



SINOLTECH

# Flexible Solar Module For Outdoor Charger Application

### A-Si Series Folding Solar Charger Technical Parameter

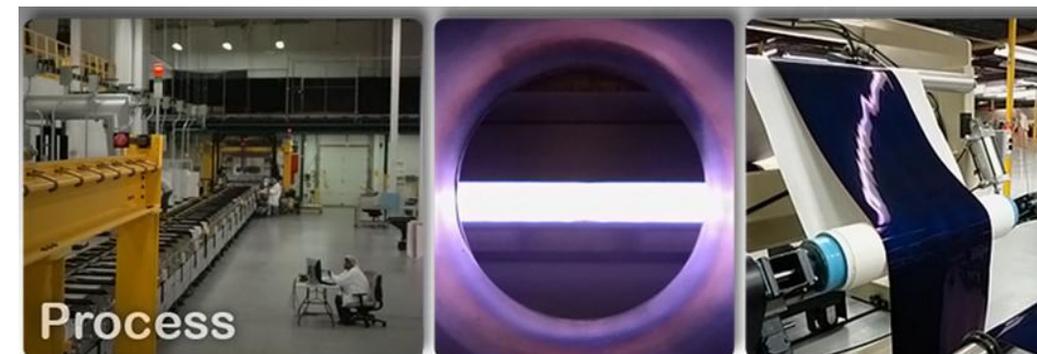
Electrical Performance at STC		FSC(12)-39	FSC(12)-78	FSC(18)-118
Nominal Power(W)	Pmpp(W)	<b>39</b>	<b>78</b>	<b>118</b>
Aperture Efficiency(%)	(%)	8	8	8
Power Output Tolerance(W)	(W)	+10/-10	+10/-10	+10/-10
Maximum Power Voltage(V)	Vmpp(V)	19.2V	19.2V	28.8V
Maximum Power Current(A)	Impp(A)	2.05A	4.09A	4.09A
Open Circuit Voltage(V)	Voc(V)	26.4V	26.4V	39.6V
Short Circuit Current(A)	Isc(A)	2.5A	5.1A	5.1A
Maximum System Voltage	IEC/UL(V)	1000/600		
Physical and Mechanical Specifications				
Extended Length (±5mm / 0.20in)	L (mm)	934mm	1869mm	2525mm
Extended Width (±3mm / 0.12in)	W (mm)	782mm	782mm	782mm
Folding Size	FS (mm)	395*160*65mm	395*280*65mm	390*260*70mm
Weight	kg	1.75KG	3.50KG	4.42KG
Thickness	T (mm)	1.0mm	1.0mm	1.0mm
Cell Type	A-Si triple junction amorphous silicon solar cell			

### Characteristics for System Design

Max System Voltage	600V
Series Fuse	10 A
Temp Coefficient of Power	-0.23%/°C
Temp Coefficient of Voc	-0.38%/°C
Temp Coefficient of Isc	+0.12 %/°C
NOCT	51.5 °C
Connectors	Double core aviation waterproof connectors Or Amphenol low profile Anderson 50A gray Color connector

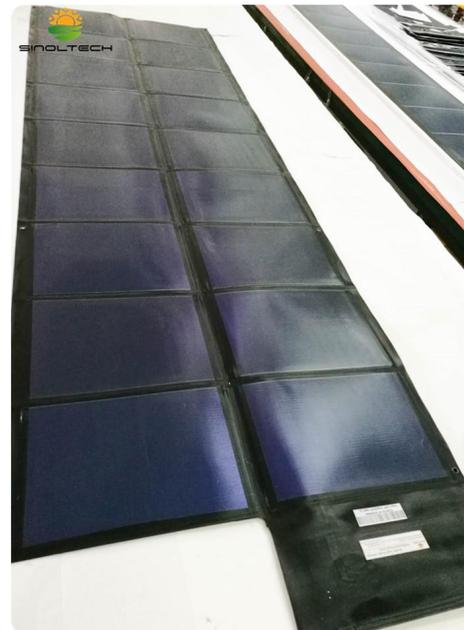
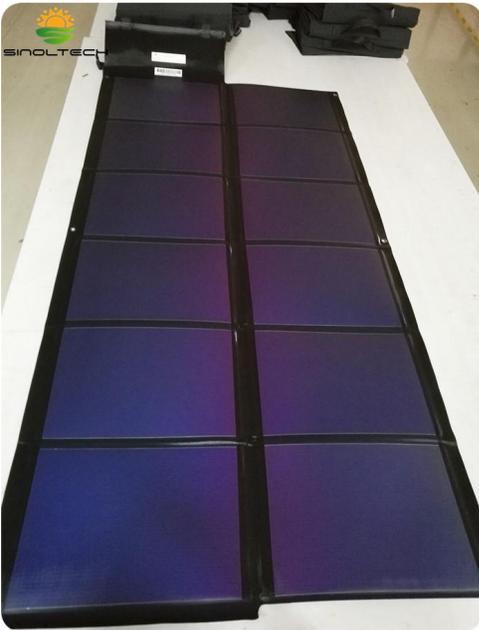
### Features

