

**SPF12V50-ST Standard Type Battery**

**LITHIUM IRON PHOSPHATE BATTERY**

**ELECTRICAL PERFORMANCE**

Nominal Voltage	12.8 V
Nominal Capacity	50 Ah
Capacity @ 10A	300 min
Energy	640 Wh
Resistance	≤20 mΩ @ 50% SOC
Self Discharge	<3% / Month
Cells	Cylindrical

**CHARGE PERFORMANCE**

Recommended Charge Current	10 A
Maximum Charge Current	50 A
Recommended Charge Voltage	14.6 V
BMS Charge Cut-Off Voltage	<15.6 V (3.9V/Cell)
Reconnect Voltage	>14.4 V (3.6V/Cell)
Balancing Voltage	<14.4 V (3.6V/Cell)
Maximum Batteries in Series	4

**DISCHARGE PERFORMANCE**

Maximum Continuous Discharge Current	50 A
Peak Discharge Current	100 A (3s)
BMS Discharge Cut-Off Current	150 A ± 5 A (31ms)
Recommended Low Voltage Disconnect	11.0 V (2.75V/Cell)
BMS Discharge Cut-Off Voltage	>8.0 V (2s) (2.0V/Cell)
Reconnect Voltage	>10.0 V (2.5V/Cell)
Short Circuit Protection	250 ~ 500 μs



**MECHANICAL PERFORMANCE**

Dimension (L x W x H)	198 x 166 x 176 mm 7.8 x 6.5 x 6.9"
Approx. Weight	13.9 lbs (6.3 kg)
Terminal Type	T11
Terminal Torque	80 ~ 100 in-lbs (9 ~ 11 N-m)
Case Material	ABS
Enclosure Protection	IP65

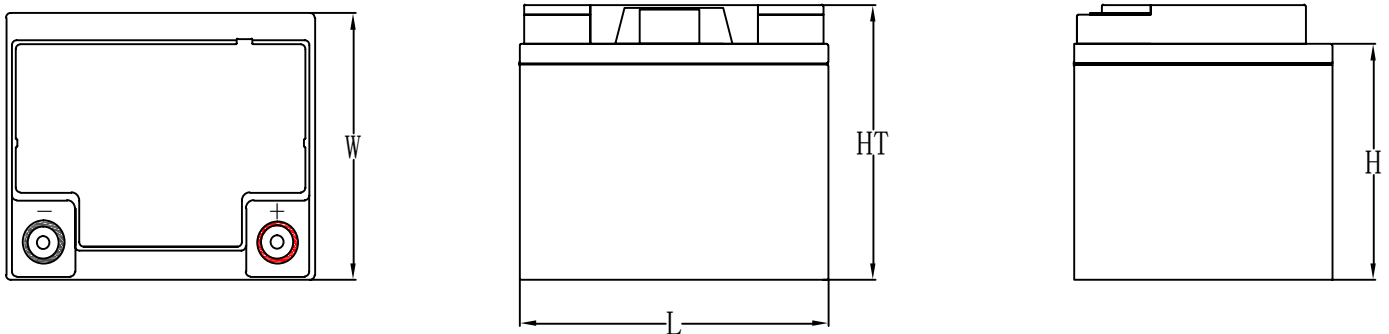
**TEMPERATURE PERFORMANCE**

Discharge Temperature	-4 ~ 131 °F (-20 ~ 55 °C)
Charge Temperature	32 ~ 113 °F (0 ~ 45 °C)
Storage Temperature	23 ~ 95 °F (-5 ~ 35 °C)
BMS High Temperature Cut-Off	149 °F (65 °C)
Reconnect Temperature	131 °F (55 °C)

**COMPLIANCE**

Certifications	CE (battery) UN38.3 (battery) UL1642 & IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9

