Manufacturing.
- ✓ Space for Four Gen2 Production Lines
- ✓ Agility Line for Customer Qual

Addressing a \$23B TAM by Enabling Advances in Mobile Technology

Enabling the Full Capabilities of Consumer Devices Today and in the Future

Mobile

'26 Battery TAM: \$11B²



Engagements with **top tier OEMs, targeting multiple smartphone launches** between 2025 and 2026

IoT

'26 Battery TAM: \$8B¹



Shipping today to leading brands in wearables and active designs with leaders in a variety of high-volume IoT categories.

Computing

'26 Battery TAM: \$4B³



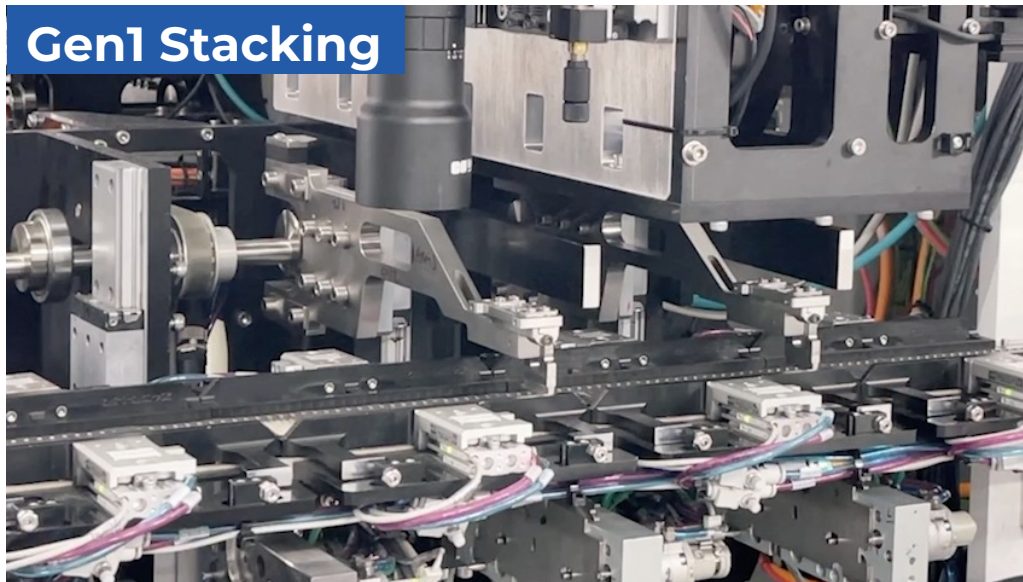
Engagements with top PC OEMs and targeting launches on multiple 2026 laptops

Gen2 Designed to Build Batteries over 10x Faster Than Gen1

Significant Learning from Gen1 Captured; Upgraded Automation and Parallelism

Gen1

200W Laser Patterning
100 Units Per Hour (UPH)¹
Partial Automated Production



Gen2 Design

1,000W Laser Patterning (Cut Speed Improved 5x)
Designed for 1,350 UPH²
High Speed Automation
Enhanced Parallelism and Metrology



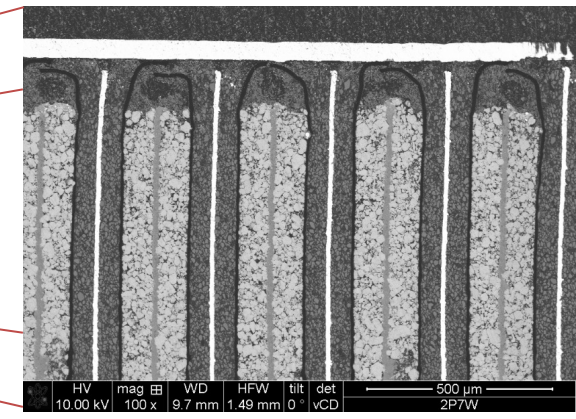
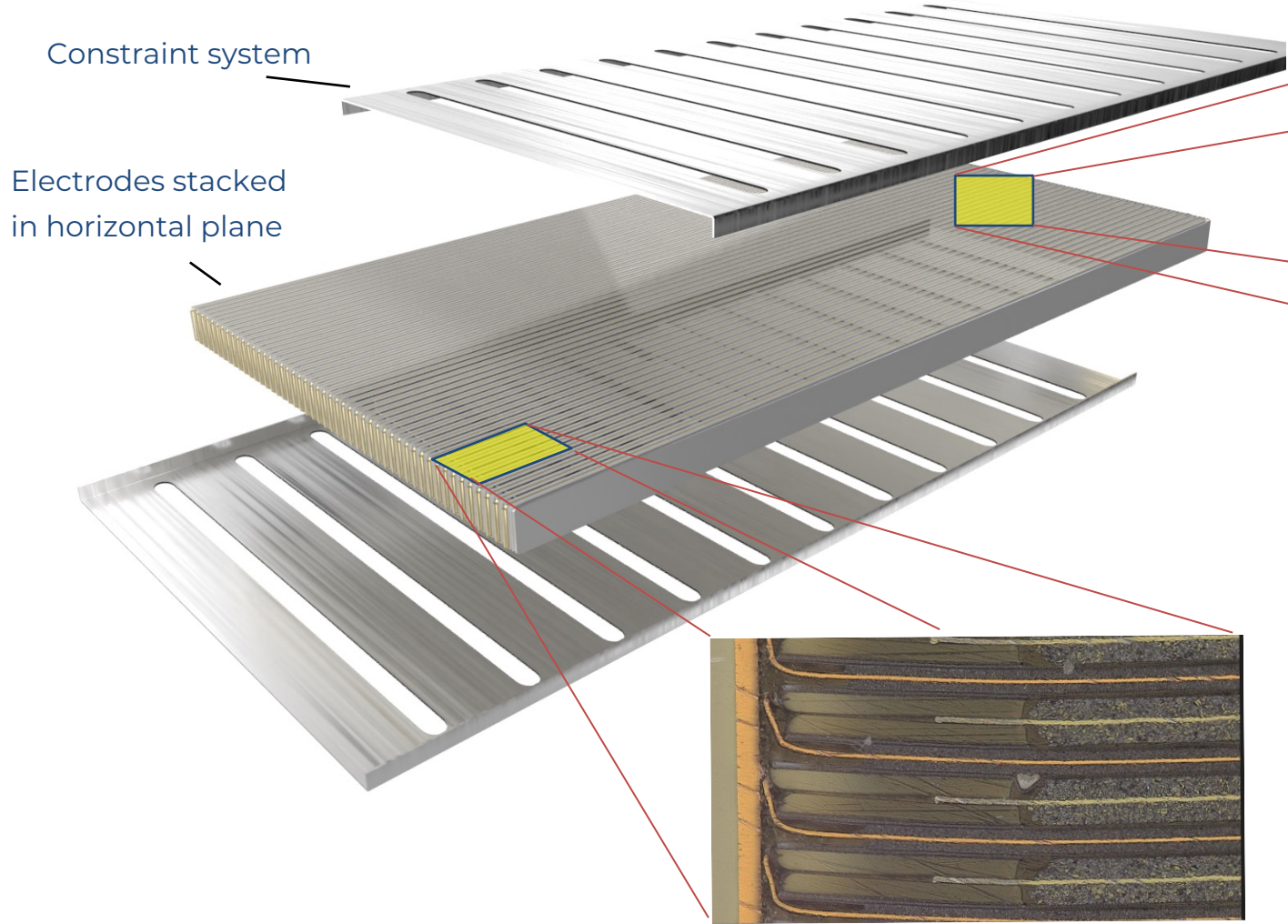
¹ Q4 2023 Gen1 production UPH when in operation goal