- \* Portable, Lightweight, Flexible folding solar panel.
- \* Adopting Multi-Junction, A-Si Technology, the finished solar charger is durable, weather resistant, virtually unbreakable.
- \* Expansion ready to conveniently add additional solar panels if needed
- \* Easy to set up. Plug and play principle.
- \* More low light (overcast) and high temperature tolerant than glass solar panels.
- \* Delivers up to 15% more energy into the battery than glass solar panels.
- \* Water, hail and dust proof.



Process

### A-Si Series Folding Solar Charger Photos



**Output Option:**  
Extention cable +MPPT Solar Controller



**Output Option:**  
Alligator clip cable + DC/USB Dual Output

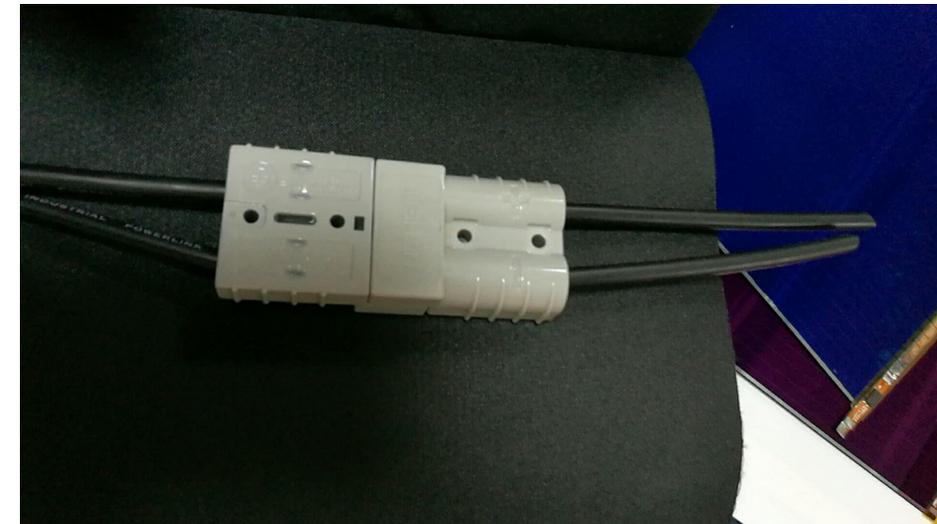


**Flexible\* Powerful\* Lightweight Solar Solution**

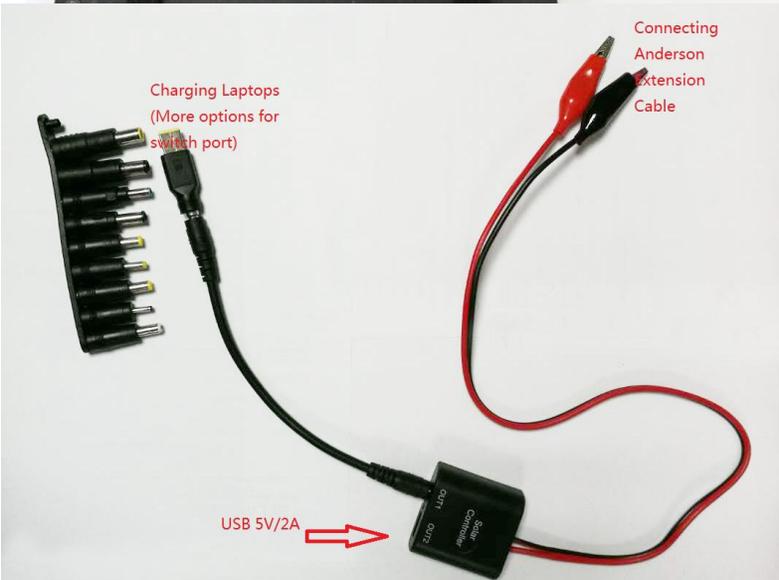
### A-Si Series Folding Solar Charger Accessories



