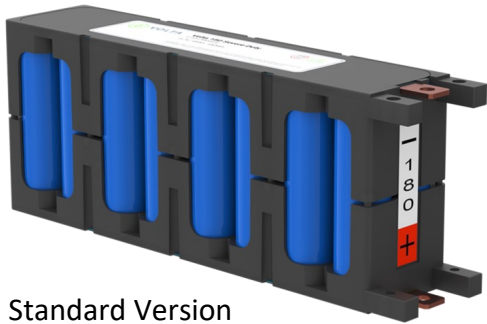
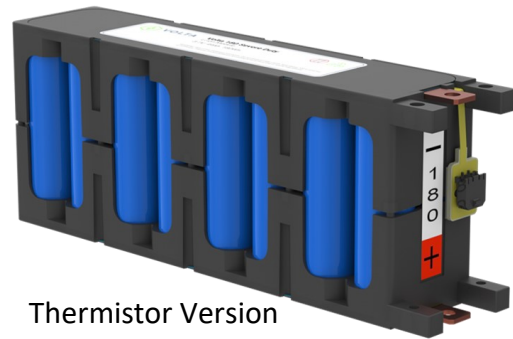


Volta 180 Severe Duty Lithium-ion Module

Volta Energy Products' 180 Severe Duty module provides a practical, user-friendly way to realize the advantages of small cells in lithium-ion battery pack designs



Standard Version



Thermistor Version

Specifications

Configuration		16 Parallel, 1 Series
Capacity ¹ Nominal / (Minimum)		51 Ah
Energy ¹ Nominal / (Minimum)		189 Wh
Nominal Voltage		3.70 V
Energy Density	Gravimetric	214 Wh/kg
	Volumetric	388 Wh/L
Cycle life to 80% capacity		> 800 cycles @ 100% DOD
Standard charging method		CC/CV
Operating Voltage Range		2.50V to 4.2V
Maximum Continuous Discharge ²		70 A (~ 1.4C)
Peak Pulse Discharge (10s) ⁴		176 A (~ 3.4C)
Maximum Continuous Charge ²		70 A (~ 1.4C)
Peak Pulse Charge (10s) ⁵		76 A (~ 1.5C)
Nominal Impedance (1 kHz)		≤ 3 mΩ
Nominal Module Weight		0.87 kg
Operating Temperature ³	Discharge	-30°C to 60°C
	Charge	-10°C to 45°C
Storage Temperature ³		-30°C to 60°C

¹ CC/CV Charging: 0.5C to 4.2V, Cut-off Current: 0.8A (0.02C); CC Discharge: 0.2C, End Voltage: 2.50V; 22°C

² Requires active thermal management

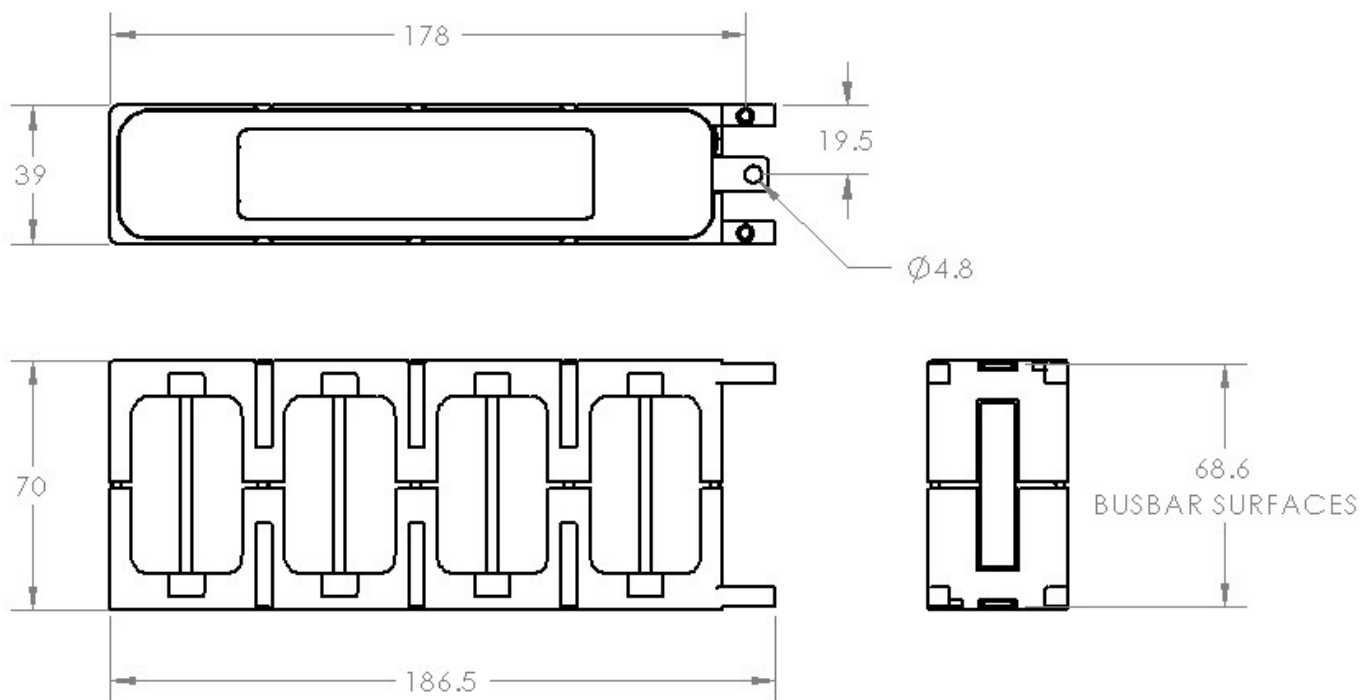
³ Contact Volta Energy Products for information on operation and storage at temperature extremes

⁴ Discharge voltage limit = 2.50V

⁵ DOD window = 10% to 90%

Charge / Discharge Curves:

Mechanical Dimensions:



Electrical Connections:

Electrical connections to bus bars require M4 screws with locking washers and properly sized copper bus bar to handle current from the multiple parallel modules

For module variant with integrated thermistor (optional), the thermistor connector (Molex Micro-fit 3.0™ - Molex P/N 43650-0209) is located between the positive and negative screw terminals

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