**OUTLINE DIMENSION**

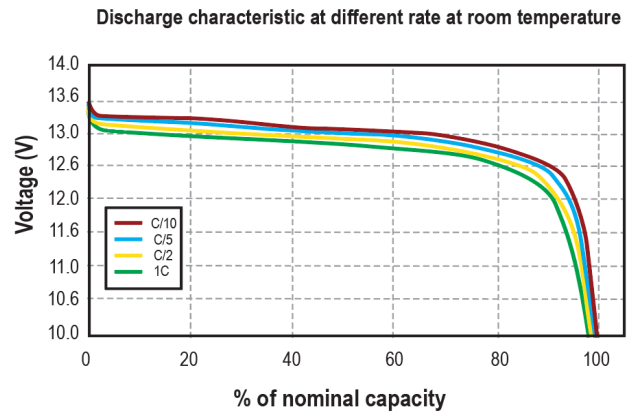
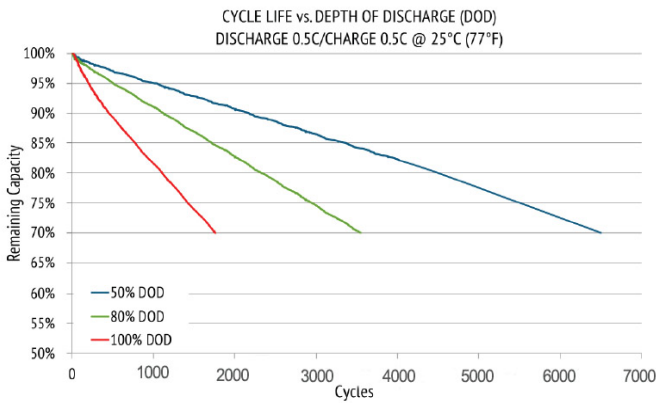
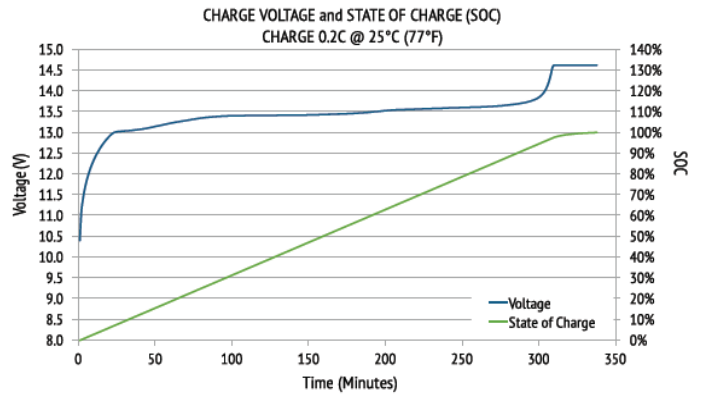
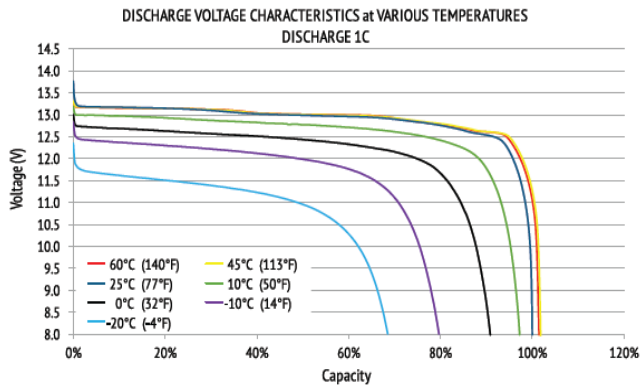


L mm(")	W mm(")	H mm(")	HT mm(")
198 (7.8)	166 (6.5)	146 (5.7)	176 (6.9)

Performance may vary depending on application. All specifications are subject to change without prior notice to the user. This data is for evaluation purposes only. No guarantee is intended or implied by this data. For clarification and updated information, please contact us.

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**PERFORMANCE CHARACTERISTICS**



**FEATURES & BENEFITS**



**High cycle life**

>2000 cycles @80% DoD for effectively lower total cost of ownership.



**Longer service life**

Low maintenance batteries with stable chemistry.



**Built in circuit protection**

Battery Management System (BMS) is incorporated against abuse.



**Better storage**

up to 6 months thanks to its extremely low self discharge (LSD) rate and no risk of sulphation.



**Quickly recharge**

Save time and increase productivity with less down time thanks to superior charge/discharge efficiency.



**Extreme heat tolerance**

Suitable for use in a wider range of applications where ambient temperature is unusually high: up to +60°C.



**Lightweight**

Lithium batteries provide more Wh/Kg while also being up to 1/3 the weight of its SLA equivalent.

**APPLICATIONS**

Lithium Iron Phosphate can be used in most applications that use Lead Acid, GEL or AGM type batteries. Suitable applications include:

- Caravan
- Marine
- Golf Car
- Buggies
- Solar Storage
- Remote Monitoring
- Switching applications and more

**CAUTIONS**

- Do NOT short circuit, reverse polarity, crush or disassemble.
- Do NOT heat or incinerate.
- Do NOT immerse in any liquid.
- Store at 30~50% SOC. Recharging every 3 months is recommended. The storage area should be clean, cool, dry and ventilated.

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