



# OMNIPOWER

THE POWER OF CHOICE

## 12V LiFeYPO<sub>4</sub> Battery (Lithium Iron Yttrium Phosphate)

- Includes Battery Management system, cell monitoring and voltage control
- Built-in fuse and DC isolator
- Integrated with leading solar inverters to ensure optimal battery charging for prolonged battery life.

**HIGH ENERGY, HIGH PERFORMANCE ENERGY STORAGE SOLUTIONS.**



**Shelf Price < Lead Acid shelf price**

**Daily cycle for more than 10 years**

**Weight < 25 % of Lead Acid**

**Volume < 33% of Lead Acid**

**100% Environmentally friendly**

**100% Safe**

Lithium Iron Phosphate (LiFeYPO<sub>4</sub>) batteries have transfer efficiencies of more than 96% at C/2 charge and discharge rates they deliver 10 times higher turn around efficiencies than leading lead acid batteries. This feature implies major savings in the necessary size of the solar system required to charge the batteries.

LiFeYPO<sub>4</sub> batteries are capable of delivering up to 80% of their charge for more than 5000 times and are perfectly suited for operation in warm African conditions.

LiFeYPO<sub>4</sub> batteries have more than 4 times the energy density compared to Lead Acid equivalents. This has great advantages for application where light weight energy storage is a requirement. Applications such as 4x4 vehicles, yachts and even apartment buildings benefit greatly from these light weight batteries. No gassing, no ventilation required.

Available from **12V, 24V, 36V, 48V** up to **800V** with storage capacities from 1.8 kWh for small residential applications to 1080kWh for industrial applications.



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# LiFeYPO4 Lithium Iron Yttrium Phosphate Battery

| MODEL                                  | OPR12V-77-1k                              | OPR12V-154-2k   | OPR12V-310-4k   | OPR12-460-6k    |
|--|---|-----------------|-----------------|-----------------|
| <b>GENERAL</b>                         |   |                 |                 |                 |
| Battery Type                           | LiFeYPO4 (Lithium Iron Yttrium Phosphate) |                 |                 |                 |
| Useable Capacity                       | 1 000 Wh                                  | 2 000 Wh        | 4 000 Wh        | 6 000 Wh        |
| Nominal Voltage                        | 12 VDC                                    |                 |                 |                 |
| Operating Voltage                      | 11.6 VDC - 14.1VDC                        |                 |                 |                 |
| Operating Temperatures                 | -20°C to 65°C                             |                 |                 |                 |
| Cycle Life > 3600 Cycles (100% DoD)    | 1 000 Wh                                  | 2 000 Wh        | 4 000 Wh        | 6 000 Wh        |
| Cycle Life > 5000 Cycles (80% DoD)     | 800 Wh                                    | 1 600 Wh        | 3 200 Wh        | 4 800 Wh        |
| Cycle Life > 7000 Cycles (70% DoD)     | 700 Wh                                    | 1 400 Wh        | 2 800 Wh        | 4 200 Wh        |
| Dimensions L x W x H (mm)              | 470 x 290 x 310                           | 470 x 290 x 310 | 710 x 230 x 265 | 660 x 360 x 280 |
| Net Weight (kg)                        | 15 kg                                     | 25 kg           | 47 kg           | 75 kg           |
| Warranty                               | 10 Years                                  |                 |                 |                 |
| <b>CHARGE</b>                          |   |                 |                 |                 |
| Bulk Voltage                           | 14.1 VDC                                  |                 |                 |                 |
| Discharge Voltage (min)                | 11.6 V                                    |                 |                 |                 |
| Max. Charge Current (cont.)            | 100 A                                     |                 | 400 A           |                 |
| Max. Discharge Current (cont.)         | 100 A                                     |                 | 400 A           |                 |
| Max. Discharge Current (burst @ 1 min) | 150 A                                     |                 | 600 A           |                 |
| Max. Discharge Current (peak @ 10 sec) | 300 A                                     |                 | 1200 A          |                 |
| Self-discharge Rate                    | < 2% per month                            |                 |                 |                 |
| Charge / Discharge Efficiency          | 96% @ C2; 98% @C10                        |                 |                 |                 |
| <b>PROTECTION</b>                      |   |                 |                 |                 |
| Isolator                               | 150 A                                     |                 | 600 A           |                 |
| In-line Fuse                           | 150 A                                     |                 | 600 A           |                 |
| Over Current Protection                | 16.0 V (4.0 V on any cell)                |                 |                 |                 |
| Over Voltage Cut-out                   | 11.4 V (2.85 V on any cell)               |                 |                 |                 |
| Under Voltage Cut-out                  |   |                 |                 |                 |

