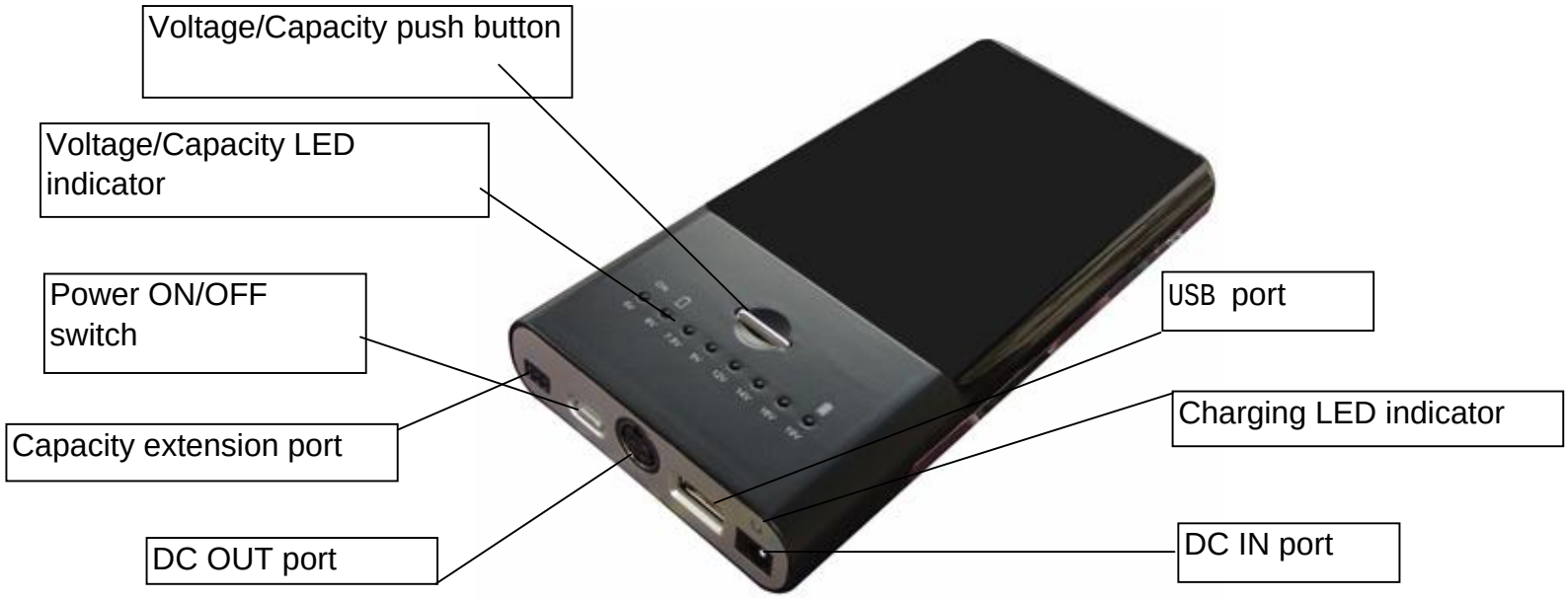
MP3450D（DIY Type）

Application: Notebook,Netbook,Micro-projector, PDA,GPS,MID,DSC,iphone,ipod and so on.

I. Operation panel



II. Function introduction

◆As DIY style, user can select output voltage by yourself.

◆Light weight, fashion appearance.

◆Wide input charging voltage range: 8~20V

◆Shorter charging time: about 2 hours

◆Three charging method: Power adapter，Car charger，Solar panel charger

◆Charging LED display:Orange:charging; Green: full charged

◆8 scales output voltage：5V,6V,7.5V,9V,12V,14V,16V,19V

◆Output current of DC OUT port : 4 ~ 4.5A

◆USB port's output voltage/current: 5.25~5.4V / 2.0A

◆Voltage/capacity display: 8pcs blue LEDs indiate the relate voltage scale and remaining capacity.

◆Output capacity:5V/9.8Ahr,6V/8.16Ahr,7.5/6.53Ahr,9V/5.44Ahr,12V/4.08Ahr,14V/3.5Ahr,16V/3.06Ahr,19V/2.57Ahr

◆Automatic lock voltage scale function: It will auto lock voltage scale while power on and connected with loading current over 80 mA. At this moment, the voltage is non-adjustable to avoid damage the device from error operation on line. The push button will light blue to indicate itself is in the capacity display function .