² Gen2 design (equipment currently being built to this specification)



Enovix Cell Design

Enovix Cell Architecture



Stacking orientation decreases constraining force from ~1.7 tons to ~210 lbs for cell phone sized cell*

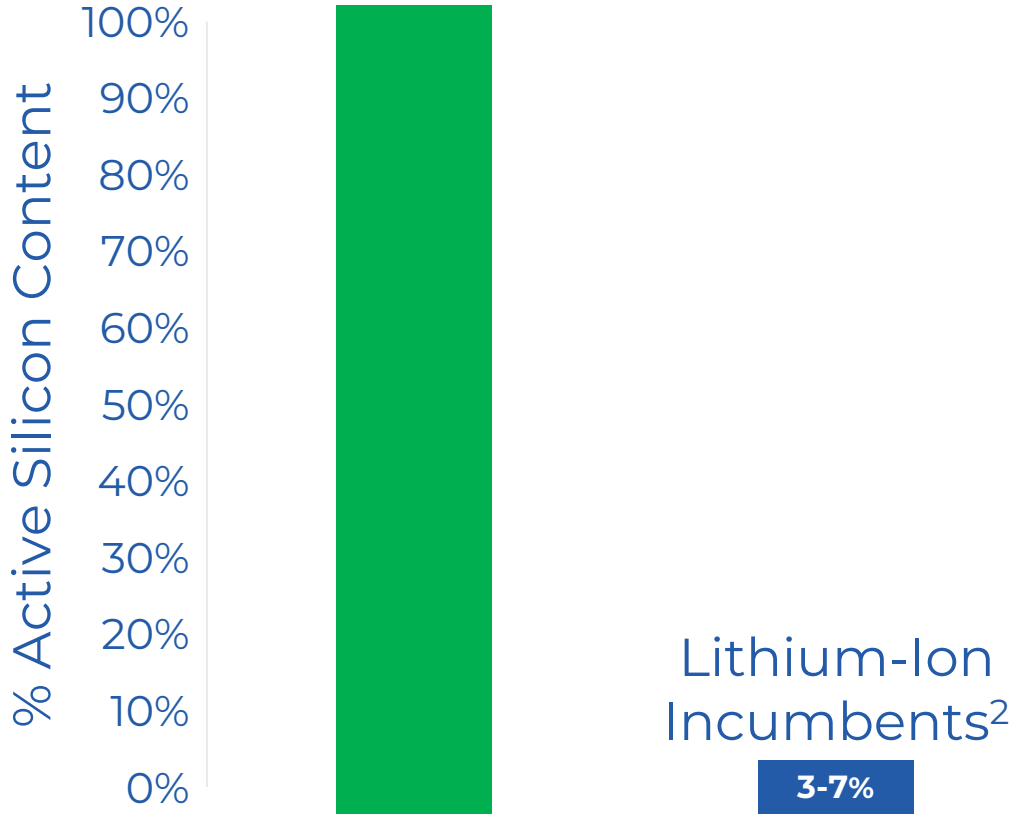
Tailor internal cell volume for active material expansion

