Medium power lithium-ion cells

VL M cells

Saft VL M cells combine the benefits of high power lithium electrode technology with enhanced energy density. This cell is proposed in Saft modules or customized battery system constructions.

Saft's battery system

Individual lithium-ion cells need to be mechanically and electrically integrated into battery systems to operate properly. The battery system include electronic devices for performance, thermal and safety management specific to each application.

Features

- High specific energy and power
- Excellent cycle and calendar life
- Maintenance free
- Fast continuous charge capability 1C rate

Applications

- Electric and hybrid vehicles
- Telecommunication networks
- Stationary
- Space and Defence
- Any application requiring an optimal balance between high power and high energy

Technology

- Graphite-based anode
- Nickel oxide-based cathode
- Electrolyte: blend of carbonate solvents + LiPF6

	VL 41M	VL 27M
Electrical characteristics		
Nominal voltage (V)	3,6	3,6
Average capacity C/3 after charge to 4.0 V/cell (Ah)	41	27
Minimum capacity C/3 after charge to 4.0 V/cell (Ah)	39	25
Specific energy after charge to 4.0 V/cell (Wh/kg)	136	124
Energy density after charge to 4.0 V/cell (Wh/dm^3)	285	252
Specific power (30s peak 50% DOD) (W/kg)	794	987
Power density (30s peak 50% DOD) (W/dm^3)	1667	2000
Mechanical characteristics		
Diameter (mm)	54.3	54.3
Height (mm)	222	163
Typical weight (kg)	1.07	0.77
Volume (dm^3)	0.51	0.38
Voltage limits		
Charge (V)	4.0 (4.1 for peak)	
Discharge (V)	2.7 (2.3 for peak)	
Current limits		
Max continuous current (A)	150	110
Max peak current during 30 s (A)	300	300

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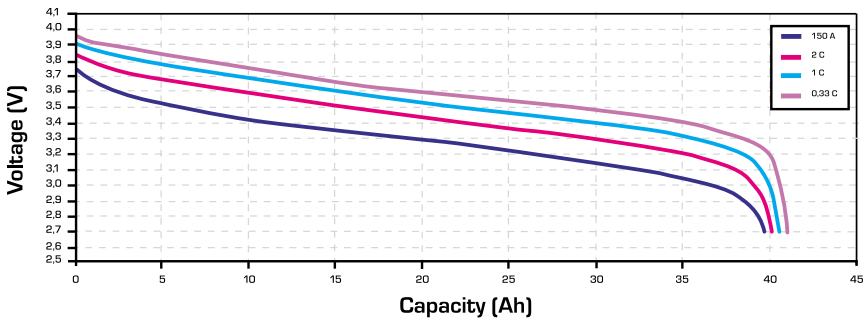
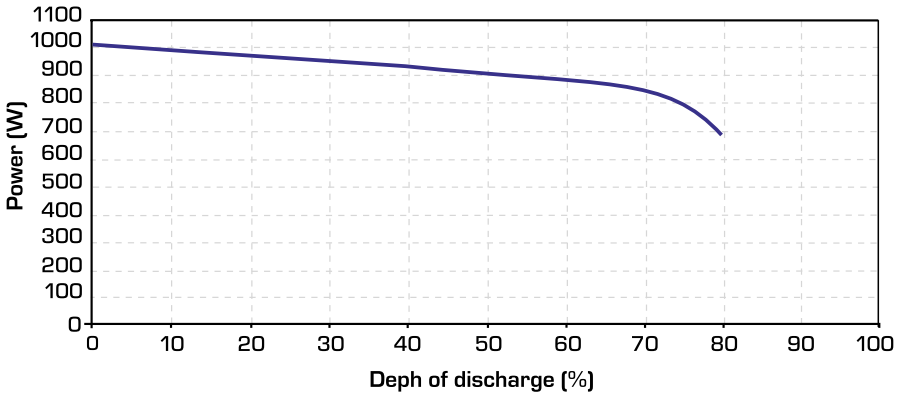
VL 41 M cell

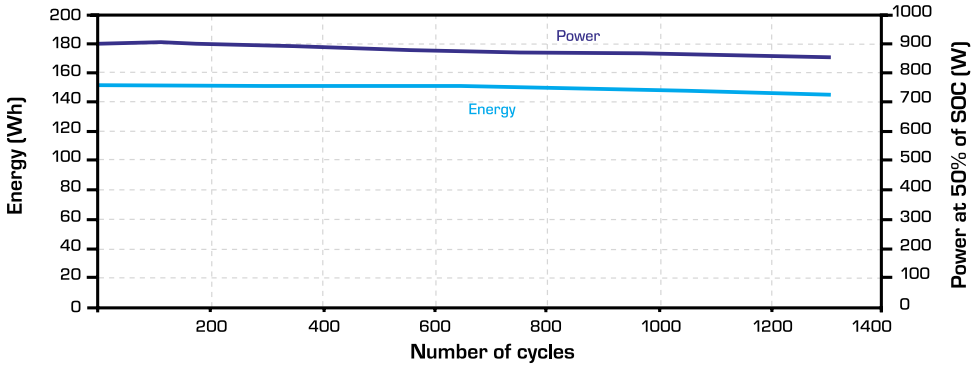
Cell capacity and voltage according to current at +20°C



Power during 30 s at 300 A discharge pulse at +20°C



Cycling life in DST profil at 80% of DOD at +20°C. Energy in discharge at C/3 rate and power 30s at 250 A at 50% of S.O.C.



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