SUPER SP PACK®
Best Solution of Battery

Guangdong Superpack Technology Co., Ltd.

# SPF12V20-ST Standard Type Battery

## LITHIUM IRON PHOSPHATE BATTERY

| ELECTRICAL PERFORMANCE | |
|---|---|
| Nominal Voltage | 12.8 V |
| Nominal Capacity | 20 Ah |
| Capacity @ 4A | 300 min |
| Energy | 256 Wh |
| Resistance | ≤30 mΩ @ 50% SOC |
| Self Discharge | <3% / Month |
| Cells | Cylindrical |

| CHARGE PERFORMANCE | |
|---|---|
| Recommended Charge Current | 4 A |
| Maximum Charge Current | 20 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 | 6 |

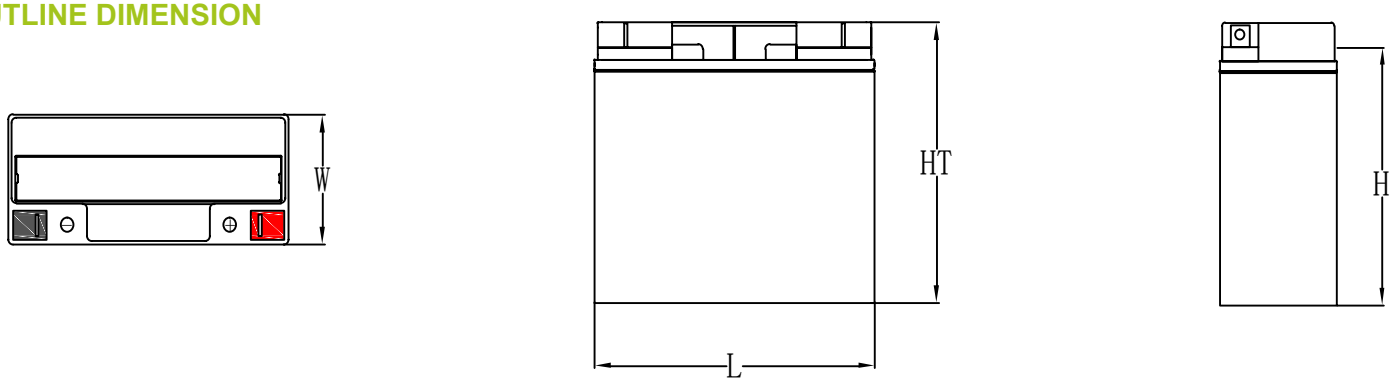
| DISCHARGE PERFORMANCE | |
|---|---|
| Maximum Continuous Discharge Current | 20 A |
| Peak Discharge Current | 40 A (3 s) |
| BMS Discharge Cut-Off Current | 60 A ± 5 A ( 31 ms) |
| Recommended Low Voltage Disconnect | 11.0 V (2.75V/Cell) |
| BMS Discharge Cut-Off Voltage | >8.0 V (2s) (2.0V/Cell) |
| Reconnect Voltage | >10.0 V (2.5V/Cell) |
| Short Circuit Protection | 250 ~ 500 μs |


| MECHANICAL PERFORMANCE | |
|---|---|
| Dimension (L x W x H) | 181 x 76 x 168 mm<br>7.1 x 3.0 x 6.6” |
| Approx. Weight | 5.6 lbs (2.6 kg) |
| Terminal Type | NB1 |
| Terminal Torque | 35 - 44 in-lbs (4 - 5 N-m) |
| Case Material | ABS |
| Enclosure Protection | IP65 |

| TEMPERATURE PERFORMANCE | |
|---|---|
| Discharge Temperature | -4 ~ 131 ºF (-20 ~ 55 ºC) |
| Charge Temperature | 32 ~ 113 ºF (0 ~ 45 ºC) |
| Storage Temperature | 23 ~ 95 ºF (-5 ~ 35 ºC) |
| BMS High Temperature Cut-Off | 149 ºF (65 ºC) |
| Reconnect Temperature | 131 ºF (55 ºC) |

| COMPLIANCE | |
|---|---|
| Certifications | CE (battery)<br>UN38.3 (battery)<br>UL1642 & IEC62133 (cells) |
| Shipping Classification | UN 3480, CLASS 9 |

