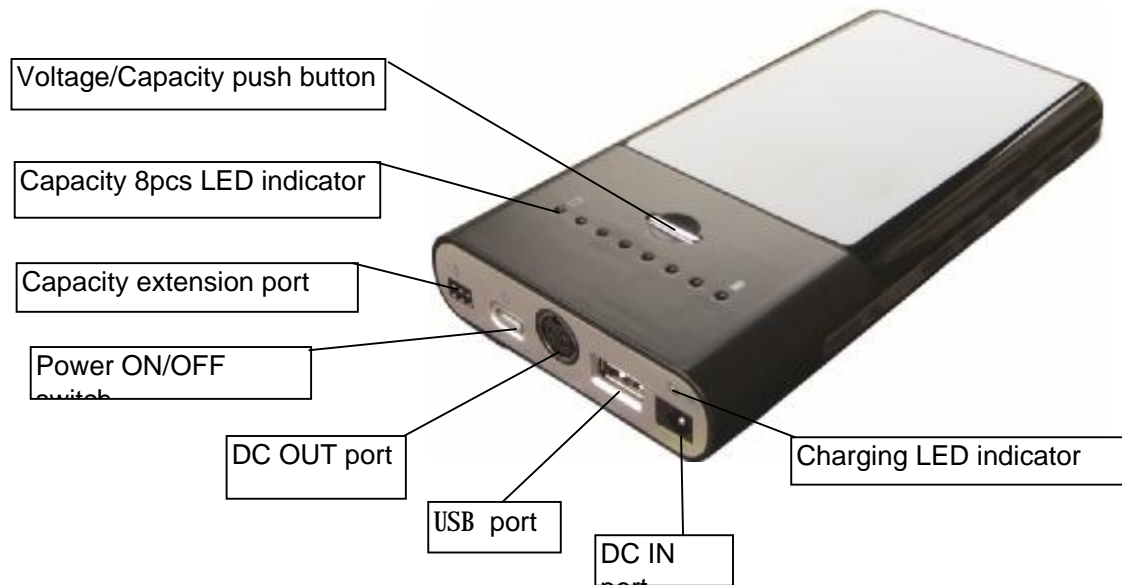


MP3450I (Industry / instrument Type)

Application: For industry / instrument devices outdoor operate & indoor uninterrupted Power System .

I. Operation panel



II. Function introduction

- ◆ This product can be used to industry / instrument devices. You can select one fixed voltage from 16 scales.
- ◆ Light weight (0.4kg), fashion appearance.
- ◆ Wide charging input voltage range: 8~24V
- ◆ charging time: 3~4 hours
- ◆ Three charging method: by **a.** AC Power adapter **b.** Car charger **c.** Solar panel charger
- ◆ Charging LED display: Orange: charging ; Green: fully charged
- ◆ 16 scales output voltage : 5V,5.5V,6V,6.5V,7.5V,8.4V,9V,10V,11V,12V,13V,14V,15V,16V,18V, 19V
- ◆ Output current: 4 ~ 4.5A
- ◆ USB output voltage/current: 5.25~5.4V / 1.2A
- ◆ Capacity display: 8pcs blue LEDs indicate remaining capacity.And the push button will light blue.
- ◆ Output capacity:5V-10.2Ahr, 5.5V-9.28 Ahr ,6V-8.51Ahr, 6.5V-7.85 Ahr ,7.5V-6.8Ahr,8.4V-6.07 Ahr, 9V-5.6Ahr,10V-5.1 Ahr,11V-4.64 Ahr, 12V-4.25Ahr, 13V-3.92 Ahr ,14V-3.64Ahr, 15V-3.4 Ahr ,16V-3.19Ahr, 18V-2.83 Ahr, 19V-2.68Ahr
- ◆ With low capacity alarming function.
- ◆ With extend capacity function: It can extend the battery capacity by extended battery pack MP3460 from 60W to 120W.
- ◆ With pass through charging function:It can charge and power your device in the meantime,and will charge your device internal battery fully in priority,also it can charge the MP3450I from AC power adapter.
- ◆ With uninterrupted power system function:MP3450I will power your device in time if the AC power shut down to avoid your device from shutting down.
- ◆ With multi-protection function:Over charge /over discharge/over current/over voltage/short circuit/over temperature protection.
- ◆ Low self-discharge ,can be store 1 Years Without Using
- ◆ Cycle life:300~500 cycles
- ◆ Safety Certification: CE,3C,RoHS