◆With extend capacity function: It can extend the battery capacity by extended battery pack MP3460 from 50W to 100W.

◆ 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 MP3450D from AC power adapter.

◆With uninterrupted power system function:MP3450D 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	Capacity	51Wh(13,600~14,000mAh）	
3	DC OUT port's output voltage	5V，6V，7.5V，9V，12V，14V，16V，19V	Adjustable
4	Ripple voltage	≤100mV	
5	DC/DC transfer efficiency	94~97%	
6	DC OUT port's Power	49Wh	
7	DC OUT port's output current	4A(Constant),4.5A(Max.)	
8	DC OUT over-current protection	5~7A	

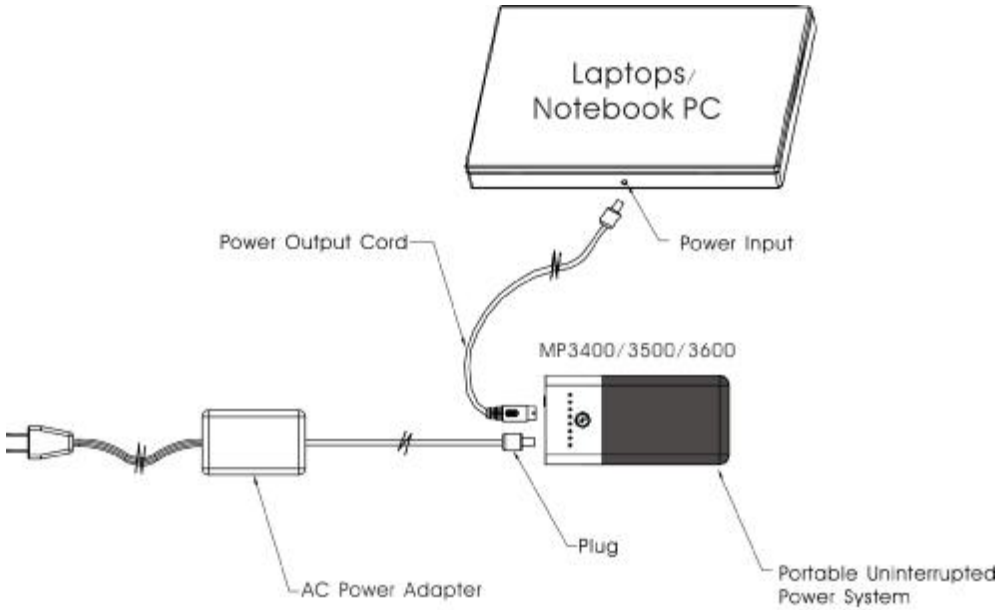
9	USB port's output voltage	5.25~5.4V	
10	USB port's output current	1.5A（Constant），2.0 A（Max.)	
11	USB port' sover-current protectio	2.2~3.0 A	
12	Self-discharging current	a,＜100uA(Power OFF） b,＜50mA(Power ON）	
13	DC IN charging voltage	8~20V	
14	DC IN charging current	1.5~1.8A	
15	Charging time	2.5±0.5 Hours	
16	Charging indicator	Orange：charging，Green：fully charged	
17	DC IN JACK dimension	5.5~6*2.0~2.1*10.5（inside "+",outside "-"）	
18	Power adapter voltage/current	20V/3.5A	
19	Solar panel charger voltage/current	12~20V/ ＞2000mA	the DC input jack be plug by solar panel output
		28~35V/ 50~ 2000mA	charged by solar panel to the Capacity extend port
		12~24V/ 50~ 2000mA	The Sun-booster adapter is optional for charged by the solar panel ;the output side (3pin plug)connected to the Capacity extend port.