Anderson extension cable+Alligator Clip  
+DC/USB Dual Output  
+Laptop port  
Suitable for 39W &78W



Another option: DC/USB Dual Output fixed onto solar panel



Anderson extension cable+Alligator Clip  
+DC/USB Dual Output  
+Laptop port  
Suitable for 39W &78W



### Flexible\* Powerful\* Lightweight Solar Solution

### Customized Wrapping CIGS Solar Charger

27W Wrapping Solar Charger

Model No.: **SP-027**

Peak power: 27W

VMPP: 16.5V

IMPP: 1.64A

VOC: 21.6V

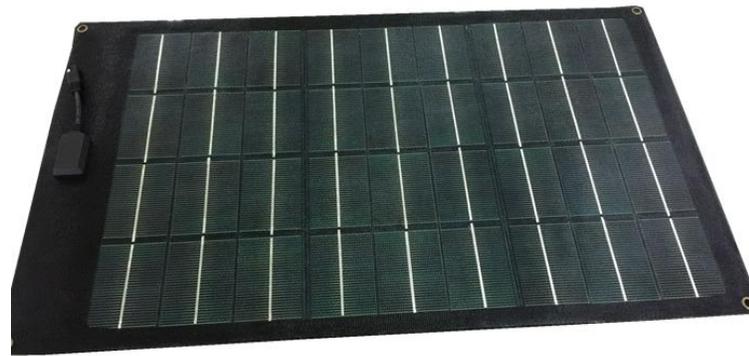
ISC: 1.8A

Dimension: 750\*450MM

Thickness: 1 mm

Cell type: CIGS

Backside: Wear resistant cloth



Thin, Light-weight, Rollable, Durable  
Accept custom-made dimension and power.

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### Military Solar Charger Kit 30W.60W.90W

Electrical Performance at STC		SP-030K	SP-060K	SP-090K
Nominal Power(W)	Pmpp(W)	30	60	90
Solar Cell		CIGS(PowerFLEX)		
Power Output Tolerance(W)	(W)	+10/-10	+10/-10	+10/-10
Maximum Power Voltage(V)	Vmpp(V)	20 V	21.15V	21.15 V
Maximum Power Current(A)	Impp(A)	1.5 A	3.2A	5.3A
Maximum System Voltage	IEC/UL(V)	1000/600		
Physical and Mechanical Specifications				
Extended Length (±5mm / 0.20in)	L (mm)	872mm	1590mm	1555mm
Extended Width (±3mm / 0.12in)	W (mm)	729mm	712mm	1062mm
Folding Size	FS (mm)	243*183*50mm	356*256*50mm	350*270*50mm
Weight	kg	0.60 KG	1.12 KG	1.73 KG
Thickness	T (mm)	2.0mm	2.0mm	2.0mm
Output port	SAE / Optional DC/USB Dual Output			
Working temperature	-40 ~+70 C			
Warranty	One year			