III. Electric specification

NO.	Item	Rated performance	Remark
1	Battery cell	Li-Polymer	
2	battery Power / Capacity	60Wh(15000~15600mAh)	
3	DC OUT output voltage	5V,5.5V,6V,6.5V,7.5V,8.4V,9V, 10V, 11V,12V, 13V,14V, 15V,16V,18V, 19V	
4	Ripple voltage	≤100mV	
5	DC/DC transfer efficiency	94~97%	
6	DC OUT output current	4A(Constant),4.5A(Max.)	
7	DC OUT over-current protection	5~7A	
8	USB output voltage	5.25~5.4V	
9	USB output current	1.2A (Constant) , 1.5 A (Max.)	
10	USB over-current protection	2.2~3.0 A	
11	Self-discharging current	a, <100uA(Power OFF) b, <40mA(Power ON)	
12	DC IN charging voltage	8~24V	
13	DC IN charging current	800~1200mA	
14	Charging time	3~4 Hours	
15	Charging indicator	Orange: charging , Green: fully charged	
16	DC IN JACK dimension	5.5~6*2.0~2.1*10.5 (inside "+",outside "-")	
17	Power adapter voltage/current	20V/3.5A	
18	Solar panel charger voltage/current	12~20V/ >2000mA	the DC input jack be plug by solar panel output charged by solar panel to the Capacity extend port The Sun-booster adapter is optional for charged by the solar panel ;the output side (3pin plug)connected to the Capacity extend port.
		28~35V/ 50~ 2000mA	
		12~24V/ 50~ 2000mA	
19	Car charger voltage/current	9~15V/2.5A	1.Car charger optional accessory 2. It only for charging by car charger, it can't work on pass through charging
20	Capacity indiation push button	8pcs blue LEDs	
21	The Capacity push button with power ON indicated LED	Power ON indicated LED will light blue color as below state: 1. Power ON or 2. the charging voltage plug in the DC IN port	
22	The low capacity alarm of battery	19.3 ~19.5V of battery pack	The buzzer will alarm while battery pack's voltage lower than the limited
23	Pass through charging function	Firstly offer power to loading device working and charging loading's internal battery . Secondly charging MP3450I battery after loading's internal battery charged fully .	

24	Power interrupted timing for loading	0ms (when loading current $\leq 2.0A$); 20ms (when loading current $> 2.0A$)	When working on pass through charging state
25	The Capacity extend port function	1. connected with MP3460 for battery capacity extend to double or 2. connected with 3-pin cable connector or sun-booster adapter for solar panel charged .	
26	Over-charge protection voltage	4.35V \pm 0.05V /cell, 26.1V \pm 0.3V/pack	
27	Over-discharge protection voltage	3.1V \pm 0.05V/cell, 18.6V \pm 0.3V/pack	
28	Temperature protection	130 $^{\circ}$ C	
29	Typical weight	420 \pm 20g	
30	Operation temperature	Charging: 0~40 $^{\circ}$ C, Discharging: -10~50 $^{\circ}$ C	
31	Storage temperature	1.-20~20 $^{\circ}$ C (one year) 2. -20~45 $^{\circ}$ C (three months) 3.-20~60 $^{\circ}$ C (one month)	