20	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
21	Capacity indiation by voltage/capacity push button	Push button light blue(except item 1)，8pcs blue LEDs indication capacity.	1. power off or 2. power on without connected output cord or 3. Power on and connected loading after auto lock or 4. charging state without connected output cord. The push button’s indicator LED will lightBlue color except item 1 as above state
22	Adjust voltage by voltage/capacity push button	8pcs blue LEDs indicate 8 scales voltage	Power on and DC OUT port connected the output cord without connected loading , The push button’s indicator LED will no light
23	Automatic lock-voltage load current	80mA ± 40mA	The output voltage scale will auto lock while connected loading’s current over this limited
24	Pass through charging function	Firstly offer power to Laptops working and charging Laptop ’s internal battery . Secondly charging MP3450D battery after Laptop’s internal battery charged fully .	It will stop charging while the loading current output is more than2±0.2A on passing through charging state.
25	Power interrupted timing for loading	0ms (when loading current ≤2.0A)；20ms (when loading current＞2.0A）	When working on pass through charging state

26	The Capacity extend port functior	1. connected with MP3460 for battery capacity extend to double or 2.connected with 3-pin cable connecter or sun-booster adapter for solar panel charged .	
27	Over-charge protection voltage	4.35V±0.05V /cell, 26.1V±0.3V/pack	
28	Over-discharge protection voltag	3.1V±0.05V/cell,18.6V±0.3V/pack	
29	Temperature protection	130℃	
30	Typical weight	420±20g	
31	Operation temperature	Charging：0~40℃，Discharging：-10~50℃	
32	Storage temperature	1.-20~20℃(one year）2. -20~45℃(three months）3.-20~60℃(one month）	

IV. Operation guide –There are two situations:

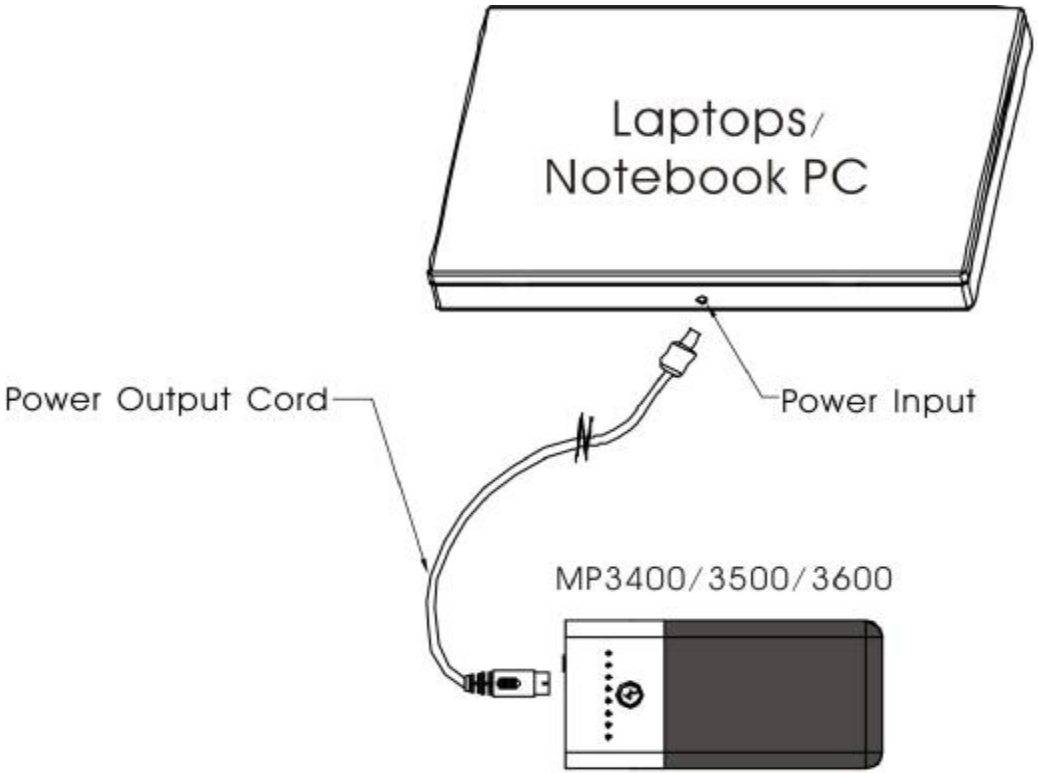
1）. Indoor Application —— working for Pass through charging



The AC power adapter will offer power to laptops working and charged laptop ’s internal battery firstly. It will follow charged MP3450D after laptop ’s internal battery has charged fully. The MP3450D 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 (MP3450D&Laptop ’s internal battery).It doesn’t matter the laptop is operated or not . It will auto stop charging MP3450D battery while offer to Laptop ’s loading current higher than 2±0.2A. ; it will start charging MP3450D if Laptop ’s loading current less than 2±0.2A. The Laptop ’s 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 MP3450D. It will shut down if demand current over MP3450D maximum output 4.5A.



