ENSURGE™

Q1 2022 Preliminary Report

25 May 2022

Kevin Barber

CEO

Safe Harbor Statement

This report includes forward-looking statements covered by the Private Securities Litigation Reform Act of 1995. Because such statements deal with future events, they are subject to various risks and uncertainties and actual results for fiscal year 2021 and beyond could differ materially from the Company's current expectations. Forward-looking statements, including estimates of capacity, selling price and other material considerations, are identified by words such as "anticipates," "projects," "expects," "plans," "intends," "believes," "estimates," "targets," and other similar expressions that indicate trends and future events.

Factors that could cause the Company's results to differ materially from those expressed in forward-looking statements include, without limitation, variation in demand and acceptance of the Company's products and services, the frequency, magnitude and timing of raw-material-price changes, general business and economic conditions beyond the Company's control, timing of the completion and integration of acquisitions, the consequences of competitive factors in the marketplace including the ability to attract and retain customers, results of continuous improvement and other cost-containment strategies, and the Company's success in attracting and retaining key personnel. The Company undertakes no obligation to revise or update forward-looking statements as a result of new information, since these statements may no longer be accurate or timely.

Ensurge financial reports and presentations may be accessed online at https://ensurge.com/investor-relations/

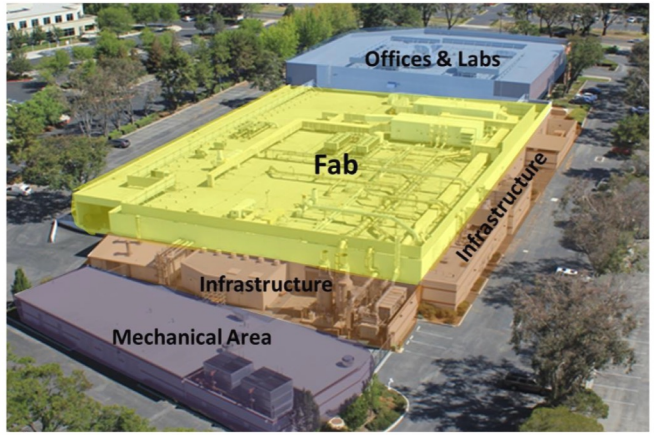
Q1 2022 Overview

Ensurge Micropower

Delivering differentiated solid-state lithium microbatteries into existing billion-unit market

- Novel solid-state lithium microbattery architecture
- Own proven roll-to-roll manufacturing facility
- Intellectual property in architecture, barriers, materials, and packaging
- **40+ employees** semiconductor and battery veterans

San Jose, CA



- 20,000 ft² (2,000 m²) cleanroom
- 70,000 ft² (6,500 m²) office & labs

- Higher energy densities, faster charging, form factor flexibility
- Five signed customer agreements, additional agreements in pipeline
- ~$100M EBITDA potential in current factory, based on mix
- Initial production ramp target end of 2022

Significant Progress during Q122

Technology Progress

Achieved higher unit cell cycling performance

Validated packaging materials and ensured packaging provides hermetic sealing

Optimizing fully packaged microbatteries that meet capacity and cycling targets for customer samples

Commercial Progress

Our customers continue to validate our strategy and value propositions

Existing customers remain actively engaged and are in the process of integrating the Ensurge microbattery into their products

New customers with strong interest because the products are not possible without the Ensurge microbattery

Team

Hired two key packaging technologists to accelerate packaging innovation

Hired two key equipment engineers focused on enabling end-to-end ultra-thin handling as well as production readiness

2022 Ongoing Focus

Convert current and new customer agreements into active product designs with initial revenue in Q4

Broaden customer activities across all target markets

Customer qualification of Ensurge technology & product

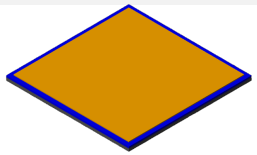
Establish operational readiness for production ramp