IV. Set Voltage method

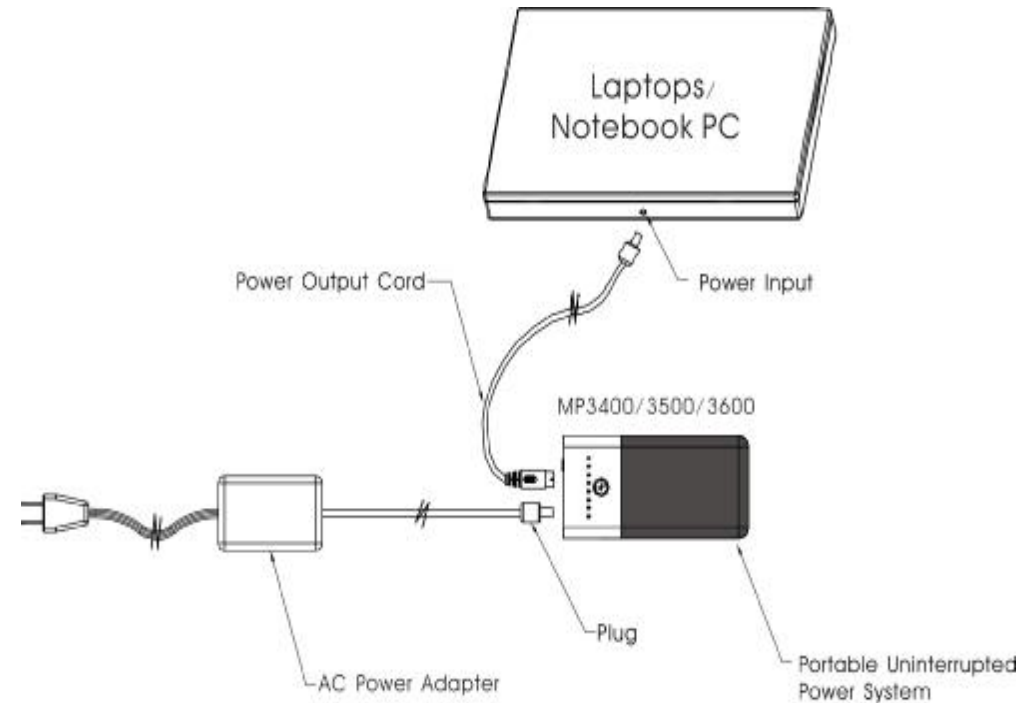
Please adjust output voltage according to the status of DIP switch as below(the DIP switch located the top of down case) :

Once the output voltage have fixed setting , it 's not will be change even if the Power ON/OFF .



V. Operation guide –There are two situations:

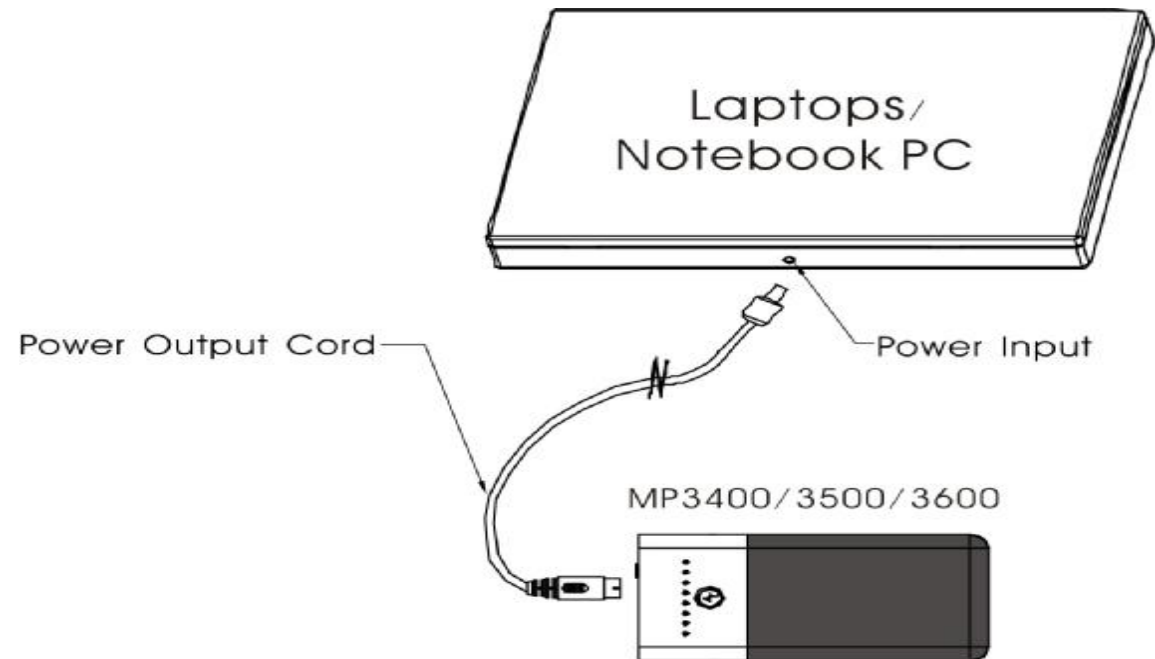
1) . Indoor Application — working for Pass through charging



