

EPiC n42 Liquid Cooled Lithium Battery



Features

- Integrated liquid cooling system
- Scalable in series and parallel
- Lightweight (120 Wh/kg)
- Compact (140 Wh/l)
- High power (1,200 W/l)
- 2,000+ Cycles (100% DOD)
- 4,000+ Cycles (80% DOD)
- Isolated CANbus interface
- Isolated discrete control and sense I/O

Specifications

Electrical

Voltage @ Charge:	41 - 42 V
Nominal Discharge Voltage:	37 V
Voltage @ Discharge Termination:	30 V
Nominal Capacity (C/2):	50 Ah
Standard Discharge:	50 A (C)
Max Cont. Charge:	300 A (6C)
Max Cont. Discharge:	184 A (8C)
Peak Discharge:	500 A (10C, <10s)

Mechanical

Dimensions:	18.0"L x 6.0"W x 8.5"H
Mass:	17.5 Kg / 35.5 lbs
Cooling:	50/50 glycol mix, ~1 gpm

Temperature

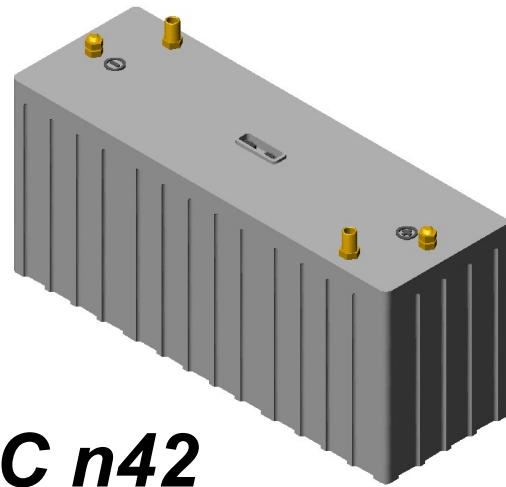
Discharge:	-30°C to +70°C
Charge:	0°C to +60°C
Storage:	-20°C to +35°C

Interfaces

Module:	Isolated Serial x1
Controller COM:	Isolate CANbus x2
Controller Discrete Out:	Isolated <60V, x4
Controller Discrete In:	Isolated <60V, x4

Life Data

Cycle Life:	2,000 cycles > 80% BoL 100% DOD
Shelf-Life	60 months



EPiC n42 42 V @ 50 Ah (2.1kWh)

EPS introduces the *n42* advanced lithium-ion battery offering very high power, long life rechargeable energy in an extremely lightweight compact package. The chemistry uses high power lithium NMC chemistry, capable of very high symmetrical discharge and charge rates, very high cycle life and very long calendar life. A proprietary cooling system allows the *n42* to operate at very high discharge and charge rates continuously without impacting the cycle life of the cells.

The design also allows the *n42* to be assembled into parallel and series strings up to 1kV to construct larger battery systems. The *n42*'s integrated battery management system (BMS) communicates to a central controller that manages the complete system, balances the lithium cells, controls charge and discharge operations, measures current, and provided state-of-charge information over the integrated CANbus interface.

Contact EPS to discuss incorporation of this advanced technology into your application.