Including whole Solar Kit: Power Bank and Accessories



Power adapter



DC connecting lines



Triple Data cable



Car charger



Cable clamp



Adapters



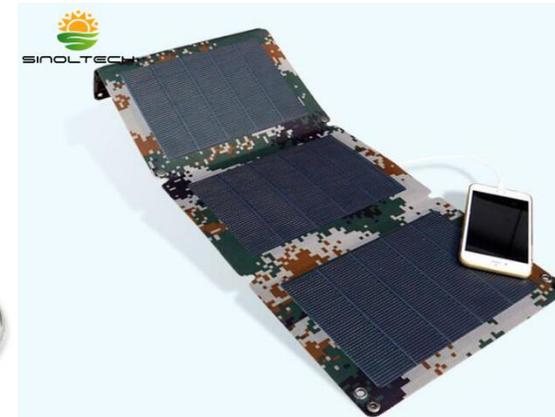
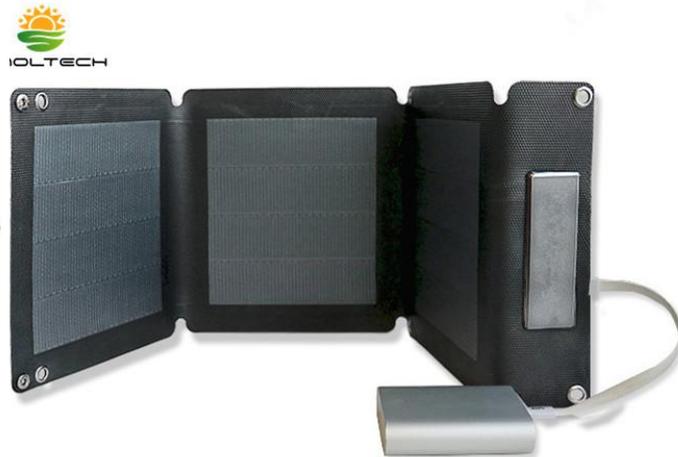
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### Hanergy Walker Series

Electrical Performance at STC		SP-08	SP-08F	M12	SP-15	SP-50	SP-100
Nominal Power(W)	Pmpp(W)	<b>7.7W</b>	<b>7.7W</b>	<b>12W</b>	<b>15W</b>	<b>48W</b>	<b>97W</b>
Solar Cell		CIGS(Miasole)					
Power Output Tolerance(W)	(W)	+10/-10	+10/-10	+10/-10	+10/-10	+10/-10	+10/-10
Output Voltage(V)	Vmpp(V)	5 V	5 V	5 V	5 V	19.8V	19.8V
Output Current(A)	Imp(A)	1.2 A	1.2 A	2 A	2.5A	2.47A	4.94A
Type		Flat	Fold	Fold	Fold	Fold	Fold
Color Option		Black,Red,Camouflage				Black	Black
Physical and Mechanical Specifications							
Extended Length	L (mm)	400mm	495mm	678mm	675mm	1075mm	1740mm
Extended Width	W (mm)	256mm	212mm	227mm	265mm	610mm	900mm
Folding Size	FS (mm)	/	141*212*15mm	227*198*16mm	265*190*15mm	305*250*16mm	305*250*22mm
Weight	kg	160 G	190 G	262 G	420 G	850 G	1600 G
Output port		USB	USB	USB	USB	SAE	SAE
Working temperature		-20 ~+50 C					
Warranty		One year					

WALKER SERIES Flexible Solar Charger:

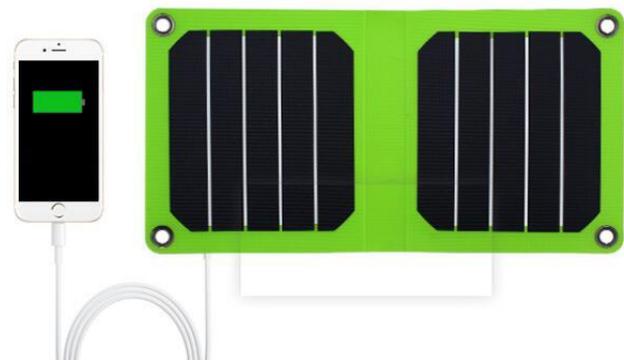
- Foldable and portable, without any burden
- Low light power output
- Wide compatible DUAL USB output
- Extra thin to 1mm
- Light and small
- Green technology, CIGS thin film solar cell
- Keep a stable output between -20 and +50 celsius degree, beyond the shackles of temperature, calm generation
- Anti UV, waterproof, self cleaning, easy to wipe and maintain.
- Better compatibility, safe and reliable, with built-in voltage regulator, could charge cell phone, IPAD, power bank, or bluetooth speaker, portable fan, car cigarette lighter etc.