The AC power adapter will offer power to loading device working and charging loading's internal battery firstly. It will follow charged MP3450I after loading's internal battery has charged fully. The MP3450I also will be charged fully at finally. It will total charged fully after 7~8h by connected as this diagram if empty of all battery (MP3450I& loading's internal battery). It doesn't matter the loading device is operated or not . It will auto stop charging MP3450I battery while offer to device's loading current higher than $2 \pm 0.2A$; it will start charging MP3450I if device's loading current less than $2 \pm 0.2A$. The loading device demand power always priority one of support from AC Power adapter .

2). Outdoor application ———Back-up power for your device

Please check loading device demand voltage/current before connected the DC OUT port of MP3450I. It will shut down if demand current over MP3450I maximum output 4.5A.



VI. Charging ways

Charging main body battery capacity by 3 way :

a. Charging by AC Power Adapter

The output connector of AC Power Adapter plug into DC IN port of MP3450I for Charging. The push button 's indicated LED will light blue color at same time. The AC Power Adapter is inside the standard package.

Power Adapter's specification:

- a. Input AC voltage range: 100 to 240V AC
- b. Frequency: 50~60HZ
- c. Maximum input power: 70W (output load 3A)
- d. Input current (no load): <50mA
- e. Standby power: <0.5W
- f. Output voltage: $20\pm 1V$ (No load or Loading current 3A)
- g. Efficiency: $\geq 85\%$
- h. Over- Current Protection: 4.7-6A
- i. Hi-POT test: 1.5KV AC for 60s between primary to secondary

b. Charging by Car Charger

The output connector of Car charger plug into DC IN port for charging. The push button's indicated LED will light blue color at same time.

The car charger is optional accessory.

Car charger's specification:

The output is directly connected to input of car charger.

- a. The input voltage/current of car charger : 9 ~14V / 2.5A
- b. The output voltage will follow up input voltage.
- c. It only can charging MP3450I by car charger. But can't apply to the pass through charging state.

C. Charging by Solar panel Charger

Due to the output's specification of Solar panel charger is different. There is 3 ways to charge by different cable & adapter plug into different port.

Please check Solar panel charger specification firstly. There are 3 ways to charge as below:

Way1 : suitable for : a. The output current of solar panel : > 2A

b. The OCV voltage of solar panel : 12V ~20 V

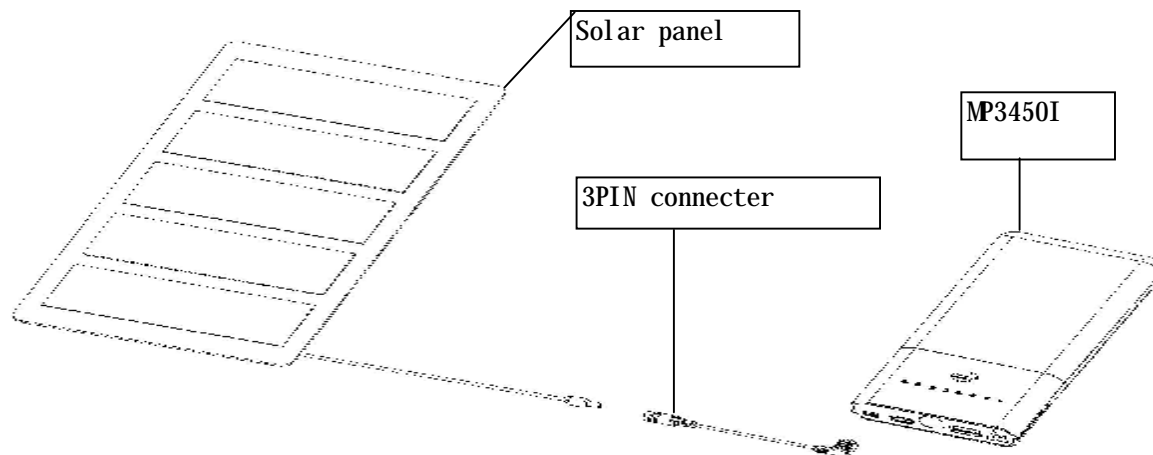
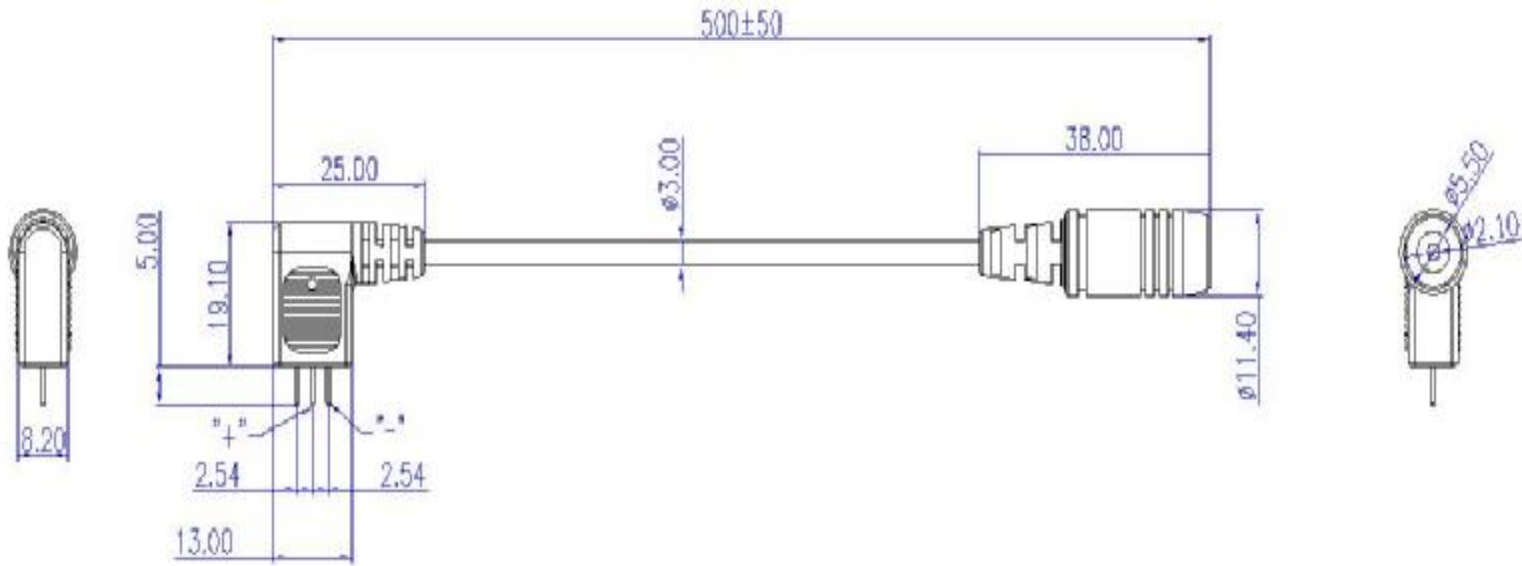
The output connector of solar panel charger directly plug into DC IN port

