

## Overview

Ocean Dream Series (OD in short) is our newest designed PWM solar controllers. Its specialty lies in the inner 32 bits CPU, which enables the controllers to work faster and more stable. It built 4USB port and a screw driver inside. Besides, our unique black&Red big terminals design facilitate your connection in real application. The white frosted plastic shell is very natural no matter where it is placed in your home or RV.

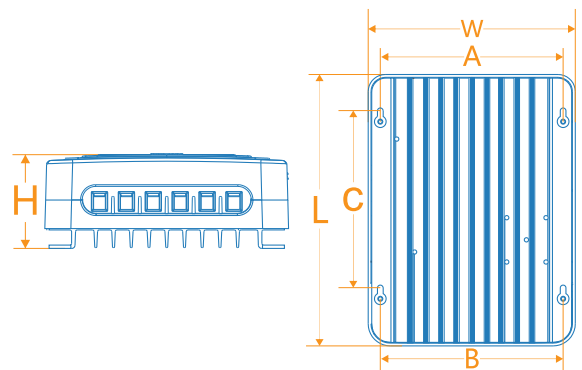
## Features

- ▶ 32bits CPU, sampling precision is higher, operation speed is faster
- ▶ 12V/24VDC 12V/24V/48VDC Automatic Identification System Voltage
- ▶ 3 stages PWM charging: Bulk, Boost, Float
- ▶ Sealed, Gel, Flooded, LiFePO4, Li(NiCoMn)O2 battery selection procedure
- ▶ Humanized LCD displaying, dynamic display operation data and working state.
- ▶ Built-in operation log, account system working state
- ▶ Multi load control mode: Normal mode
- ▶ Temperature Compensation Function and Controller Over Temperature Protection Function
- ▶ Fullset digital protection functions: Overcharging, Over-discharging, Overload, Short Circuit, Reverse Connection, Controller Over-Temperature and so on.
- ▶ colorful connector distinguish plus and minus poles.
- ▶ 5V 2.4A USB output (10A 20A 5V 1.5A and 30A 40A 50A 60A 5V 2.4A)



## Mechanical size

Charge and load current	10A	20A	30A/40A	50A	60A
Size (L×W×H)mm	165×120×39.4	170×130×50	190×145×55	190×145×55	190×145×56
Mounting holes distance (A×B×C)mm	84×92×134	111×114×124	128×128×124	128×128×124	128×128×124
Mounting hole size	Φ5mm				
Weight(g)	225	350	450	690	780
Terminal scale	10mm <sup>2</sup> /8AWG	16mm <sup>2</sup> /6AWG	25mm <sup>2</sup> /4AWG	25mm <sup>2</sup> /4AWG	25mm <sup>2</sup> /4AWG



● Please refer to the indicator diagram on the right

● Dimension reference drawing

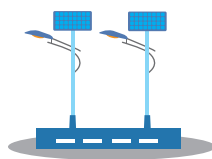
## Application scenario



Solar RV



Household solar energy



Solar street lamp



Solar Power Generator



Solar boat

# Safety Protection



Over Charging Protection



Over Discharging Protection



Overload Protection



Short Circuit Protection



Solar Reverse Connected Protection



Battery Reverse Connected Protection



Battery Over-Voltage Protection



Temperature Compensation



Over Temperature Protection



Thunder Protection



Reverse Flow of Current Protection

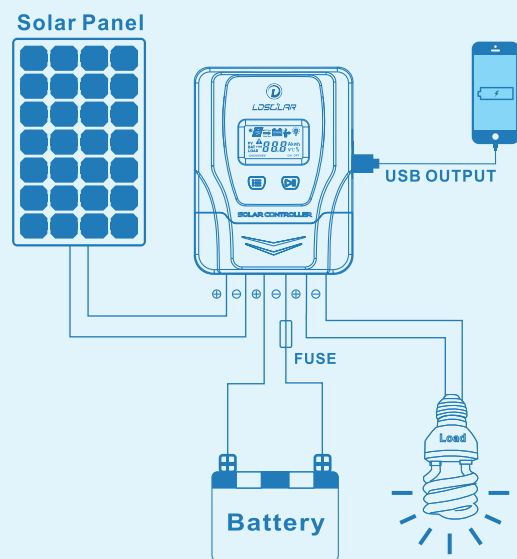
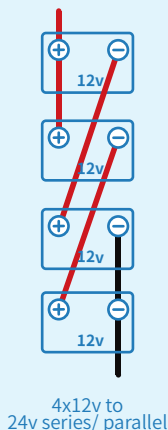
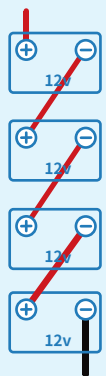
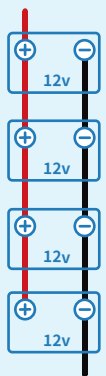
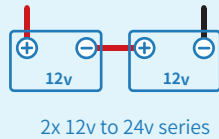
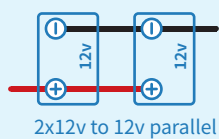


Solar Short Circuit Protection

# Technical specifications

Model	OD2410C	OD2420C	OD2430C	OD2430S	OD2440S	OD2450S	OD2460S	OD4830S	OD4840S	OD4850S	OD4860S	
System Voltage	12V/24V DC auto						12V/24V/48V DC auto					
PV Max Input Voltage	55V						100V					
Self-consumption	<10mA											
Max Charging current	10A	20A	30A	30A	40A	50A	60A	30A	40A	50A	60A	
Max Discharging current	10A	20A	20A	30A	40A	50A	60A	30A	40A	50A	60A	
Battery type	Sealed(Default)/Gel/Flood/Lithium											
LVD※*	11.0V ADJ 9V...12V ; x2/24V ; x4/48V											
LVR※*	12.6V ADJ 11V...13.5V ; x2/24V ; x4/48V											
Float Voltage※*	13.8V ADJ 13V... 15V ; x2/24V ; M/48V											
Boost Voltage※*	13.8V ADJ 13V... 15V ; x2/24V ; M/48V battery voltage less than 12.6V auto boost 2hours											
Battery Over Voltage ※*	16.5V ; x2/24V ; x4/48V											
Reverse Connection Protection	yes											
Load Over Current Protection	Yes, each 30s auto restart again											
Controller Over Temperature	yes											
USB Output	5VDC/1.5A 2PCS			5VDC/2.4A 4PCS				5VDC/2.4A 4PCS				
Charging Type	PWM											
Charge circuit voltage drop	≤0.25V											
Discharge circuit voltage drop	≤0.1V											
Temperature Consumption#	For 12Vsystem:-24mV /°C ; x2/24V ; x4/48V											
Relative humidity	≤95%, N.C.											
WorkingTemperature	-20°C~+55°C(Product can work continuously at full load)											
LCD temperature range	-20°C~+70°C											
Waterproof grade	IP32											

# Connection



● Example Wiring Methods

● Connection diagram