Q1 ‘22 financials

		Q1 2022	Q4 2021	Q3 2021	Q2 2021	Q1 2021
Beginning Cash:		$6,853	$13,050	$7,053	$9,418	$5,790
Expenses (non-gaap):						
	Operations	$808	$504	$794	$660	$583
	R&D	$689	$896	$998	$856	$947
	Sales & Marketing	$215	$181	$213	$226	$154
	G&A	$1,434	$1,489	$1,228	$1,409	$947
	Facilities	$1,198	$1,208	$1,222	$1,068	$1,083
	Total Operating Expenses	$4,344	$4,278	$4,455	$4,219	$3,714
Cash Adjustments:						
	Capital Purchases	$302	$225	$399	$1,077	$138
	Utica Payments (P&I)	$1,311	$1,311	$2,863[1]	$563	$596
	Changes in Working Capital	$18	$383	$320	$(552)	$147
	Total Cash Adjustments	$1,631	$1,919	$3,582	$1,088	$881
Total of Operating Expenses and Cash Adjustments		$5,975	$6,197	$8,037	$5,307	$4,595
Proceeds of Offering		$10,796	-	$14,034	$2,942	$8,223
Ending Cash		$11,674	$6,853	$13,050	$7,053	$9,418

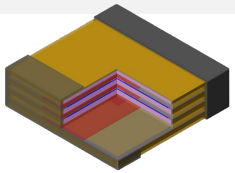
1 – Utica principal ”catch-up” payment in Q3 21’

Technology Progress



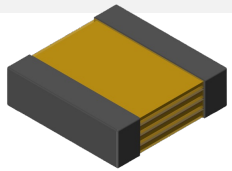
Unit cells that meet capacity and cycles targets

- ✓ Achieved capacity and cycling targets
- ✓ Demonstrated superior performance
  - ✓ ***3X faster charging***
  - ✓ ***5C high-pulse discharge***
- ✓ Using 10um steel enabling high energy density and form factor flexibility



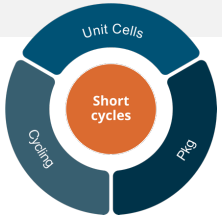
Achieve ambient free packaging and hermeticity

- ✓ Validated internal packaging materials remain neutral during battery operation
- ✓ Developed innovative solution to prevent ambient penetration that can degrade cycling performance
- ✓ Filing multiple patents based on new architecture



Integrate to achieve sample capacity and cycling

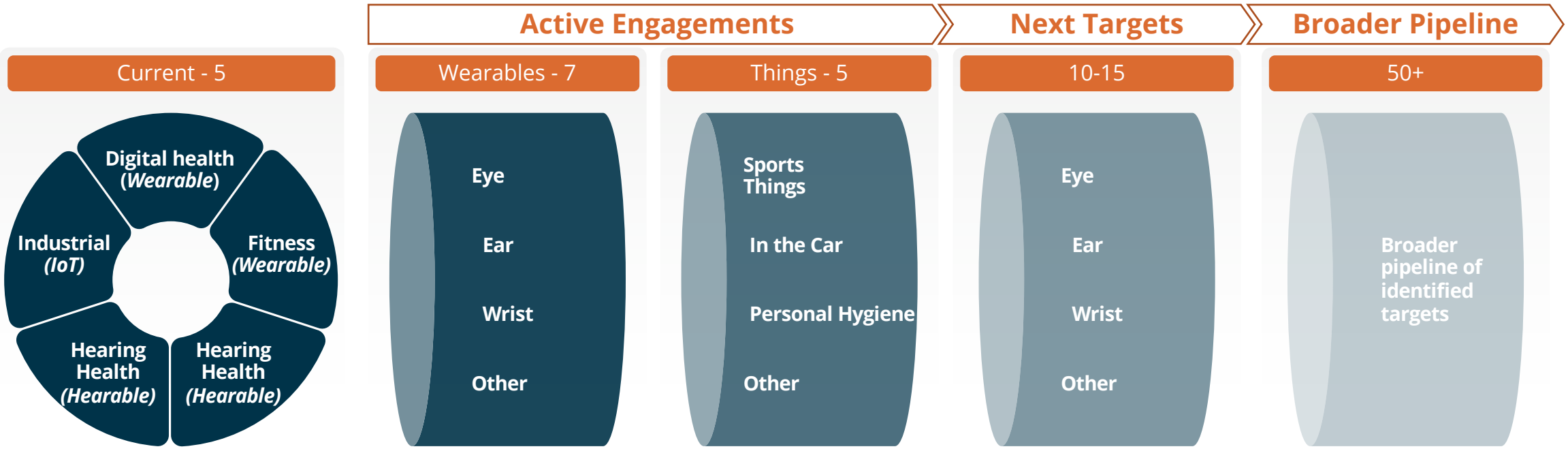
- ✓ Significant achievement of end-to-end handling of ultra-thin substrates
- ✓ Integrated battery, unit cell processing, stacked and packaged microbatteries
- Remaining requirement to consistently meet the initial target cycling performance
- Solution identified that is undergoing validation
- Expect to provide Ensurge microbattery samples to customers shortly