Way2 : suitable for : a. The OCV voltage of solar panel : 26V ~ 35V

b. The output current of solar panel : > 50mA

The output connector of solar panel charger plug into the DC IN of 3-pin cable; the output of 3-pin cable plug into the Capacity extend port of MP3450I.

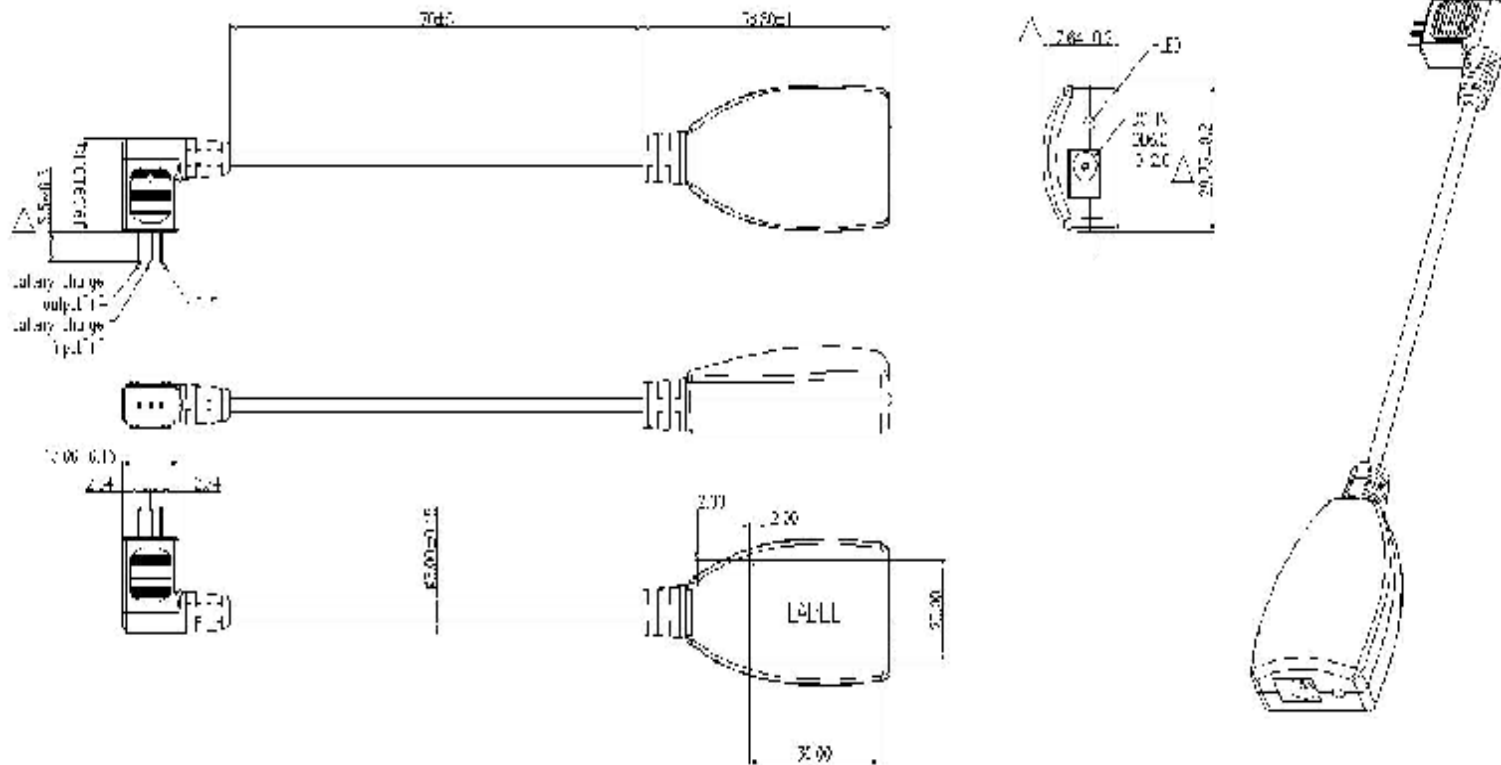
The 3-pin cable (optional accessory) diagram as below :