Facile pre-lithiation, Brakeflow™ technology

*50x30x3 mm cell at 1.5kPSI stack pressure

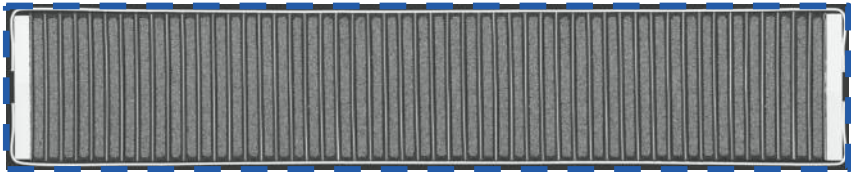
Maximizing Silicon to Drive High Energy Density

Silicon Can Theoretically Store Over 2x the Lithium in the Anode than Graphite¹

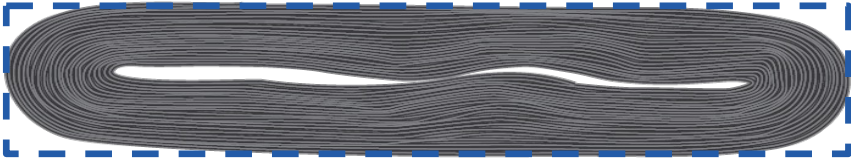


Increased Silicon Content Enabled by Advanced Architecture

Enovix 3D Architecture + Integrated Constraint



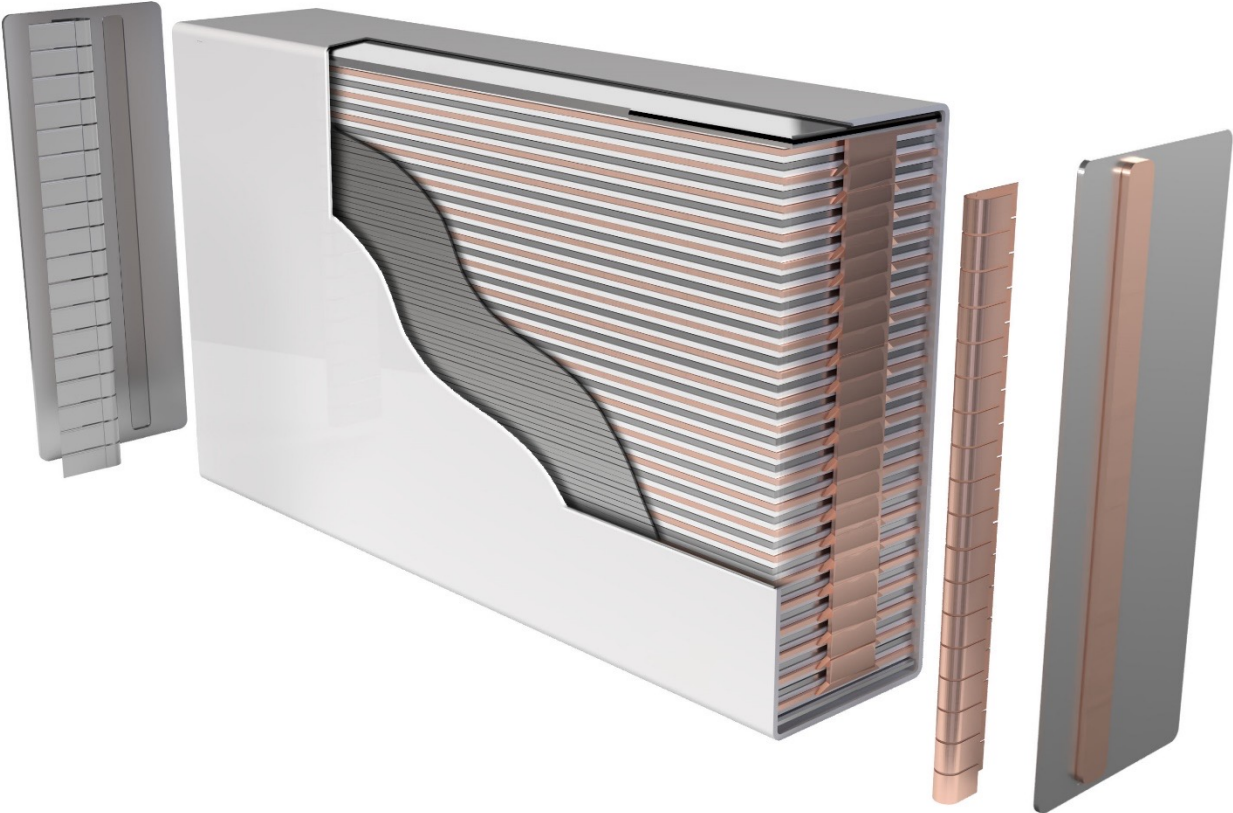
Conventional Wound Lithium-Ion Cell



¹ Silicon anode material capacity: 1,800 mAh/cc (de-rated from theoretical capacity of 2194 mAh/cc for Lithium trapping losses). Graphite anode material capacity: 800 mAh/cc (nominal capacity between host capacity of 841 mAh/cc and lithiated capacity of 719 mAh/cc)