V. Charging ways

Charging main body battery capacity by 3 way :

a. Charging by AC Power Adapter

The output connecter of AC Power Adapter plug into DC IN port of MP3450D for Charging. The push button ’s indicated LED will light blue c 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±1V(No load or Loading current 3A)

g. Efficiency: ≧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 connecter 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 MP3450D 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 po

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

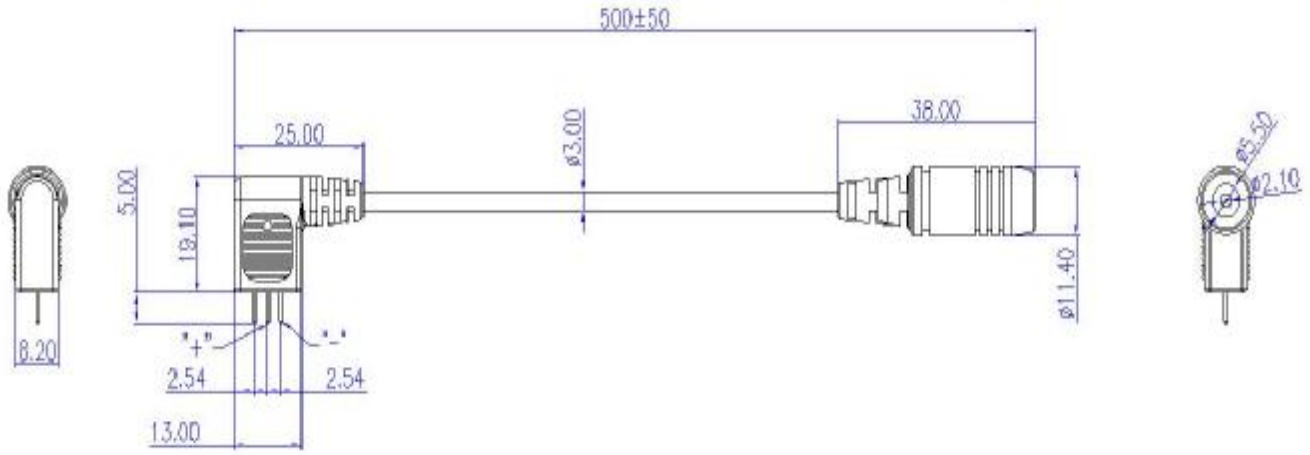
The output connecter of solar panel charger directly plug into DC IN port

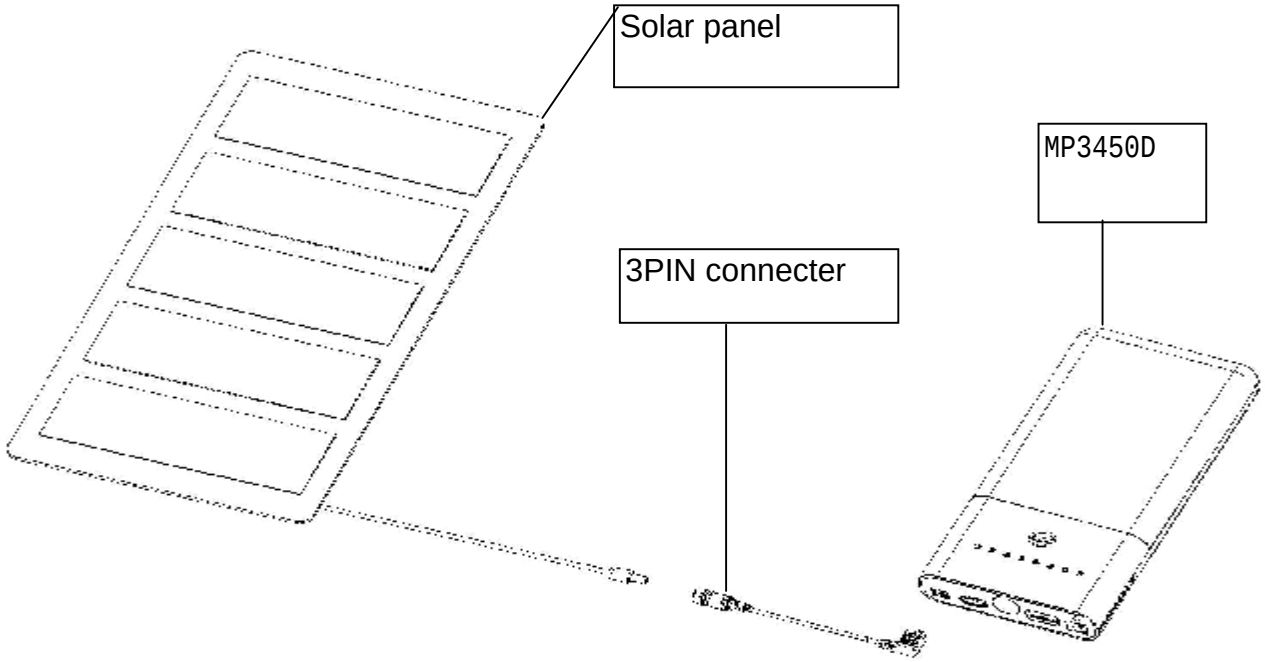
Way2 : suitable for : a. The OCV voltage of solar panel : 26V ~ 35V

