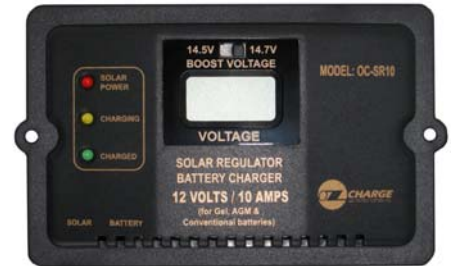
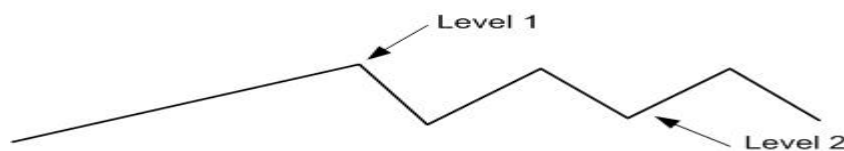


## OzCharge Solar Controller for 12Volt Solar Panels

1. Two models which include:
  - OC-SR10 - 12V / 10 Amp (up to 170 Watts)
  - OC-SR30 - 12V / 30 Amp (up to 510 Watts)
 Suitable for Gel, AGM, Conventional Lead-Acid and Calcium batteries.
2. Selectable Boost Voltage Switch for selecting maximum Charging Voltage.
3. The OC-SR10 has a Digital Volt Meter where as the OC-SR30 has a Digital Volt Meter and Amp Meter.
4. Built in regulator to prevent your battery from being overcharged. Overcharging occurs when the charge voltage is unregulated. This can result in premature battery failure.
5. They can be connected to the battery permanently to keep the battery fully charged by using a process called "floating". This means the controller will stop charging when the battery is full and will automatically start charging the battery as required. This process will also reduce water loss and help prevent the battery from 'drying out'.
6. Protects your battery from discharge at night. Under low light or no light conditions the solar panel voltage could be less than the battery voltage. The unit contains a special circuit which prevents current flowing back from the battery and into the solar panel.
7. Coloured LED's to indicate the operational status.
8. Surface Mount or Flush Panel Mount options.



### OC-SR10 Charging Curve



### OC-SR30 Charging Curve








## Model: OC-SR10 SPECIFICATIONS

1 Electrical Parameters				
1-1	Normal input solar cell array voltage :	16.5	Typ.	Vdc
1-2	Max. solar cell array voltage (when output has no load)	23	Max.	Vdc
1-3	Current Consumption when connected 15V Array (battery not present) :	30	Max.	mAdc
1-4	Current Consumption when connected 12V battery (Array not present) :	15	Max.	mAdc
2 Output Control & metering Characteristics				
2-1	Normal Start up Charging Condition :			
2-1-1	Charging start when Battery voltage not less than	5.0	+/- 1	Vdc
2-1-2	Input solar cell array voltage	16.5	Typ.	Vdc
2-2	Charging current (continuous) :	10		Adc
2-3	Charging current (Peak), Max (30 seconds)	12		Adc
2-4	Level 1 Cut-out Control Voltage:(for GEL Battery)	14.5	+/- 0.3	Vdc
2-5	Level 1 Cut-out Control Voltage: (for AGM/Conventional Flooded Battery)	14.7	+/- 0.3	Vdc
2-6	Level 2 Cut-in Control Voltage:(for GEL Battery)	13.6	+/- 0.3	Vdc
2-7	Level 2 Cut-in Control Voltage:(for AGM/Conventional Flooded Battery)	13.8	+/- 0.3	Vdc
2-8	Minimum LCD Display Voltage *	6.0	+/- 0.3	Vdc
2-9	Maximum LCD Display Voltage *	19.0	+/- 0.3	Vdc
<b>Note</b> : * The voltage range may be out of these ranges when input current is different.				
3 Protection				
3-1-1	Over temperature protection active at above *	85		°C
3-1-2	The charger will resume the charging at about	75		°C
3-2	Battery Reversed Protection			
<b>Note</b> : * When over temperature protection is activated, the Yellow LED will be "OFF".				
4 Electrical Parts				
4-1	Input Lead (Array ) specifications :	SPT-1 18AWG x 2C 105°C, External length : 915mm		
4-2	Output Lead (Battery ) specifications :	SPT-1 18AWG x 2C 105°C, External length : 915mm (Two terminals - 10mm ring terminal for Positive, 8mm ring terminal for Negative)		
5 Physical Parameters				
5-1	Panel material :	Plastic, Standard ABS		
5-2	Panel Dimension :	120 (W) x 75 (H) mm		
5-3	Panel Cut Out Size:	100 (W) x 63 (H) mm		
5-4	Overall Depth :	approx. 25 mm		
5-5	Net weight :	approx. 200g		
6 Environmental Characteristics				
6-1	Operating temperature :	-5 to 50 °C		
6-2	Storage temperature :	-10 to 70 °C		
6-3	Operating Humidity range :	0 to 80% RH		

