High energy lithium-ion module

VLE Module

Saft VL modules include the latest improvements regarding cells, housing, connections and electronic devices for safety, cycle and calendar life, reliability and cost. VL modules are available in high energy VLE, medium power VLM and high power VLP versions.

Saft VLE technology is suited to any very high energy demanding application that requires a storage system with drastically reduced weight and volume. VLE module is made up of six high energy VL45E cells that can be connected in two different configurations: six cells in series or three sets in series of two cells in parallel.

	VLE 22-42	VLE 11-84
Electrical characteristics		
Nominal voltage (V)	21.6	10.8
Minimum capacity at c/3 after charge to 4.0 V/cell (Ah)	42	84
Specific energy (Wh/kg)	110	111
Energy density (Wh/dm³)	158	158
Specific power (30s peak/50% DOD) (W/kg)	533	533
Power density (30s peak/50% DOD) (W/dm³)	753	753
Mechanical characteristics		
Height (mm)	242	242
Width (mm)	190	190
Lenght (mm)	123	124
Typical weight (kg)	8	8
Volume (dm³)	5.66	5.66
Voltage limits		
Charge (V)	4.0 (4.1 for peak)/cell	
Discharge (V)	2.7 (2.3 for peak)/cell	
Current limits		
Max continuous current (A)	100	200
Max 30s peak current (A)	250	500

Features

- Very high specific energy
- Light and compact
- Maintenance free
- Excellent cycle and calendar life
- Integrated liquid cooling
- Easy integration into customized battery systems

Applications

- Electric and hybrid vehicles
- Telecommunication networks
- Stationary
- Space and defence

Technology

- Nickel oxide-based cathode
- Graphite based anode
- Plastic housing
- Bus-bar connection technology
- Integrated electronic circuits for cells management and protection to be monitored by external Battery Management System

saft

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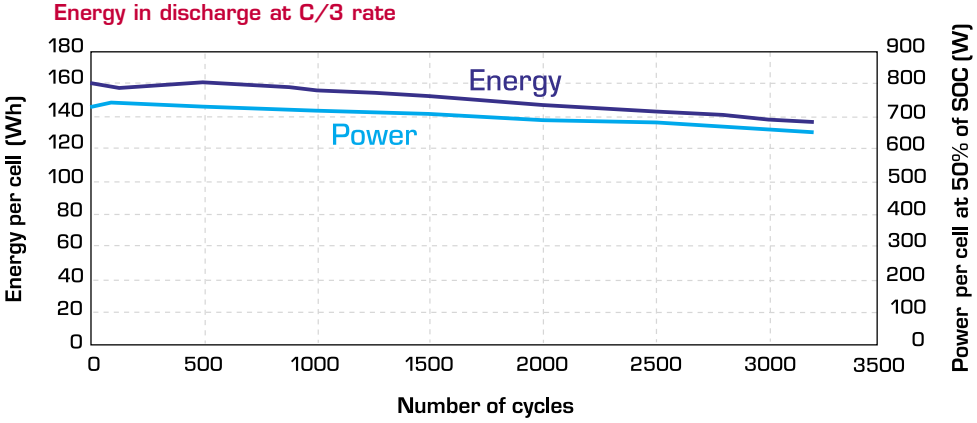
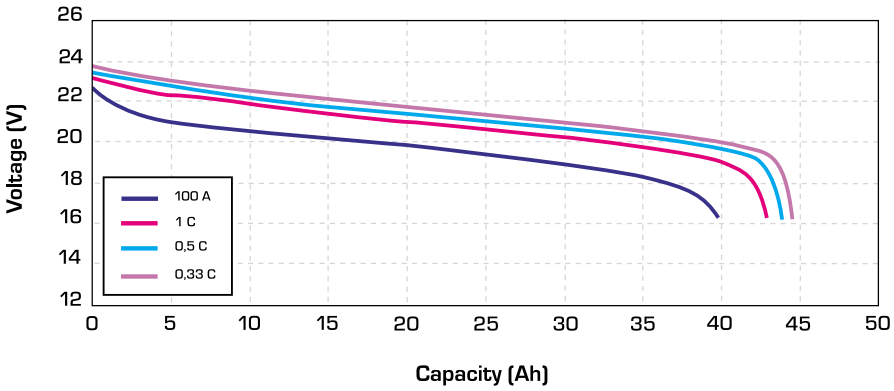
VLE module

Cycling life in DST profil at 80% of DOD at +20°C.
Energy in discharge at C/3 rate



Typical discharge at +20°C after change to 4.0 V/cell



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