SSL-LFPP **45**
SSL-LFPP **48**

Cylindrical lithium iron nano-phosphate cell

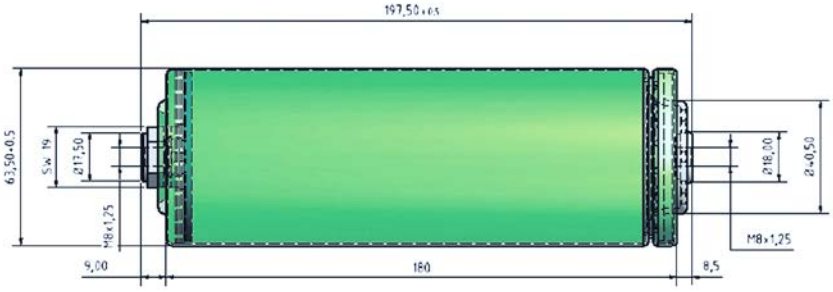
45 Ah / 148 Wh at 0,2 C
48 Ah / 158 Wh at 0,2 C

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 / SSL-LFPP-48

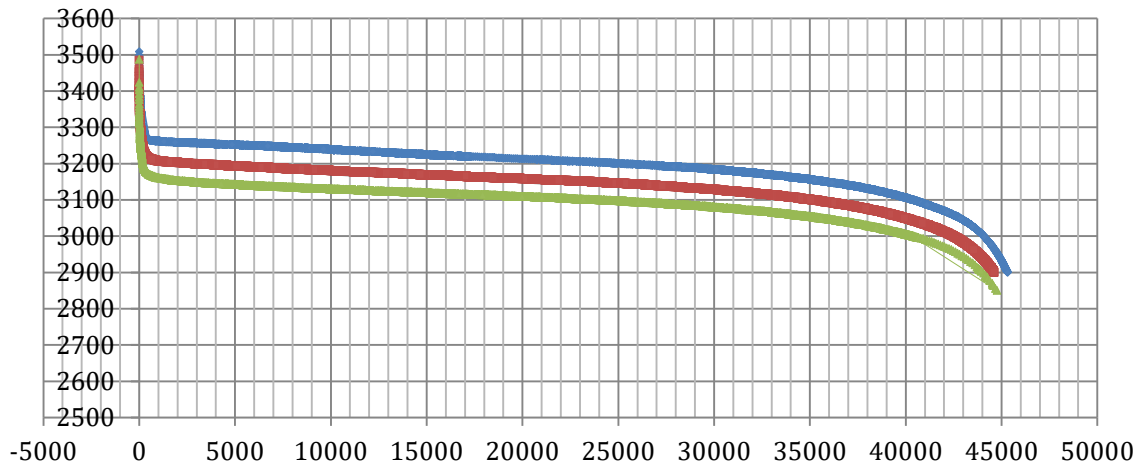
© SSL Energie GmbH | Donaupark 13 | D-93309 Kelheim | Production: SSL Batteries | Mercatorstraße 67| D-21502 Geesthacht
phone: + 49 (0) 8072 3767-250 | fax: + 49 (0) 8072 3767-109 | e-mail: info@ssl-energie.de | www.ssl-energie.de

Chemical description	45 Ah	48 Ah
Positive electrode	lithium iron nano-phosphate P	
Negative electrode	graphite	

Electrical properties		
Nominal voltage at 0.2 C; 25°C	3.3 V	3,3 V
Specific energy content at 0.2 C; 25°C	148 Wh	158 Wh
Nominal capacity at 0.2 C; 25°C	45 Ah	48 Ah
Nominal capacity at 0.2 C; 0°C	41 Ah	ca. 43 Ah
Capacity at 1 C	approx. 44 Ah	ca. 47 Ah
Internal resistance/impedance up to 1 kHz	0.75 mΩ	0,8 mΩ
DC resistance (VDA) - 2s discharge 5 C up to 50% SOC; 25°C	< 1.5 mΩ	< 1,6 mΩ
Specific gravimetric energy density	129 Wh/kg	138 Wh/kg
Specific volumetric energy density	235 Wh/l	250 Wh/l
Specific gravimetric power density 2 s pulsed discharge up to 100% SOC; 25°C	2582 W/kg	2685 W/kg
Specific volumetric power density 2 s pulsed discharge up to 100% SOC; 25°C	4550 W/l	4730 W/l

Physical and mechanical properties	
Diameter	63,5 mm
Total length	197,5 mm
Weight	1,15 kg
Volume without connectors	569 cm³
Cell beaker (can) material	pure aluminium

Conditions of use		
Recommended charging method	constant current	
Recommended charging current	up to 45 A (=C)	up to 48 A (=C)
Maximum continuous charging current	I < 50A	I < 50A
Maximum charging current for 10 sec.	I < 180A	I < 192A
Charging cut-off voltage	3.48 V	3.48 V
Discharge voltage at 0.2 C	U = 2.8 V	U = 2,8 V
Recommended continuous discharge current	45 A	48 A
Maximum continuous discharge current	I < 90 A	I < 96 A
Maximum discharge current for 10 sec. (C5)	I = 225 A	I = 240 A
Maximum pulse discharge current for 2 sec. (C8)	I = 360 A	I = 384 A
Recommended operating temperature range	-10°C to +50°C	
Recommended charging temperature range	0°C to +40°C	
Temperature range for storage and transport	-10°C to +45°C	
Cycle stability of 100% DOD at 25°C; 1C/1C	> 2000 cycles	
Cycle stability of 85% DOD at 25°C; 1C/1C	> 5000 cycles	



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 ≈ 90% R_{DC} (10C @ 30sec / 40sec) 1.2mΩ; R_{DC} vs. OCV: 1.6 mΩ

Subject to modifications including technical modifications

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