

LiFe Power Technology provides advanced lithium iron phosphate energy storage solutions.

The **OasisIN** Battery Series is made for renewable energy storage. High energy storage efficiency and allows fast recharge, it captures most of the energy generated by the solar panel or wind generator. It is built with lithium iron phosphate cell, it offers light weight with extremely high cycle, long calendar life and this battery is capable of very high energy output. This is also design to use in the extreme temperature range (-20°C to 75°C).

Description

- *Specially designed for solar power supply system **with LiFePO4 cells as storage battery.***
- *In-built with outstanding LiFePO4 battery BMS consisting of **Voltage Balancing Unit for cells of the battery**, and dispensing with an PCM of the battery pack.*
- *With **auto photovoltaic switch** for day/ night driven by solar array.*
- ***PWM signals** from the control system working with the dimmer function of LED Drive **for power-saving.***
- ***With capacitor-MPPT circuitry**, which is hooked up with our innovative charging mode of CCP/CVP, the best for solar power system, ensuring A-plus efficiency in transforming energy from solar cells to storage battery.*

Feature

- **Run Time Test button for lighting:**
After you selected one run time stage from 16 of the system, having pressed once the run time test button, the blue LED will play exactly the same role of the lamp, lighting on or off by minute representing the run hour of the system.
- **3-mode with 16-stage run time options covering most requirements:**
Through the rotary digital switch, you can select one from 16-stage run time options, which can fit a wide range of applications to individual requirements.
- **A wide range of solar input voltage, Max 65 Vmp (based on a regulated current):**
*Under a given power efficiency, allowing higher solar panel voltage input to charge the storage battery,
which entitles the smaller size wires to be used and saves wire cost.*

● **Solar lighting controller over LiFePO4 battery :**

A genuine solar charge controller over LiFePO4 battery builds an effective, practical frame for your solar power supply system, made for lamps.

● **Smart MCU drives the system to operate:**

A microcontroller coordinates the operations of the whole system, organized up to overload protection, over-charge/over-discharge protection and low voltage protection.

● **Easy-to-read LED Extension Module to Solar Box(Option) :**

LED modular indicators showing the status of the operations of the system, including solar input power, charging, discharging, battery storage, or low battery, which can be looked over from down under the box.

● **Protection from in-rush current of thunderbolts via high-value components.**

● **Blocking reverse discharge from battery to PV panel**

● **Converse polarity connection protection (self-reconnection after removal of condition)**

● **Built-in LiFePO4 battery BMS cloned with CCP/CVP of Multi-stage PWM charging mode:**

This Lithium Battery Management System named as BMS, with our innovative CCP-CVP charging mode (constant current pulse-constant voltage pulse), hooked up with capacitor-MPPT, helps integrate all of the system operations and attain its higher cost-performance value.

Our technology of hanging solar control circuitry and BMS together in the device, brings the system to operate under control of safety from energy transferring , charging, discharging, energy-storing, and battery protections, still further to monitoring the load for power on real-time basis.

The frame of our solution can truly implement your project of most cost-effective solar power supply system that adherents have been longing for.



The Revolutionary Energy Storage Solution

Key Features:

- High cycles, over 2000 cycles at 100% DOD.
- Continue high energy output, high rate at 4C. (for Cell)
- Built-in automatic protection for over-charge & over-discharge.
- Internal cell balancing. No battery management system required.
- Communication of monitored data via Battery Management System (BMS)
- Can be charged using most standard chargers
- Fast recharge, can be fully recharged in 2 hours (option)
- Light weight, 1/2 compare to lead acid battery

BATTERY SPECIFICATION	OasisIN12V10
Nominal Voltage	12V
Nominal Capacity(C/5@25°C)	10Ah
Internal impedance (1kHz AC)@25°C	<14 mΩ
Weight	<2.2 kg
Dimension	175*175*100 mm
Specific Energy(Cell)	83Wh/kg
Max. cont. discharge@25°C	10A
Max.30sec. pulse discharge@25°C	12A
Discharge cut-off voltage@25°C	9.6V
Charge Current	< 5A
Charge Voltage	14.6V ±0.1V
Cycle life at C/2 discharge, 100%DOD@25°C	2000
Cycle life at 1C discharge, 20%DOD@25°C	8000
Discharge temperature range	-20°C to 55°C (adjustable)
Charge temperature range	0°C to 75°C (adjustable)
Storage temperature range	-40°C to 55°C

Solar charge controller Specification	150Wmax
Rated Voltage for System	12V
Nominal Storage Battery Voltage	12.8V
Max Input Voltage	65V _{oc}
Max Input Current	12Amp
Max Output Current	12A
Over Charge Cut-off Voltage Protection	3.85V for single cell; 15.40V for battery pack
Full Charge End Voltage	3.65V for single cell ; 14.6V for battery pack
Low Voltage Cutoff Voltage Protection	2.00V for single cell; 8.00V for battery pack
Overload Current Protection	For 500mS.
Efficiency	>92% @ 0.2CA
LiFePO4 Battery BMS/PCM	In-built / Voltage-Balancing Function Enable
Short Circuit Protection	Self-Recovery Fuse(PPTC)
Photo-Switch for day/night	Yes
Run Time Span Selections	Yes(as shown in table)
Charging Mode	CCP-CVP , Multi-stage PWM to Battery Voltage Levels

Condition	Lighting Run Time Span												
	Sunset				Night				Sunrise				
Mode 1	1	2	3	4	5	6	7	8	9	10	11	12	13
Power-on Run Time													
1). 1/off	(1)												
2). 2/ off	100%(2)												
3). 3/ off	100%(3)												
4). 4 /off	100%(4)												
5). 8/off	100%(8)												
Mode 2	Sunset				Night				Sunrise				
Power-on Run Time	1	2	3	4	5	6	7	8	9	10	11	12	13
6). 0.5/1/off/0.5/off													
7). 4/7off/1/off	100%(4)											(1)	
8). 4/6off/2/off	100%(4)										(2)		
9). 5/6off/1/off	100%(5)											(1)	
10). 6/4off/2/off	100%(6)										(2)		
Mode 3	Sunset				Night				Sunrise				
Power-On Run Time	1	2	3	4	5	6	7	8	9	10	11	12	13
11). 4/ 4 /off	(4)100%				(4)50%								
12). 4/ 6 /off	(4)100%				(6)50%								
13). 4/ 8 /off	(4)100%				(8)50%								
14). 6 / 2 /off	(6)100%						(2)50%						
15). 6/ 4 /off	(6)100%						(4)50%						
16). 6/ 6 /off	(6)100%						(6)50%						