² LG Chem and Panasonic; from UBS Global Research, May 2021

Enovix Architecture – EV Concept

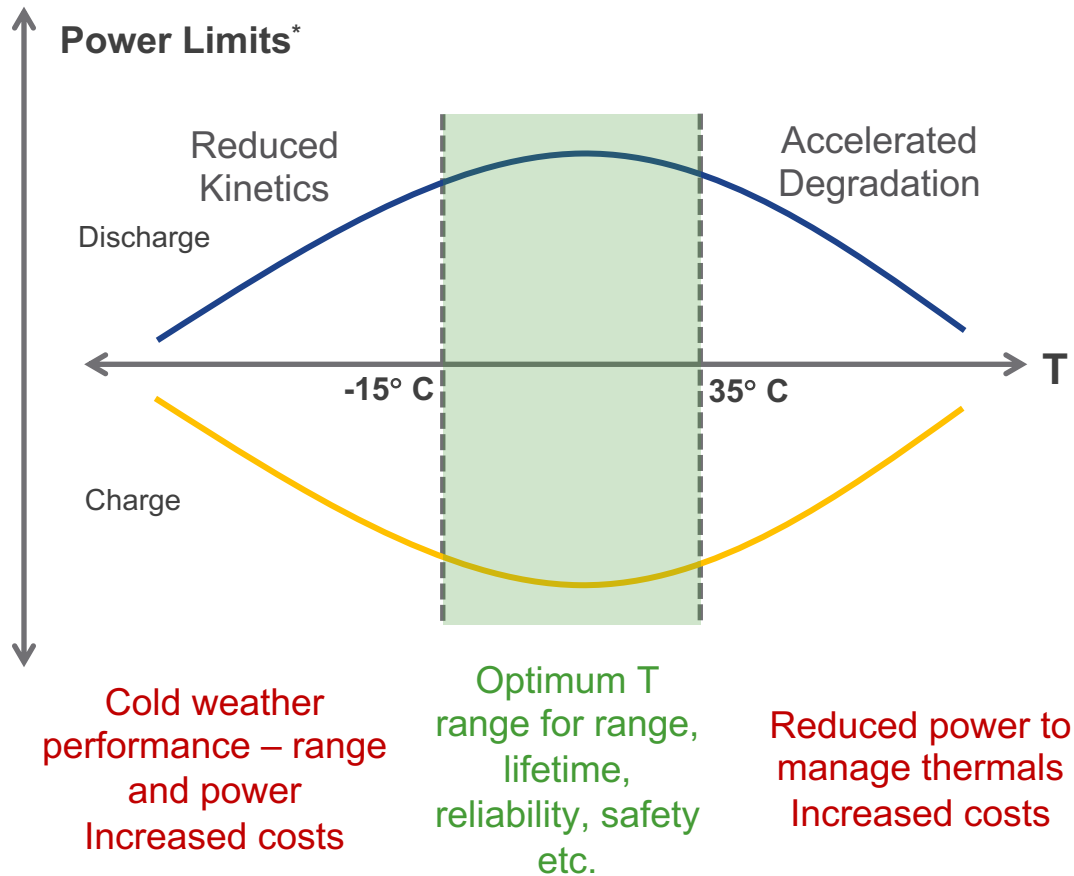




Benefits of Enovix Cell Design for EV Applications

Temperature is a Key Limiter to Performance

Modern lithium ion cells optimized for specific temperature ranges

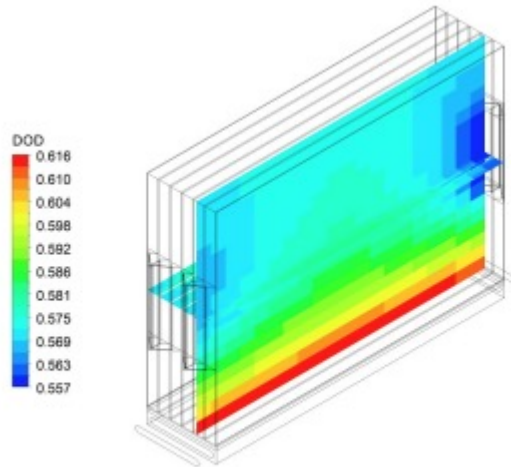


Optimized cell performance in a relatively narrow band of temperature

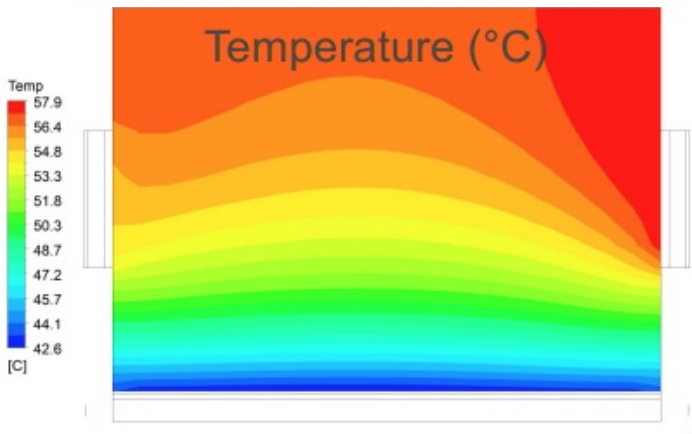
Operation outside of the optimum range at reduced performance to prevent degradation, ensure safety