Cycles of learning

- Rate of learning is set by processing times and testing/evaluation times
- Unit cell manufacturing time reduced to 9 days
- Packaging process time reduced to 9 days
- Cycle testing is based on rate of charging, typically two weeks or more
- Acceleration of cycles of learning by a factor of 2

Customer Engagement



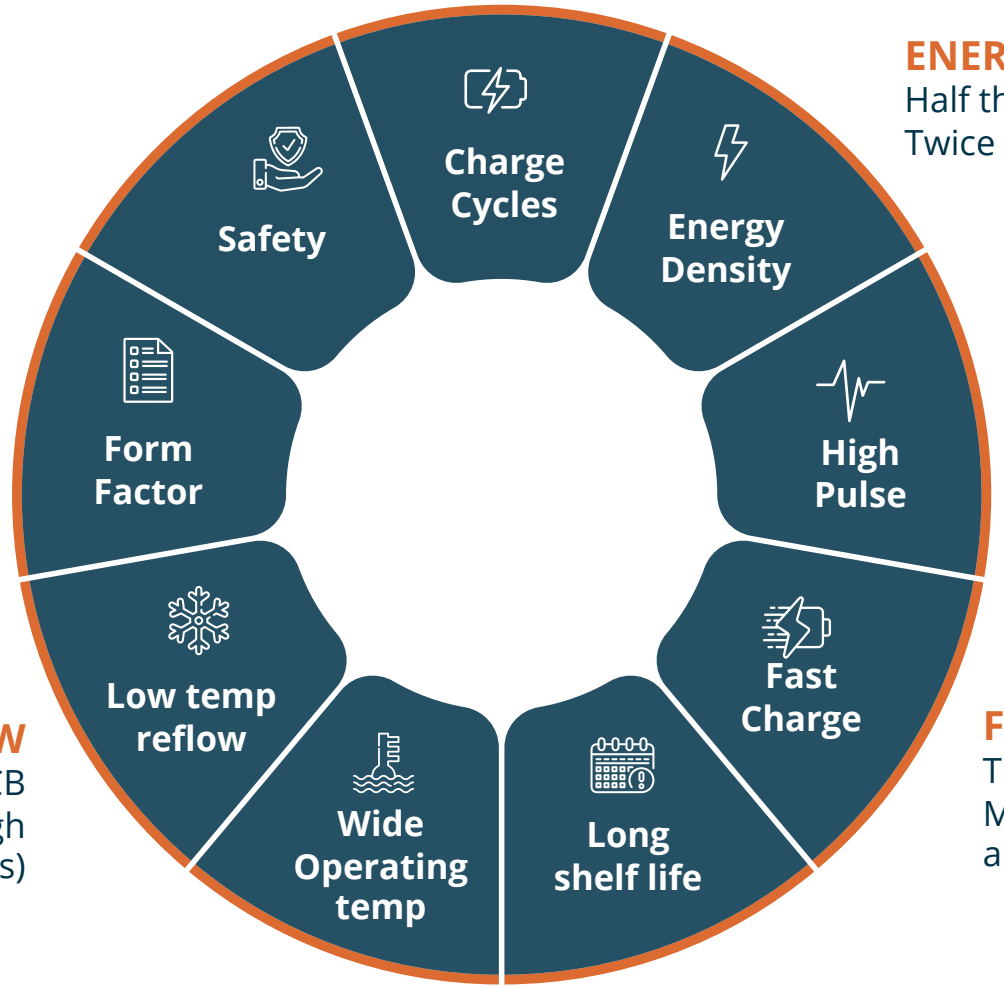
From samples to production...