Flexible\* Powerful\* Lightweight Solar Solution

### Pocketpower Series Outdoor Solar Charger

Electrical Performance at STC		FSS-5.3	FSS-6.4F3	FSS-6.4F2	FSS-8.5	FSS-10.6	FSS-15.9F3
Nominal Power(W)	Pmpp(W)	<b>5.3W</b>	<b>6.4W</b>	<b>6.4W</b>	<b>8.5W</b>	<b>10.6W</b>	<b>15.9W</b>
Solar Cell		SUNPOWER					
Output Voltage(V)	Vmpp(V)	5 V	5 V	5 V	5 V	5 V (9V/12V)	5 V / 16V
Output Current(A)	Impp(A)	1.06 A	1.28 A	1.28 A	1.7A	1.93A	2.9A / 0.96A
Type		Fold	3 Folds	Fold	Fold	Fold	3 Folds
Color Option		Black, Orange, Green, Yellow					
Physical and Mechanical Specifications							
Extended Length	L (mm)	296.2mm	397mm	324mm	336mm	340mm	491mm
Extended Width	W (mm)	153mm	142mm	216mm	237mm	262mm	262mm
Folding Size	FS (mm)	153*147mm	142*101mm	216*160mm	237*161mm	262*160mm	262*160mm
Weight	kg	0.20 KG	0.21 KG	0.21 KG	0.29 KG	0.32 KG	0.52 G
Output port		USB	USB	USB	USB	USB	USB / DC 5525
Working temperature		-20 ~+70 C					
Warranty		2 years					



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## Technology Description for Pocketpower Series

POCKETPOWER SERIES Folding Solar Charger:

-High Efficiency: with Sunpower cell imported from USA, the efficiency can up to 21%-25%, while most monocrystalline panel is only 17%-19%. Importantly, no worries about charging under low temperature. The charging temperature is  $-20^{\circ}\text{C}\sim 70^{\circ}\text{C}$ .

-Fast Charging Time: the device can be full-charged only within 2-3 hours in sunny day or under direct sunlight. The pocket power is suitable better for pocket power charging directly.

-Portable, Water-Resistant and Long Lifespan: with our integrated ETFE lamination process, its lifetime can up to 15-20 years under normal outdoor condition. It is called POCKET POWER, because it is light-weight and can be folded into your pocket.

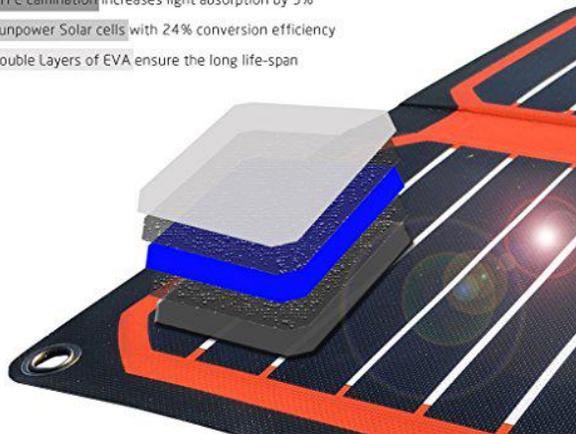
-Wide Application: it can be used to charge electrical devices. Surprisingly it's a wonderful helper for hiking, camping and others outdoor activities. Even in absence of power support, your device can be charged as long as there is sunlight.

-Quality Warranty: Many patents in technology ensure high product quality also with 2 years service warranty.

-Application: With industry leading surface encapsulation techniques and deep embossing lamination process, this portable solar charger can be used to run electrical devices such as power bank, smart phones, your GPS, and other 5V gadgets. Our solar chargers are essential for outdoor activities, such as hiking, camping, and outdoors military training.

### Product Structure

- ETFE Lamination increases light absorption by 5%
- Sunpower Solar cells with 24% conversion efficiency
- Double Layers of EVA ensure the long life-span



Flexible\* Powerful\* Lightweight Solar Solution

**SINOLTECH ENERGY LIMITED**  
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