Temperature is a Key Limiter to Performance

Cell design impacts temperature uniformity



25 Ah pouch cell simulation



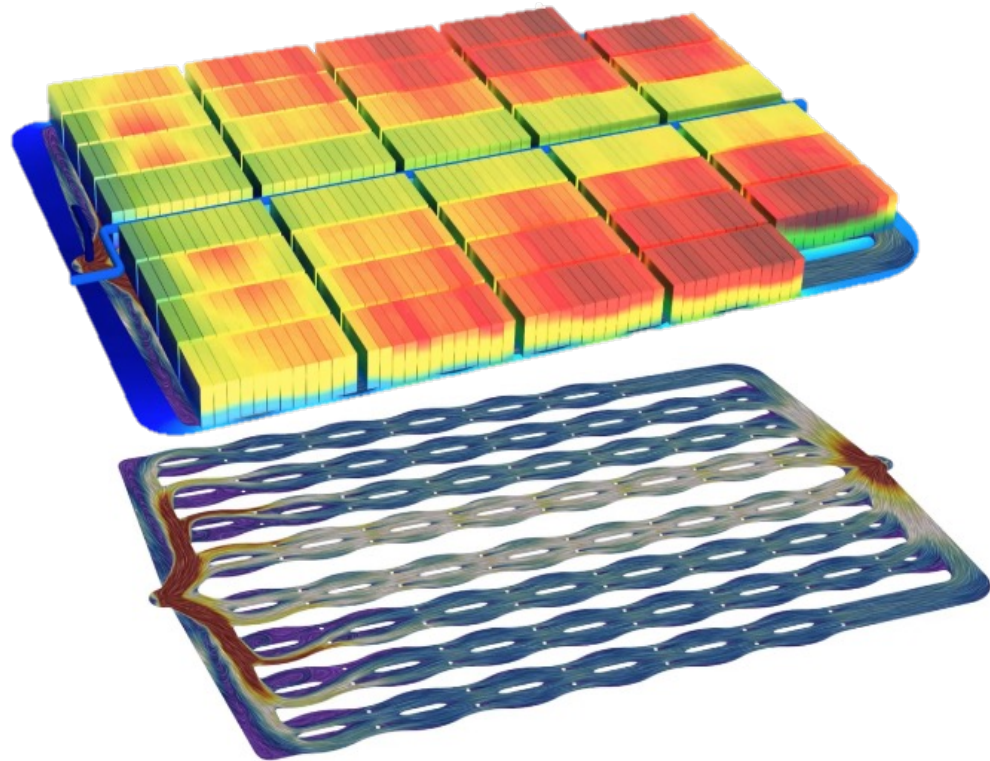
Optimized cell performance in a relatively narrow band of temperature

Operation outside of the optimum range at reduced performance to prevent degradation, ensure safety

Internal cell temperature variation impacted by cell design due to asymmetric thermal properties of components

Temperature is a Key Limiter to Performance

Pack cooling system further impacts cell temperature uniformity



Optimized cell performance in a relatively narrow band of temperature

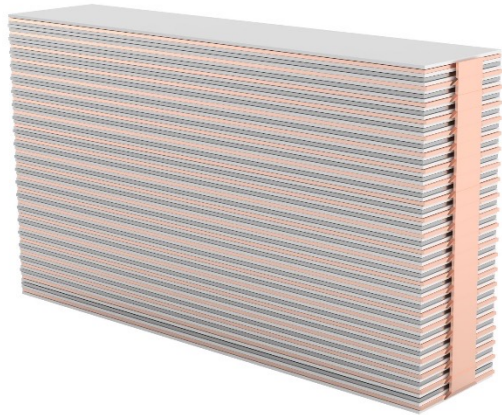
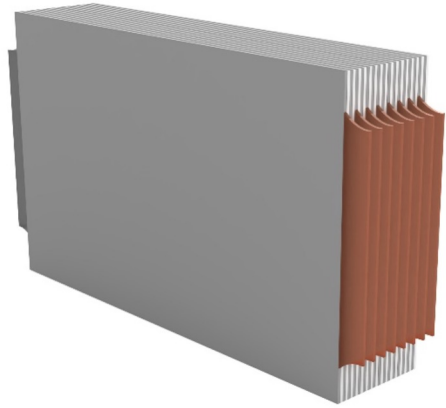
Operation outside of the optimum range at reduced performance to prevent degradation, ensure safety

Internal cell temperature variation impacted by cell design due to asymmetric thermal properties of components

Temperature varies across pack due to coolant flow etc.

Enovix Architecture Optimizes Thermal Performance

What's the best way to manage heat uniformity in a cell?



Typical solutions to reduce temperature variation:

- Reduce cell resistance
- Change cell form factor
- Increase pack capacity
- Oversize cooling system

Enovix approach:

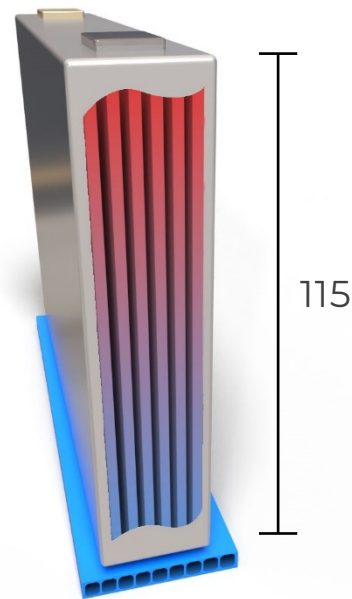
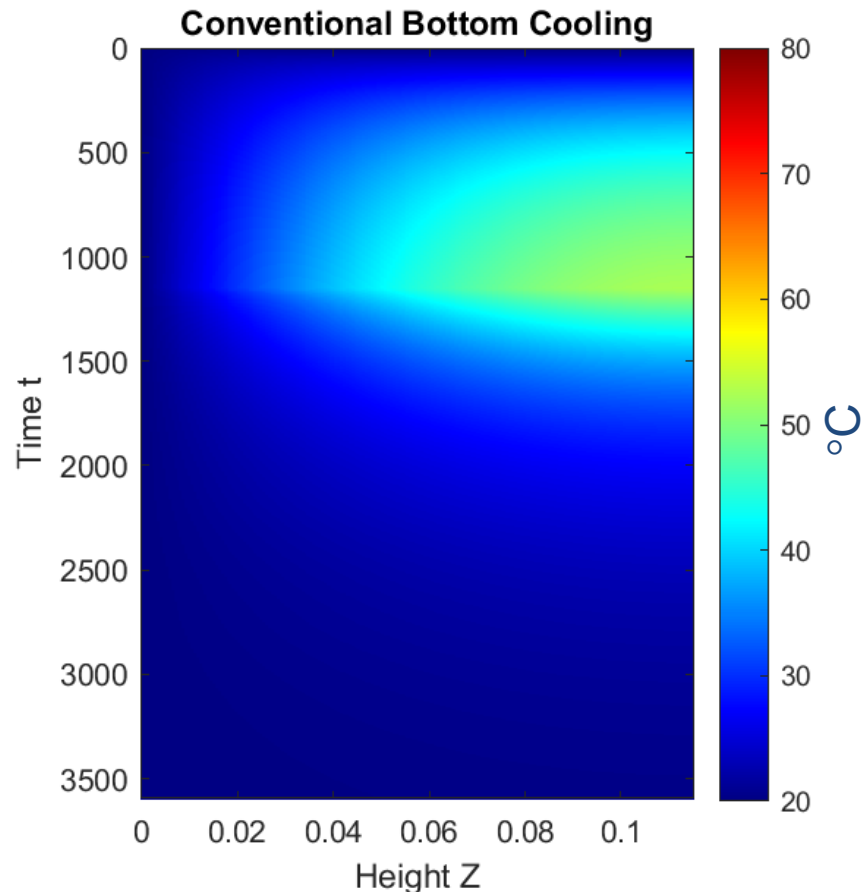
- Enable efficient heat movement in and out of the cell
- Align high thermal conductivity direction of cell to shortest dimension of the cell
- Utilize largest area of the cell

Reoriented Electrodes Designed to Deliver Excellent Thermal Performance

33X Higher* thermal conductivity to large face of prismatic cell

2.5C Fast Charging Temperature Profile

Cell Dimensions: 173 x 115 x 32 mm



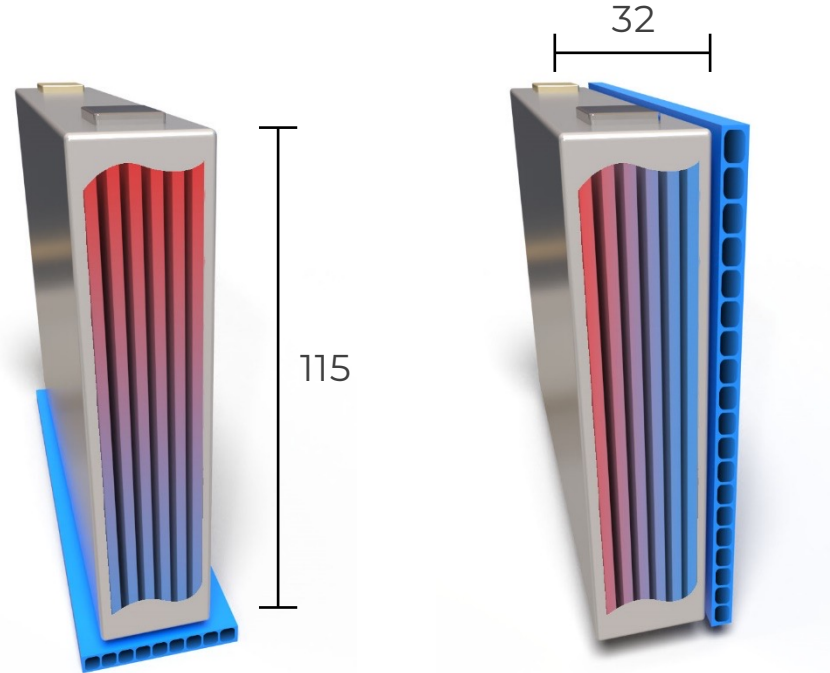
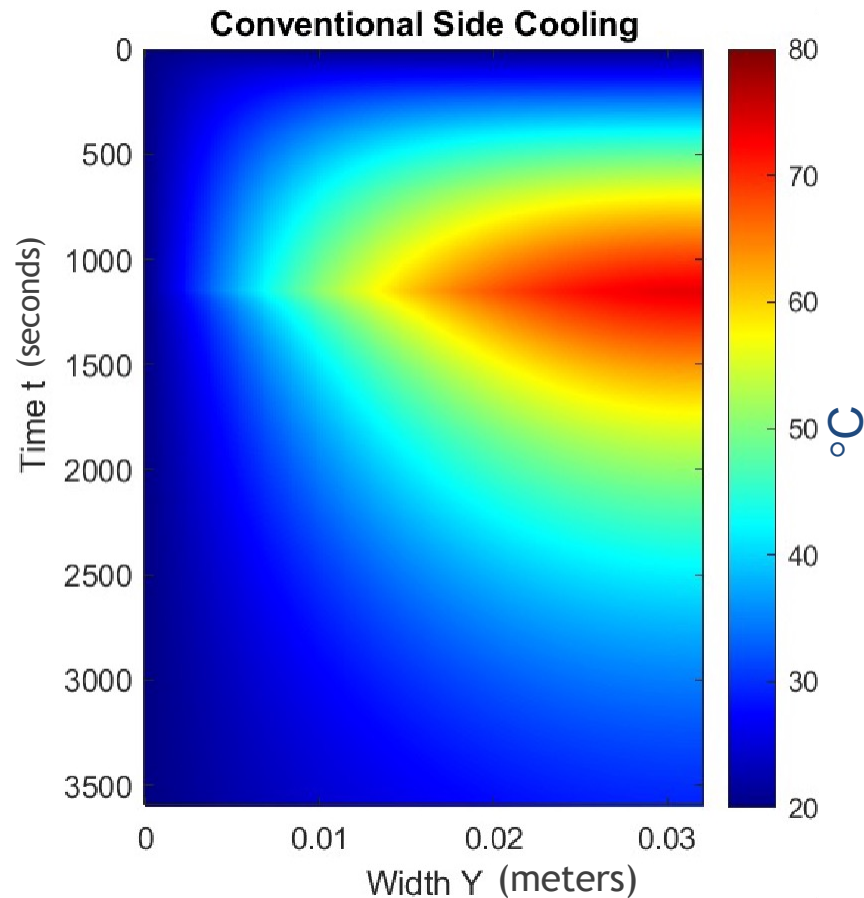
Conventional Stack Cell Bottom-Cooled
 $\Delta T_{\max} = 31.9^{\circ}\text{C}$