Helping customers build boards for Ensurge microbatteries now	Provide initial samples to signed customers	Broaden sample engagements	Support design-in of Ensurge microbattery	Deliver product in-time for customer ramp

Value Propositions Driving Customer Engagements

ENERGY DENSITY
Half the size for the same capacity OR
Twice the capacity for the same size

FORM FACTOR FLEXIBILITY
Customer's ability to access a customizable form factor battery that conforms to the customer design

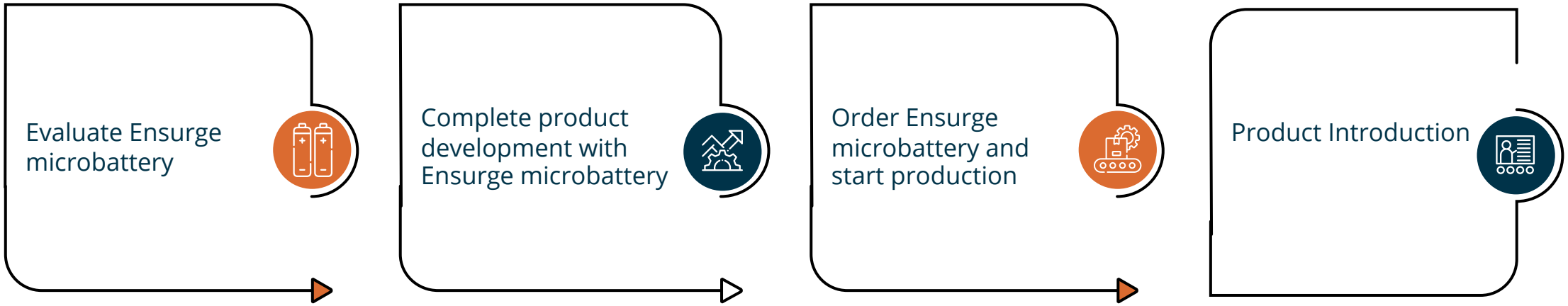


LOW TEMP REFLOW
Easier to integrate on the PCB
Also, products can be molded at high temperature (Lithium Ion cannot do this)

FAST CHARGE
Three times faster than Lithium Ion
Major customer product differentiator and end-user benefit

Customer's Product Development Process

Customer Development Process



SHORTER TIME TO REVENUE CUSTOMERS

- Want samples now
- Strongest alignment with Ensurge value propositions
- Smaller, agile companies with faster evaluation and development time
- Initial revenue in Q422-1H23; growing beyond

LONGER TIME TO REVENUE CUSTOMERS

- Many want samples now for evaluation
- Strong alignment with Ensurge value propositions
- Mid-size to large companies with longer evaluation and development time
- Initial revenue in 2H2023; growing beyond

How Ensurge Wins

First mAh Solid-State Lithium Microbattery*

Ensurge microbattery unique benefits

- Higher energy density – 2X
- Customizable form factor

Benefits of solid-state vs. Li-Ion

- Fast charge – 3X
- High pulse discharge - 5X+
- Charge cycles – 2X+

** mAh and microbattery refer to 1-100 mAh capacity required by a range of personal electronics, medical devices and IoT connected sensors*

Novel Microbattery Architecture

Ultra-thin 10µm steel substrate

- High energy density
- High mechanical strength

Roll-to-Roll manufacturing facility

- High throughput, low cost
- Conventional manufacturing environment

Innovative cell-stacking & packaging

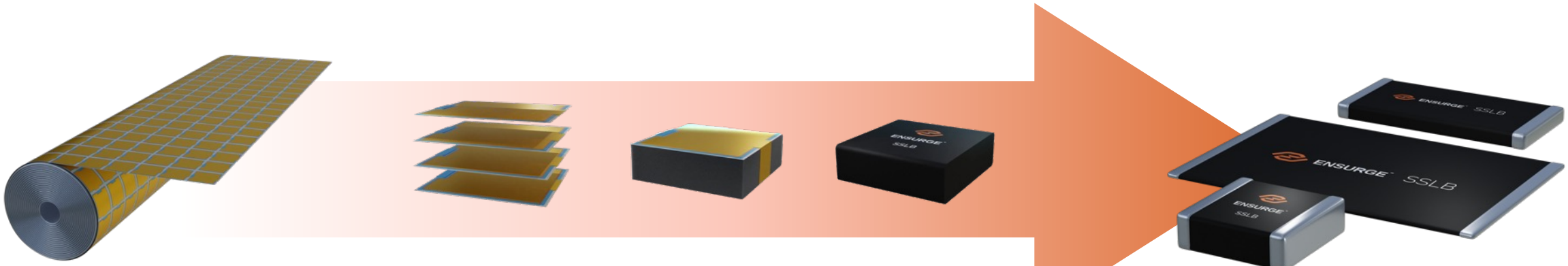
- Maximizes energy density
- Customizable
- Contacts for direct PCB connection