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

The output connecter 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 MP345

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

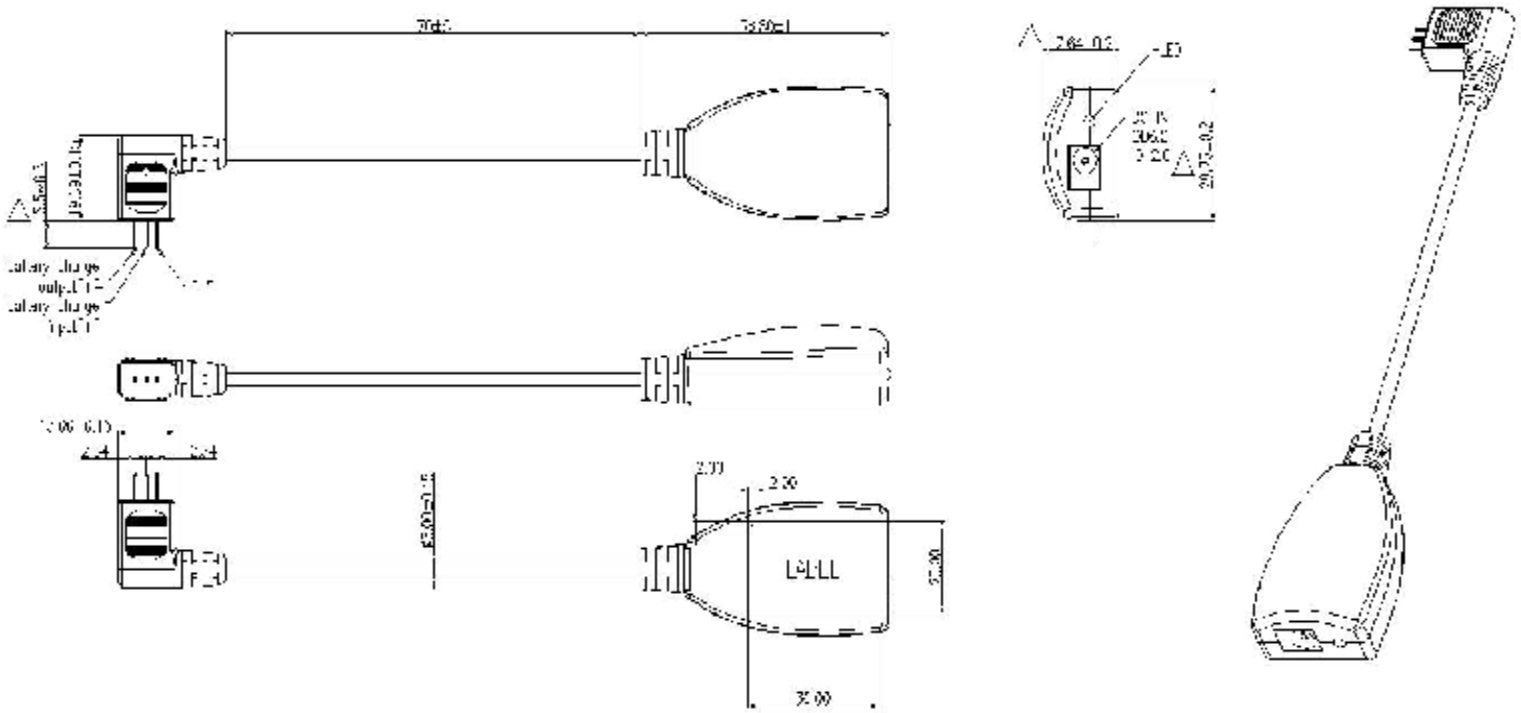