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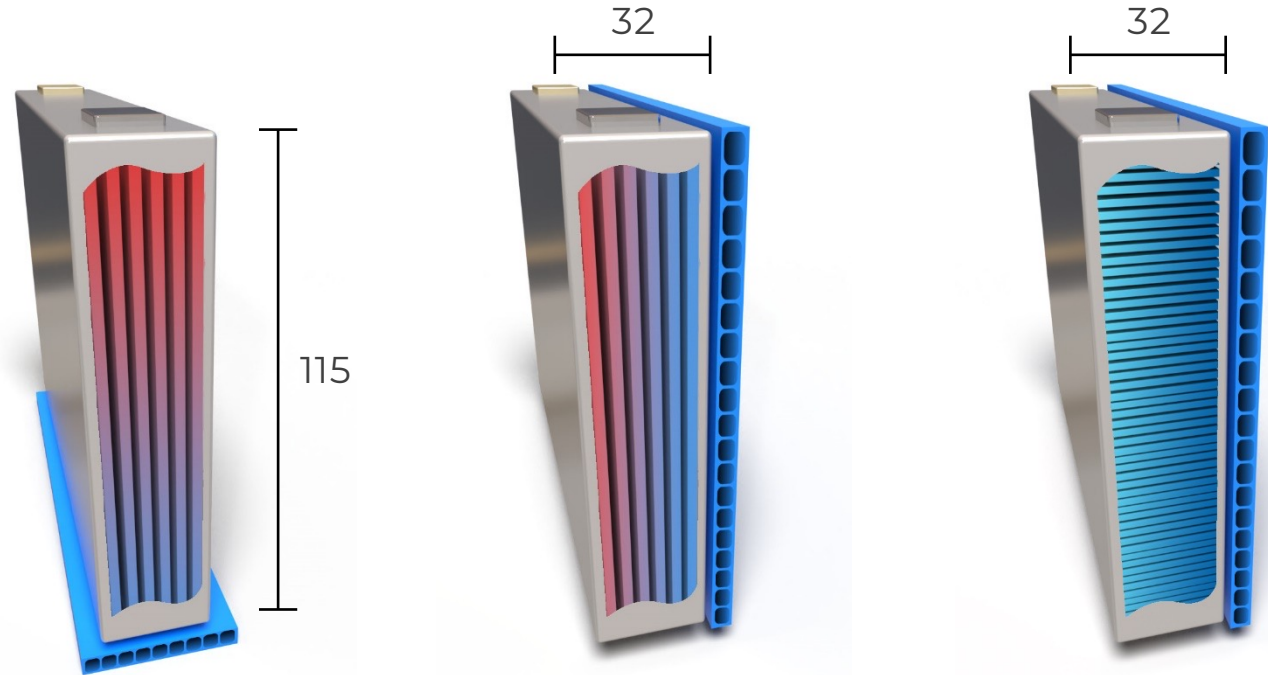
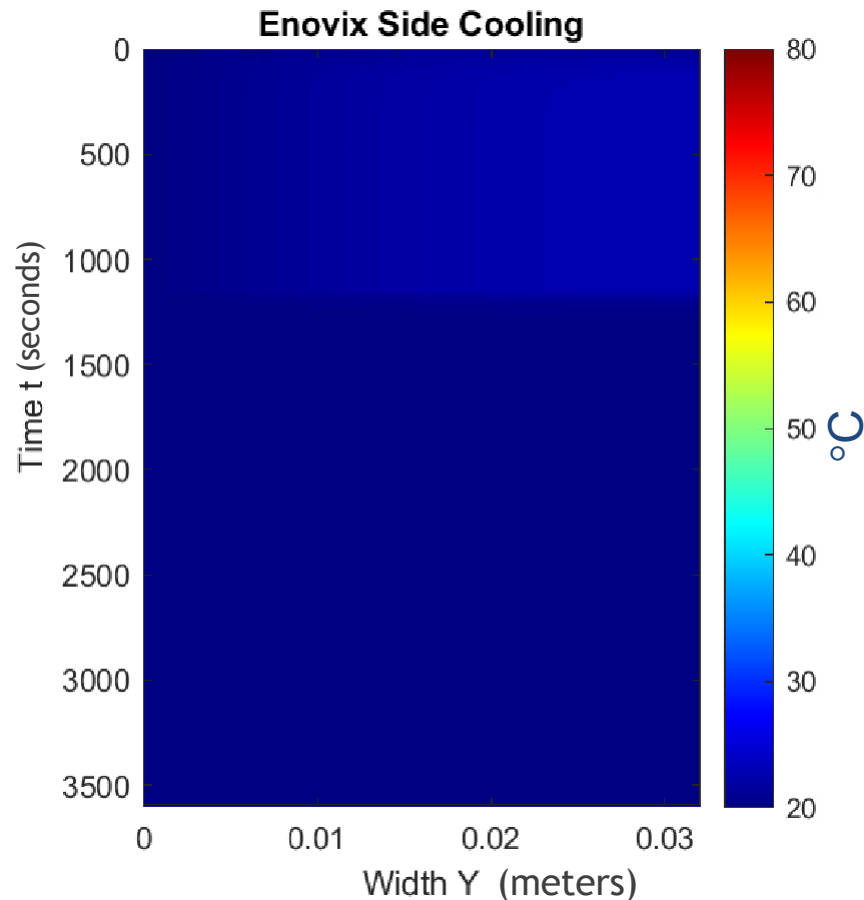
Conventional Stack Cell Side Cooled
 $\Delta T_{\max} = 53.8^{\circ}\text{C}$

