



# Drypower

12.8V

50Ah


LiFePO<sub>4</sub>

640Wh

## 12LFP50P

Rechargeable Lithium Iron Phosphate Battery

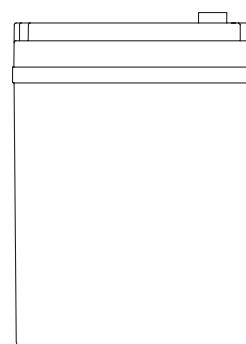
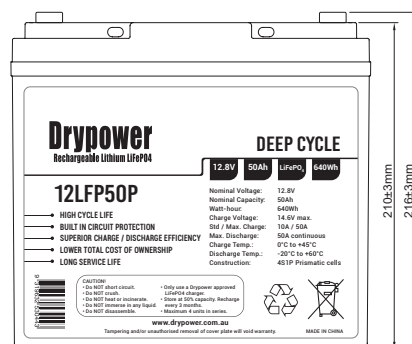
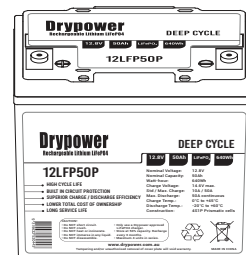
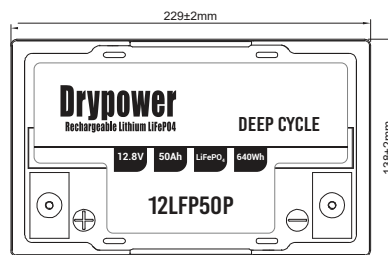
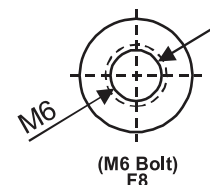
### SPECIFICATIONS

Nominal Voltage	12.8V
Nominal Capacity @5hr Rate	50Ah
Watt-hour	640Wh
Dimensions	
Length	229 ± 2mm
Width	138 ± 2mm
Height	210 ± 3mm
Overall Height	216 ± 3mm
Weight	5.95kg
Internal Resistance (at 1KHz)	≤70mΩ
Charge @25°C	
Standard Charge Current	10A (0.2C)
Maximum Charge Current	50A (1C)
Max Charge Voltage	14.6V
Discharge @25°C	
Standard Discharge Current	10A (0.2C)
Max. Continuous Discharge	50A (1C)
Cut-off Voltage	10V
Cell Used	IFP23140160
Assembly	4S1P-Pris
Cycle Life (±0.5C, 25°C)	
100% DoD	≥2000 cycles
80% DoD	≥3000 cycles
50% DoD	≥4000 cycles
Operating Temperature	
Charge	0°C ~ +45°C
Discharge	-20°C ~ +60°C
Storage	-20°C ~ +45°C
Operating Humidity Range	5% – 85%
Case Material	ABS
Termination	F8 (M6 Bolt)
Ingress Protection Rating	IP54
Series Connection	Up to 4S
Parallel Connection	No
Barcode	 9319632530443