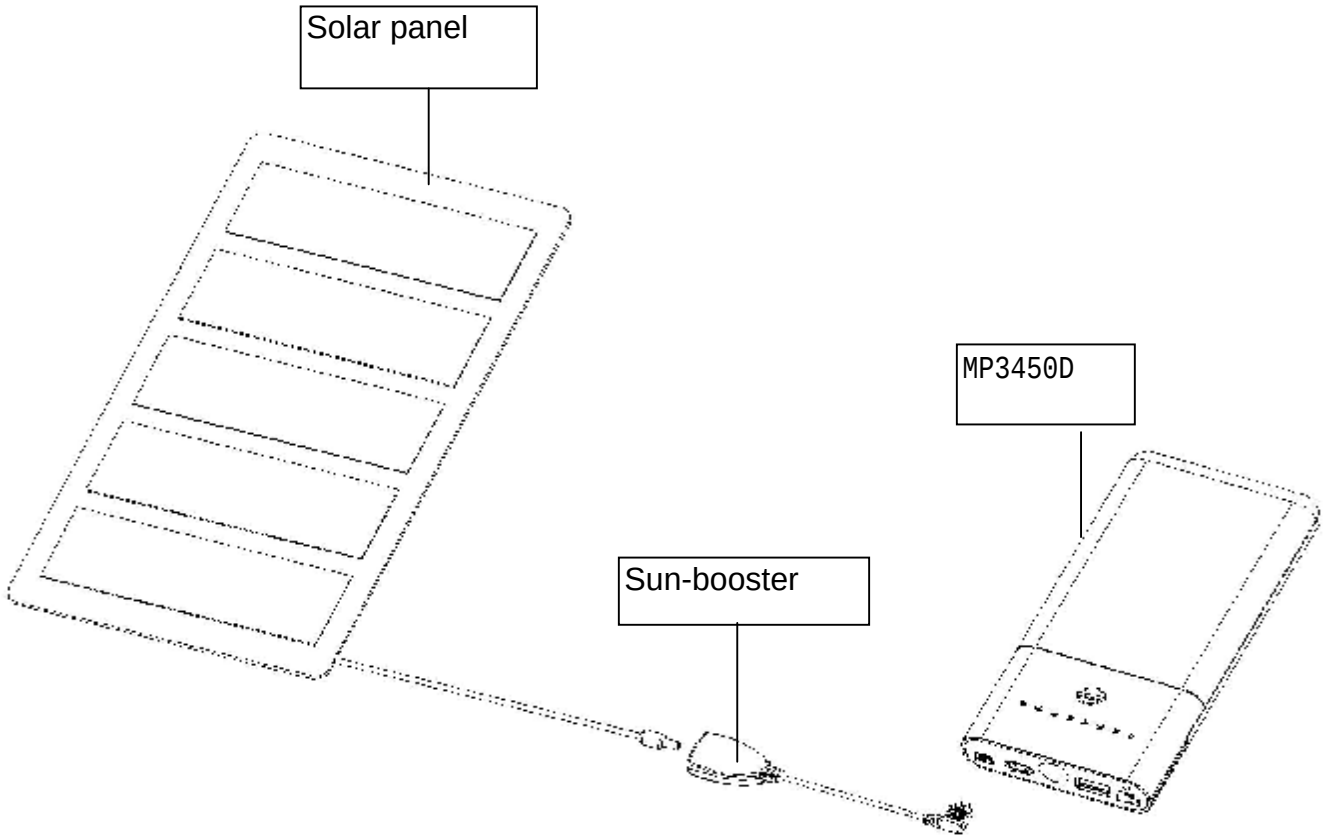


Way3 : suitable for : a. The OCV voltage of solar panel : 9V ~ 25V

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 MP3450D. The 3-pin sun-booster adapter(optional accessory)diagram as below :





IV. Product package list