	Red	Yellow	Green
Solar Power Present – No Battery Connected	ON	OFF	OFF
Bulk Charging Mode	ON	ON	OFF
Float / Maintaining Mode	ON	OFF	ON
Battery Polarity Reversed – Check Battery Connection	ON	OFF	OFF

## Model: OC-SR30 SPECIFICATIONS

1 Electrical Parameters				
1-1	Normal input solar cell array voltage :	17 - 22	Typ.	Vdc
1-2	Max. solar cell array voltage (when output has no load)	25	Max.	Vdc
1-3	Current consumption when connected 15V Array (battery not present) :	35	Max.	mAdc
1-4	Current consumption when connected 12V battery (Array not present) :	25	Max.	mAdc
2 Output Control & metering Characteristics				
2-1	<b>Charging Method: Level 1 → Level 2 → Level 3</b>			
2-2	<b>Minimum charging condition for Start Up</b>			
2-2-1	Correct polarity at input and output;			
2-2-2	Charging starts when Battery voltage is not less than	5.0	+/-0.3	Vdc
2-2-3	Minimum solar cell array voltage	13.0	+/-0.3	Vdc
2-2-4	Solar cell array voltage is higher than battery voltage	1.0	+/-0.3	Vdc
2-3	Maximum Charging Current at Level 1 period	30.0	+/-1.0	Adc
2-4	Maximum charging voltage at Level 2 Period ( for GEL Battery)	14.4	+/-0.4	Vdc
2-5	Maximum charging voltage at Level 2 Period (for LEAD-ACID Battery)	14.7	+/-0.4	Vdc
2-6	Level 1 to Level 2 Period when charging voltage reach (for GEL Battery)	14.1	+/-0.4	Vdc
2-7	Level 1 to Level 2 Period when charging voltage reach (for Lead-Acid Battery)	14.5	+/-0.4	Vdc
2-8	Level 2 to Level 3 Period when charging current reach (for GEL Battery)	4.0	+/-1.0	Adc
2-9	Level 2 to Level 3 Period when charging current reach ( for Lead-Acid Battery)	4.0	+/-1.0	Adc
2-10	Maximum charging voltage at Level 3 Period	13.8	+/-0.4	Vdc
2-11	LCD Meter Accuracy at DC Voltage	1.25		%
2-12	LCD Meter Accuracy at DC Current at 5 ~30Amp	3		%
3 Protection				
3-1-1	Over temperature protection active at above	85		°C
3-1-2	The charger will resume the charging at about	65		°C
4 Electrical Parts				
4-1	Input / Output Terminals	M5 Terminals		
5 Physical Parameters				
5-1	Panel material :	Plastic, Standard ABS		
5-2	Panel Dimension :	175 (W) x 110 (H) mm		
5-3	Panel Cut Out Size:	159 (W) x 95 (H) mm		
5-4	Overall Depth :	approx. 45 mm		
5-5	Net weight :	approx. 360g		
6 Environmental Characteristics				
6-1	Operating temperature :	-5 to 45 °C		
6-2	Storage temperature :	-10 to 70 °C		
6-3	Operating Humidity range :	0 to 80% RH		

The 6 LED's indicate the charging status and the battery condition	Solar Power	Charge Status					
	Red	Blue	Green	Green	Yellow	Red	
Solar Power Present – No Battery Connected	ON	OFF	OFF	OFF	OFF	OFF	FLASH
Reverse Polarity / Short Circuit	ON	OFF	OFF	OFF	OFF	OFF	FLASH
Solar Power Weak	ON	FLASH	OFF	OFF	OFF	OFF	OFF
Battery Voltage below 11.5V (+/-0.4V)	ON	ON	OFF	OFF	OFF	OFF	ON
Battery Voltage between 11.5V - 12.5V (+/-0.4V)	ON	ON	OFF	OFF	ON	OFF	OFF
Battery Voltage above 12.5V (+/-0.4V)	ON	ON	OFF	ON	OFF	OFF	OFF
Float Mode (Battery Fully Charged)	ON	OFF	ON	OFF	OFF	OFF	OFF