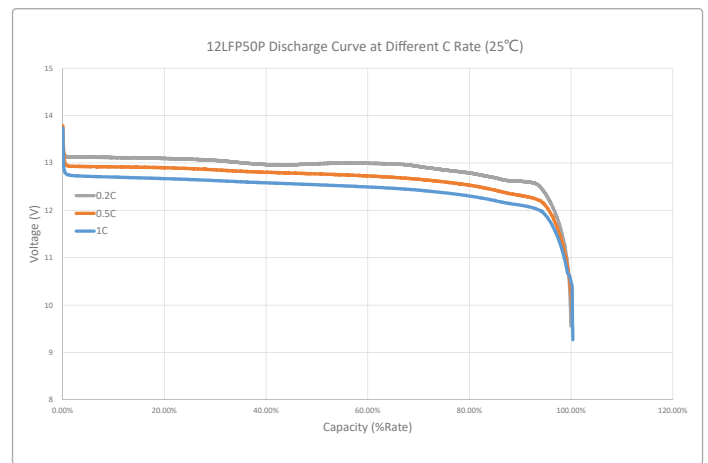
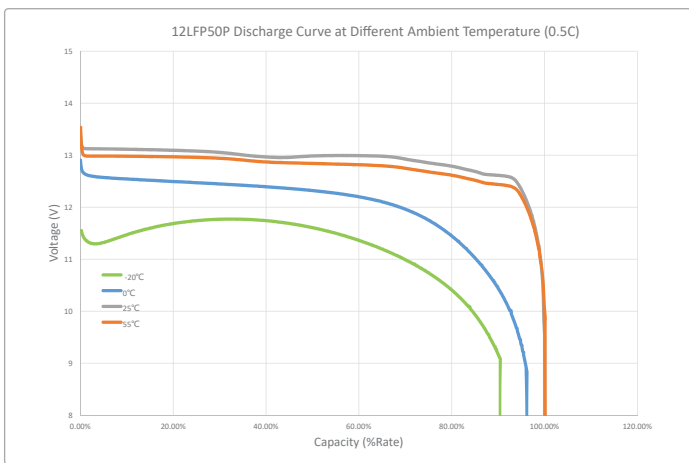
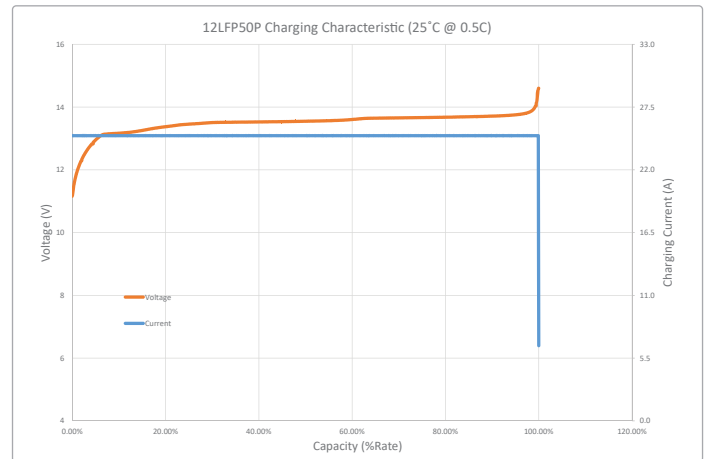
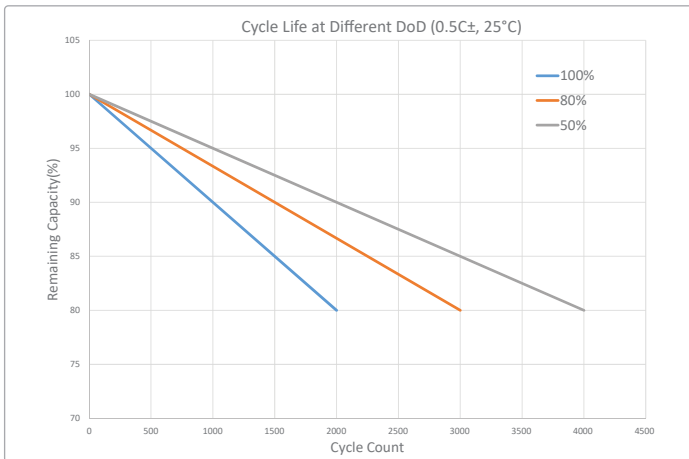


**Upright orientation only** - Drypower Rechargeable Lithium batteries with prismatic LiFePO<sub>4</sub> cells inside should only be used and mounted in an upright position for the best service life.

### DIMENSIONS



### CHARACTERISTICS CHARTS



### FEATURES & BENEFITS



#### Long Service Life

>2000 cycles @100% DoD (25°C) to 80% of original capacity - longer service life than SLA to reduce maintenance costs.



#### High Energy Density - More Power p/kg

Higher total system capacity and superior utilisation (full 100% DoD) to reduce overall system size and footprint.



#### Robust Enclosure

Enclosed in IP5x (dust resistant) or IP6x (dust tight) case with closed loop terminals - suitable for harsh environments.



#### Stable Chemistry & Built-in Circuit Protection

IEC & UN38.3 Safety Certified at cell level and integrated BMS protection to ensure safety and prevent damage.



#### Lightweight

Approx. 1/2 the weight (or less) of equivalent in SLA means lower logistics costs and minimal OH&S concerns.



#### Superior Charge & Discharge Efficiency

Faster charge/discharge rates (C/2 LiFePO4 vs C/20 SLA) for higher power usage and less downtime when charging.



#### Wide Operating Temperature Tolerance

Suitable for use in a wider range of applications where ambient temperature is atypical: from -20°C up to +60°C.



#### Fully Recyclable Battery

An environmentally friendly battery option, with no lead or calcium that can leak into the environment.

### BUILT-IN PROTECTION

All Drypower Rechargeable Lithium batteries adhere to strict safety guidelines by incorporating Battery Management Systems (BMS) that include protection components such as:

- Integrated Circuit (IC)
- Thermistor
- MOSFET
- Protection Circuit Module (PCM)
- Fuse

The BMS in each Drypower battery helps to:

1. Maintain safety for users.
2. Prevent damage to equipment and property.
3. Eliminate concerns about use of the wrong type of charger.
4. Minimise the risk of overdischarge causing damage.
5. Provide short circuit and overcharge protection.

### CAUTIONS

- Do NOT short circuit, crush or disassemble.
- Do NOT heat or incinerate.
- Do NOT immerse in any liquid.
- Do NOT allow the battery to become overdischarged. If possible, isolate the battery when not in use.
- Do NOT leave the battery in a discharged state. Always recharge after use with a Drypower approved LiFePO4 charger.
- Store at 50% capacity. Recharge every 3 months. The storage area should be clean, cool, dry and ventilated.
- Maximum 4 units in series. No parallel connection allowed.

Performance may vary depending on application. All specifications are correct at time of creation. All specifications and operation conditions contained in this datasheet are subject to change or improvement 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 • Oct2020