## OUTLINE DIMENSION




| L mm(”) | W mm(”) | H mm(”) | HT mm(”) |
|---|---|---|---|
| 181 (7.1) | 76 (3.0) | 155(6.1) | 168(6.6) |

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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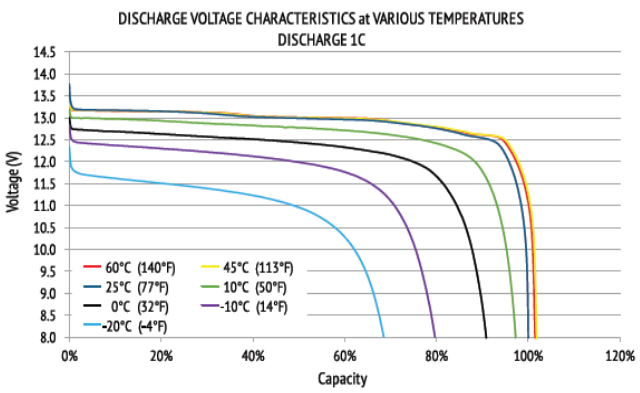
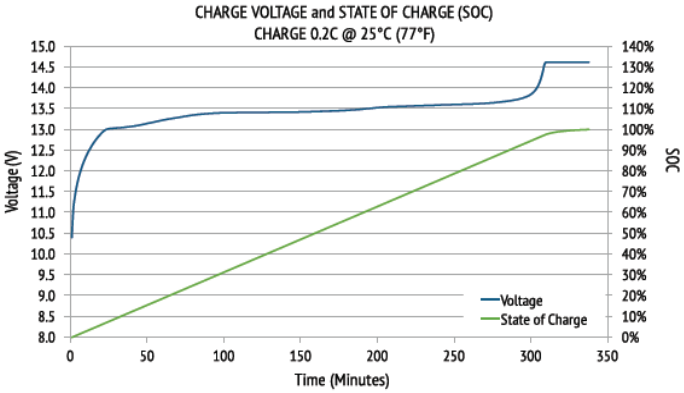
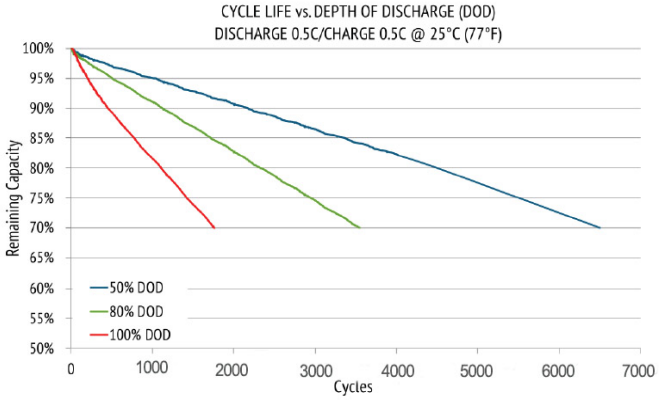
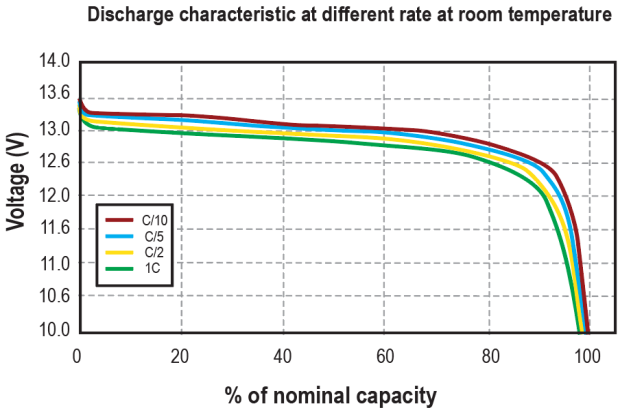
## PERFORMANCE CHARACTERISTICS




## 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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