



PowerBrick+

12v Lithium-Ion battery pack



12V battery pack - Lithium Iron-Phosphate (LiFePO₄) - 20Ah

- **High lifespan:** two thousand cycles and more (see chart)
- **Deep discharge** allowed up to 100 %
- Ultra safe **Lithium Iron Phosphate** chemistry (no thermal run-away, no fire or explosion risks)
- **Embedded BMS** (Battery Management System) : **improve lifespan AND secure the battery**
- No **Lead**, no **heavy metal**, no **toxic element**
- Calendar life > **10 years**
- Excellent **temperature** robustness (-20 °C up to +60 °C)
- **Flexible** deployment : up to 10 packs in parallel and 4 in serial
- **Constant power** during discharge (very low internal resistance)
- **Very low Peukert's losses** (energy efficiency >96 %)
- **Very low self discharge** (<3 % per month)
- **No memory effect**
- About **50 % lighter** and **40% smaller** than equivalent Lead-AGM battery with same usable energy
- **Certification** : CE, RoHS, UN 38.3, UL

Technical Specifications

Electric	Nominal voltage	12.8V
	Nominal capacity	20 Ah
	Stored energy	256 Wh
	Internal resistance	≤ 50mΩ
	Cycles	>2000 cycles (see chart)
	Self discharge	< 3% per month
	Energy efficiency	> 96%
Standard Charge	Charge voltage	14.4V ± 0.2V
	Charge mode	CC/CV : Constant Current / Constant Voltage
	Continuous charge current / Maximum charge current	10 A / 20 A
	BMS charge cut-off voltage	14.8V ± 0.1V
Standard Discharge	Continuous discharge current	40 A (512 W)
	Maximum discharge current (< 30s)	60 A (768 W)
	BMS discharge cut-off voltage	10 V
Environment	Charge temperature range	0°C à 45°C @60±25% relative humidity
	Discharge temperature range	-20°C à 60°C @60±25% relative humidity
	Storage temperature	0°C à 40°C @60±25% relative humidity
	IP protection level	IP 66
Mechanical	Cell assembly	26650 - 456P
	Casing material	ABS
	Dimensions	L : 180mm x P : 76mm x H : 168 mm
	Weight	2.80 kg
	Terminal	M5



APPLICATIONS

- **Electrical vehicles and utilities**
- **Solar and wind energy storage**
- **Marine**
- **Street lightning**
- **CCTV and security camera**
- **UPS, electric back-up**
- **Telecom**
- **Medical equipments**
- ...



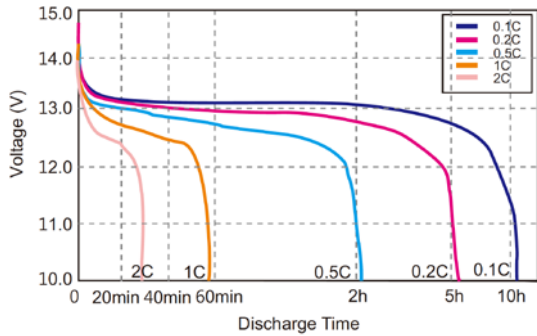
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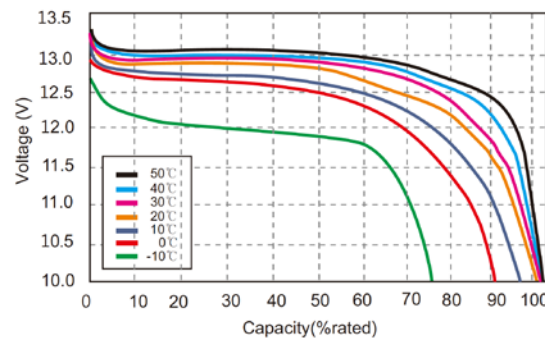