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$$\Delta T_{\max} = 31.9^{\circ}\text{C}$$

Conventional Stack Cell Side Cooled

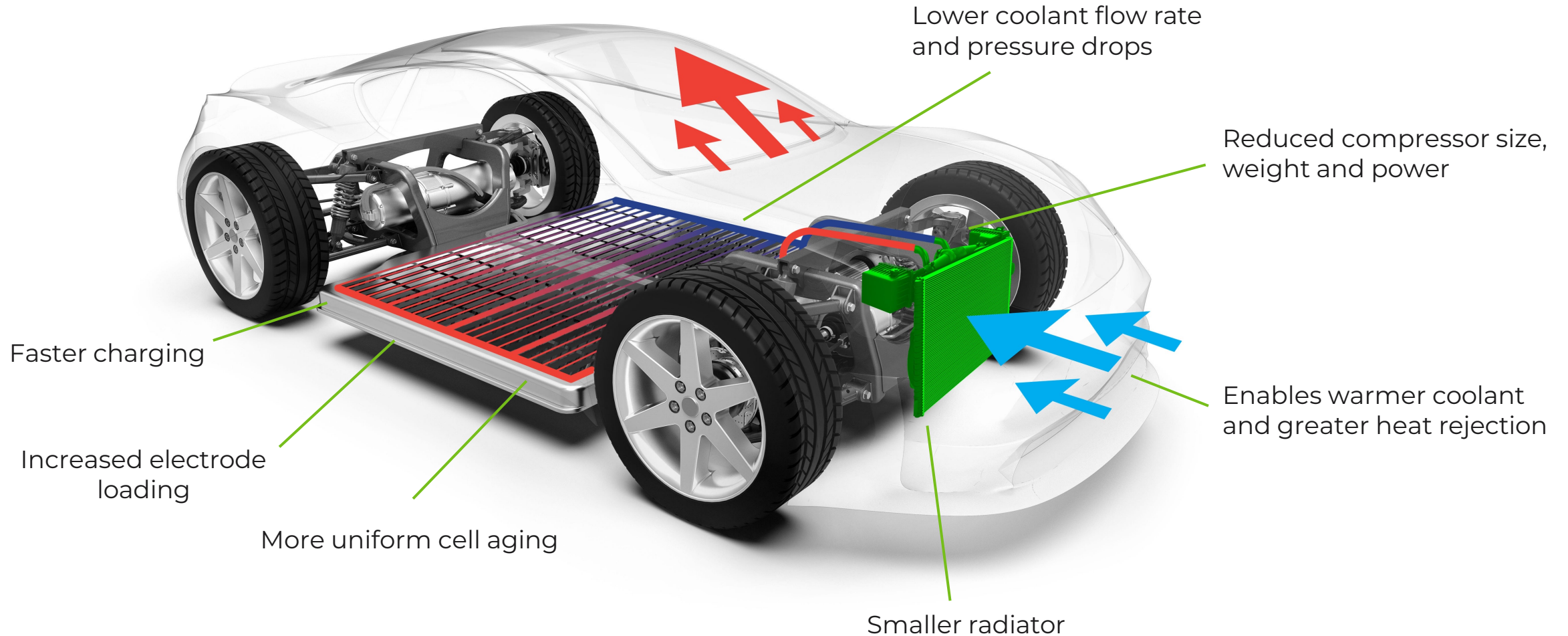
$$\Delta T_{\max} = 53.8^{\circ}\text{C}$$

Enovix Stack Side Cooled

$$\Delta T_{\max} = 2.8^{\circ}\text{C}$$

Cell Thermal Design Key to System Performance

Significant opportunities to reduce system cost, improve performance



Enovix Cell Architecture Well-Suited to EVs

Advantaged vs. Conventional Cells¹

~10x Improvement in cell internal temperature gradient

Material agnostic cell design

Integrated mechanical constraint system

Architecture validated in consumer electronics space with global leaders

Pursuing Industry Partner Strategy

Actively working with industry leading OEMs – Focus on JV/Licensing

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Thank you!