



# Immortal

## Cold-Weather Storage Batteries



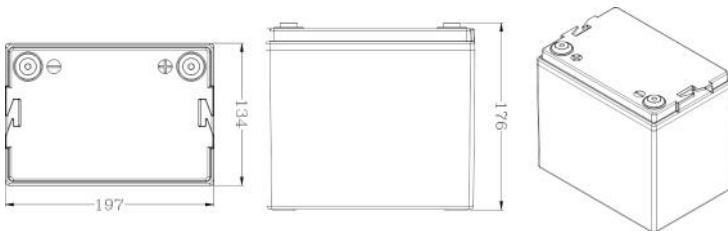
# LTO12-25ESB

ELECTRICAL	Nominal <sup>1</sup>	Absolute <sup>2</sup>
Voltage	12.8V	15.0V
Capacity	25Ah	>25Ah
Charge Voltage	13.5V	15.0V
Continuous Charge Current	30A	100A
Continuous Discharge Current	100A	250A
Operating Temperature (min / max)	25°C	-70°C / +85°C
Storage Temperature (min / max)	25°C	-35°C / +35°C
Round-Trip Efficiency (25°C / -40°C)	99% / 65%	n/a
Self-Discharge	< 1% / month	
Cycle Life	20,000 Cycles @100% DOD	
Calendar Life	25 Years	

<sup>1</sup> Recommended for maximum cell life.  
<sup>2</sup> May reduce cell life (see BMS Protection).

BMS PROTECTION <sup>3</sup>	
High Voltage Cut-Off	14V (Recovery Voltage, 13.5V)
Low Voltage Cut-Off	8V (Recovery Voltage, 9V)
Max. Charge Current	30A (Release, 3s)
Max. Discharge Current (Delay, 30s)	250A-600A (Release, 3s)
Pulse-Discharge Current (Delay, 5s)	>600A (Release, 3s) <sup>4</sup>
Short-circuit Cut-Off (delay, <5ms)	>1000A (Disconnect to release)
Over-Temperature Protection	80 °C (Release, 65 °C)
Low-Temperature Protection, Discharge	-45°C (Release, -35 °C)
Low-Temperature Protection, Charge	-30°C (Release, -20 °C)

MECHANICAL	
Cell Type	Lithium Titanate Oxide (LTO)
Cell Configuration	5s1p
Dimensions (l x w x h)	197 x 134 x 192mm (7.8 x 5.3 x 7.6in)
Weight	5.5kg (11.6 lbs)
Terminals / Torque	3/8 UNC / 27 lb-ft (36 Nm)
Enclosure	ABS
IP Grade	IP65
Comm Port	Special Order



PASSIVE CELL BALANCING	
Equalization Voltage	2.7V / Cell
Balance Current	0 - 75mA
BMS Quiescent Current Consumption	≤30µA

ADDITIONAL FEATURES	
Bluetooth	YES
Power-Saver Start Protection	No
Display	Special Order
Illuminated On/Off Button	Special Order
Series Capability	Maximum 4