Charts and curves

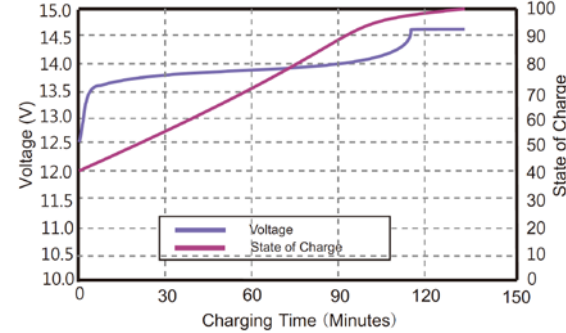
Different Rate Discharge Curve @25°C



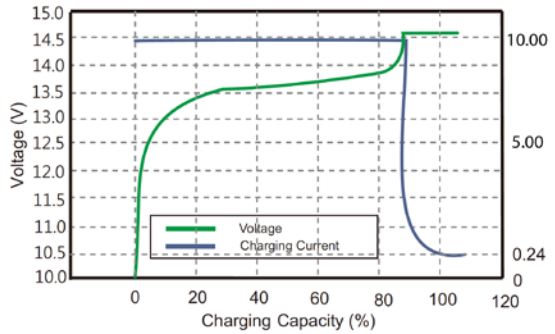
Different Temperature Discharge Curve @0.5C



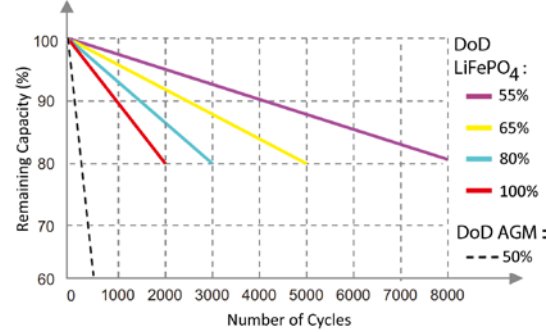
State of Charge Curve @0.5C 25°C



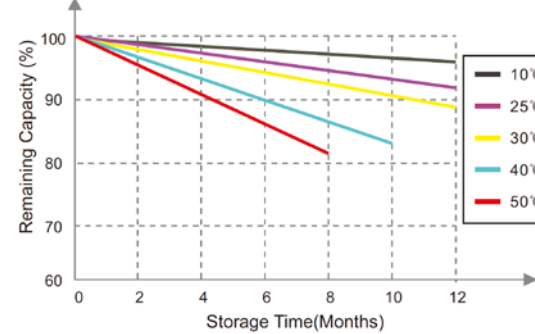
Charging Characteristics @0.5C 25°C



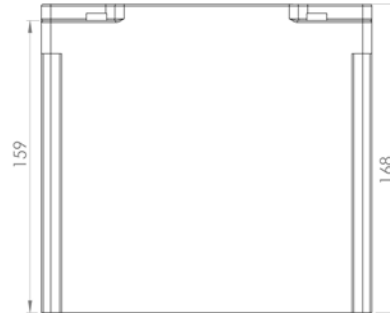
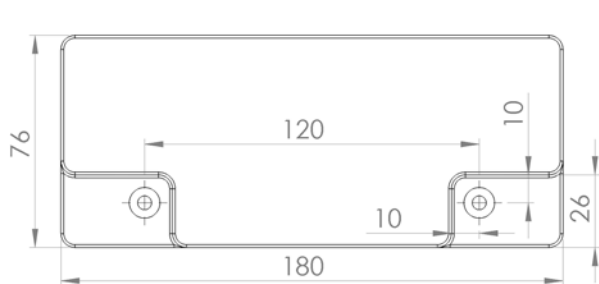
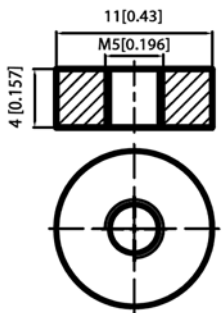
Different DoD Discharge Cycle Life @1C



Different Temperature Self Discharge Curve



Dimensions



PowerTech
systems

V1.0

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