Established anode-less solid-state chemistry

- Lower cost
- 1000+ cycles
- Rapid charging and high pulse discharge

Ensurge: performance and customizability, at scale

	energy density more battery life per unit volume	recharge cycles longer lasting hearables, wearables, sensors	charging speed improved user experience	safety no fire, explosion, heat risk	form factor enabling unique end products
 **Ensurge SSLB**	2x	2-3x	2x	✓	rectangle ultra thin
vs.					
 **Li-ion button cell**	1x	1x	1x	⊗	thick circle



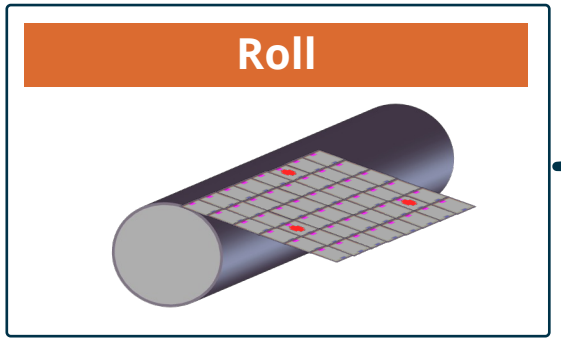
Scale via roll-to-roll fabrication

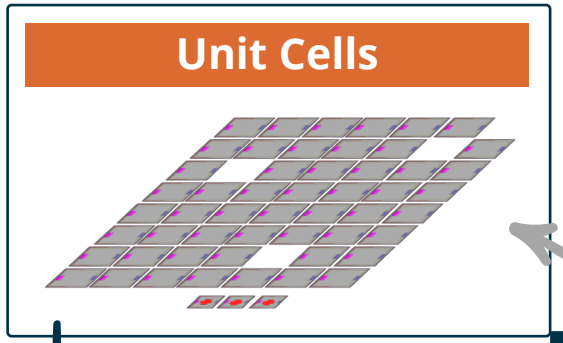
precision stacking & encapsulation

Microbattery product platform

Ensurge Microbattery

Roll-to-roll deposition of cathode and solid electrolyte

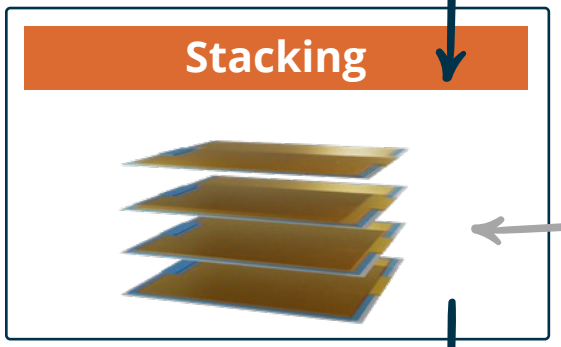




Unit cells cut from roll

Customize Length & Width

Multiple unit cells of the same size stacked to form a single Ensurge microbattery



Customize Height (# of stacks)

Form Factor Flexibility

Stacked cells encapsulated and connectors added on both sides

Reflow & SMT Compatible

Summary

First mAh solid state lithium microbattery

Novel architecture

- Superior energy density, lifetime, charging vs. Lithium-ion
- Customizable form factors
- 10µm steel substrate & innovative stacking/packaging

Billion-unit, ten-billion $ addressable market

- Hearables, wearables, sensors
- Improves existing applications and enables new ones

Barriers to entry

- Extensive IP
- Thin film and roll-based manufacturing know-how

Existing, production-grade factory

- $40M equipment for high-capacity roll-to-roll mfg.

Profitable

- EBITDA potential w/ existing facility ~$100M

ENSURGE™

Thank You