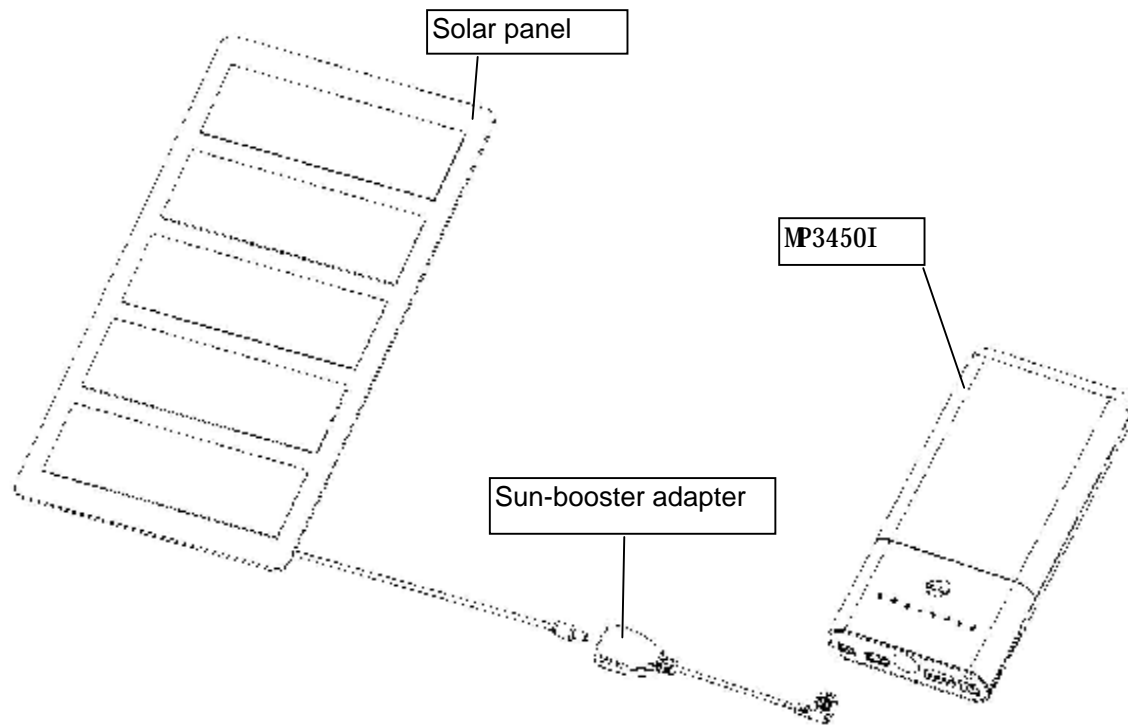


Way3 : suitable for : a. The OCV voltage of solar panel : 9V ~ 25V

b. The output current of solar panel : >100mA

The output connecter of solar panel charger plug into the DC IN Jack of 3-pin sun-booster adapter; the output of 3-pin sun-Booster adapter plug into the Capacity extend port of MP3450I. The 3-pin sun-booster adapter(optional accessory) diagram as below :





VII. Product package list

1. Rechargeable battery



2. AC power adapter (19V/3A)



3. Power output cord



4. Punching bag



5. User guide



6. Leather case



7. 5pcs output tips



VIII. Warranty : One year.