

**24M ETOP™ (Electrode-to-Pack) is a game-changer for electric mobility and energy storage systems, providing unmatched energy density.** This innovative manufacturing platform delivers a streamlined battery pack system that features electrodes packaged directly into the battery pack, removing the need for individual cells and modules.



## Benefits

### Performance

Electrode packing efficiencies of over 70%, the highest pack-level volume utilization efficiency available.

### Cost

Unit electrodes can be connected in a combination of series and parallel — an industry first to reduce the overall pack cost.

### Range and Cycle Life

Higher packing efficiencies and energy density boost range and capacity for EVs and ESS.

### Safety

24M ETOP is enabled by 24M LiForever™ Electrode and Unit Cell technology, which provides unmatched safety when subject to mechanical abuse.

### Pack Design Flexibility

Flexible connections and configurations that are no longer limited by individual cell voltage (V) and capacity (Ah).

Prior to 24M ETOP, cell manufacturers, automotive OEMs and ESS integrators have built battery packs and modules from individual cells. Current lithium-ion battery cells have a large fraction of inactive, non-charge-carrying materials within the cell's casing, such as supporting metals and plastics. These inactive materials reduce module and energy density and add unnecessary expense and waste.

The 24M ETOP manufacturing platform creates a sealed cathode / anode pair, eliminating the cell and module. Instead, the electrodes are directly integrated into the pack, eliminating unnecessary cell materials. This innovative system allows manufacturers to achieve the highest energy density available at the pack level — and cuts costs.



For purchase or licensing information, please contact [sales@24-m.com](mailto:sales@24-m.com).

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