

SSL-LFPP 45

Cylindrical lithium iron nano-phosphate cell

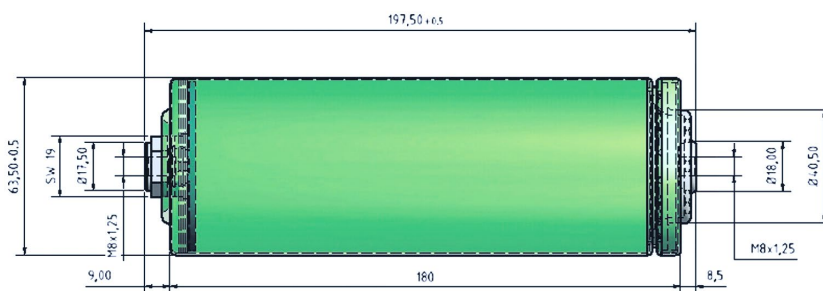
45 Ah / 148 Wh at 0,2 C

Lithium cells are the basis of modern energy storage devices. The essential parameters here are longevity, safety, current load, energy density, price level and environmental friendliness.

The sealed SSL-LFPP cells present a really unique combination of all those properties. In our ultramodern battery factory in Geesthacht near Hamburg, we produce storage cells which achieve extraordinary performances in a whole range of parameters.

Our know-how and expertise show in the manufacturing of sophisticated products and range from the composition of the chemical raw material to the extensive final inspection and measuring of each individual cell. On request, we also provide various battery management systems (BMS), design data, components and charging technology.

Please do not hesitate to contact us at info@ssl-energie.de!



Picture:
Dimensions
SSL-LFPP-45



Chemical description

Positive electrode	lithium iron nano-phosphate P
Negative electrode	graphite

45 Ah

Electrical properties

Nominal voltage at 0.2 C; 25°C	3.3 V
Specific energy content at 0.2 C; 25°C	148 Wh
Nominal capacity at 0.2 C; 25°C	45 Ah
Nominal capacity at 0.2 C; 20°C	45 Ah
Capacity at 1 C	45 Ah
Internal resistance/impedance up to 1 kHz	0.75 mΩ
DC resistance (VDA) - 2s discharge 5 C up to 50% SOC; 25°C	< 1.5 mΩ
Specific gravimetric energy density	129 Wh/kg
Specific volumetric energy density	235 Wh/l
Specific gravimetric power density	2582 W/kg
2 s pulsed discharge up to 100% SOC; 25°C	
Specific volumetric power density	4550 W/l
2 s pulsed discharge up to 100% SOC; 25°C	

Physical and mechanical properties

Diameter	63,5 mm
Total length	197,5 mm
Weight	1,15 kg
Volume without connectors	569 cm ³
Cell beaker (can) material	pure aluminium

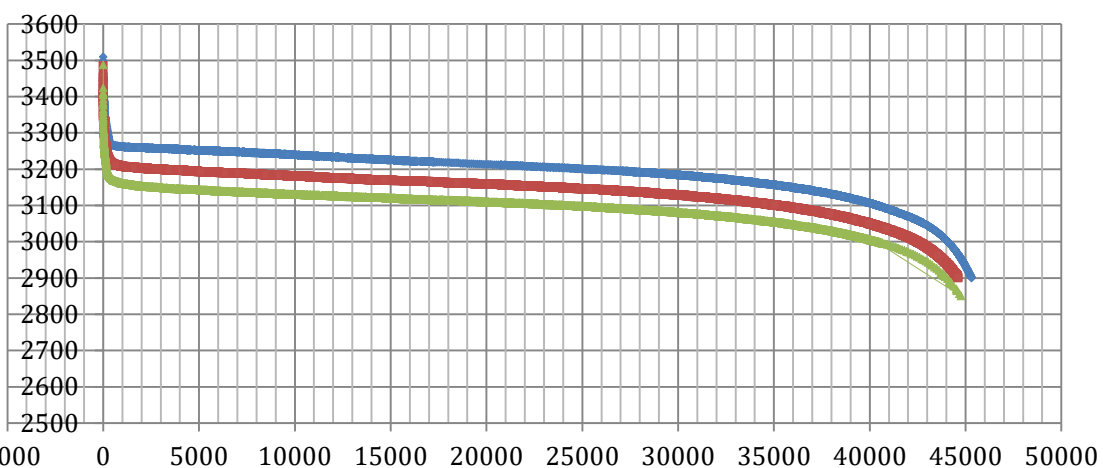
Conditions of use

Recommended charging method	constant current
Recommended charging current	up to 45 A (=C)
Maximum continuous charging current	< 50 A
Maximum charging current for 10 sec.	< 180 A
Charging cut-off voltage	3.48 V
Discharge voltage at 0.2 C	U = 2.8 V
Recommended continuous discharge current	8 bis 45 A
Maximum continuous discharge current	< 90 A
Maximum discharge current for 10 sec. (C5)	225 A
Maximum pulse discharge current for 2 sec. (C8)	360 A
Recommended operating temperature range	-10° to +50°C
Recommended charging temperature range	5° to +40°C
Temperature range for storage and transport	-20° to +45°C
Cycle stability of 100% DOD at 25°C; 1C/1C	>6000 cycles
Cycle stability of 90% DOD at 25°C; 1C/1C	>8000 cycles

Guarantee

Guarantee / Cycles

10 years or 8000 cycles, 90 % DoD



Load curves with $i=1C$; 2C and 3C charging up to 3600 mV at CV1 and discharge up to 2900 mV
Resistance between 1C and 3C curve at SOC \approx 90% $R_{DC}(10C @ 30sec / 40sec) 1.2m\Omega$; R_{DC} vs. OCV: 1.6 mΩ

 according to EU regulation 765/2008

Subject to modifications including technical modifications