



SINOLTECH

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# FOLDING SOLAR CHARGER

## A-Si Flexible Solar Cell

Flexible\* Powerful\* Lightweight  
Solar Solution



Portable &  
Lightweight



Ultra-thin &  
Resilience



Anti-impact &  
Anti-Scratch



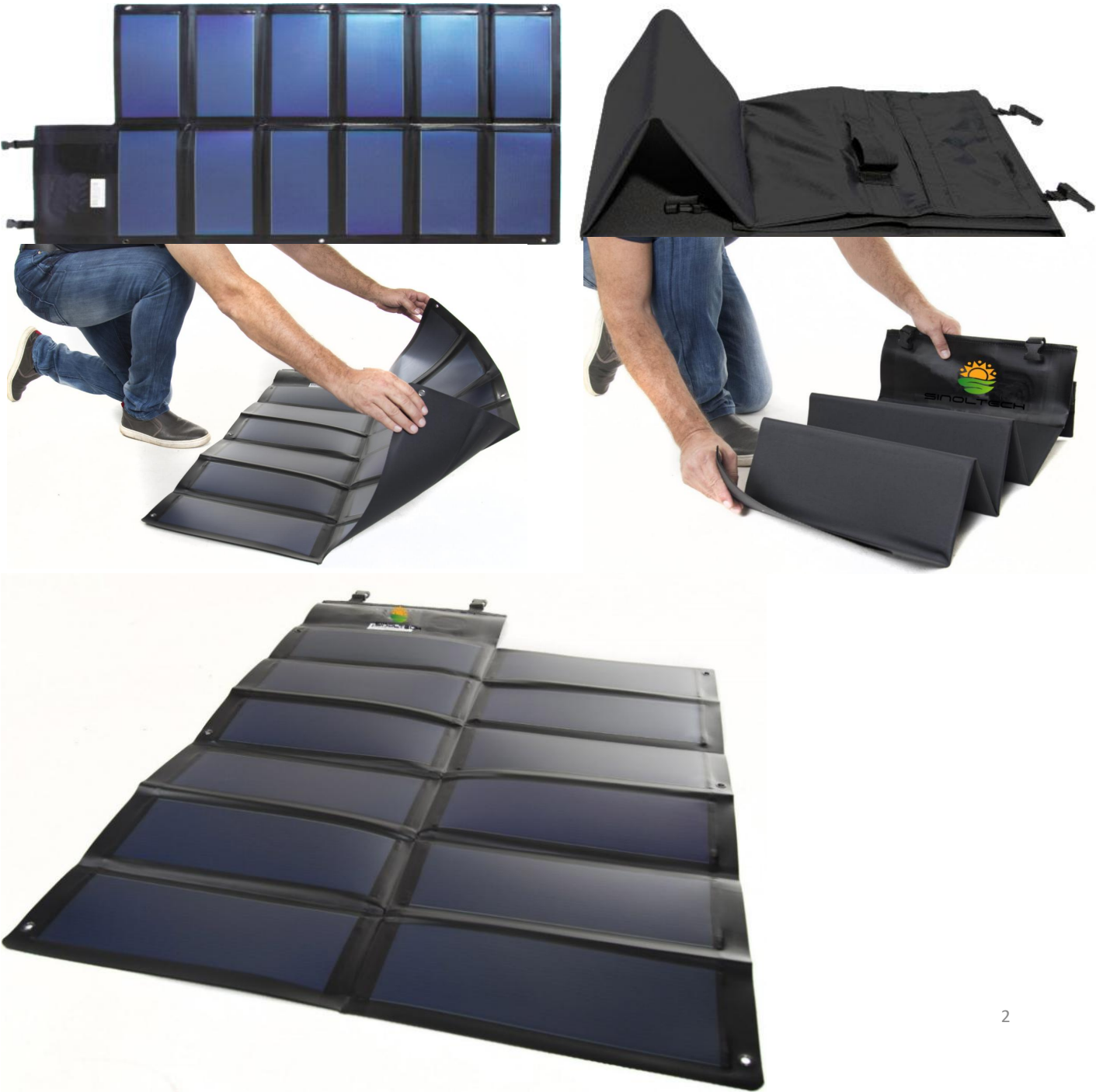
Flexible &  
Foldable

# Portable/Foldable Thin Film Solar Kit for Outdoor Activities

Electrical Performance at STC		FSC(12)-39	FSC(12)-78	FSC(18)-118
Nominal Power(W)	Pmpp(W)	39	78	118
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

Warranty	
5 years limited product warranty	





# A-Si Flexible Solar Cell Technology Introduction

## A-Si Technology, Multi-Junction

1. Unique triple-junction thin-film cells made from amorphous silicon and germanium
2. Cell absorbs red, green and blue light through three different cell layers
3. Flexible Solar PV-laminates produce energy when the sun is low, through cloud cover and when installed at non-ideal angles

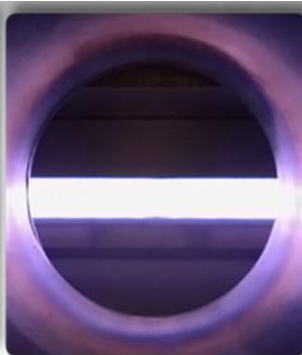
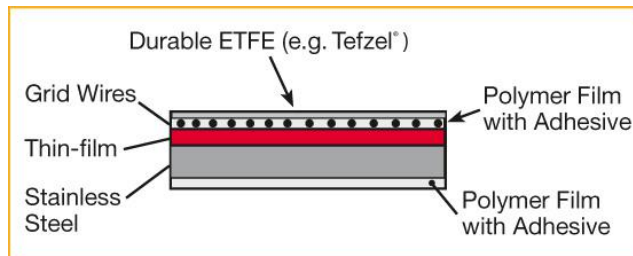
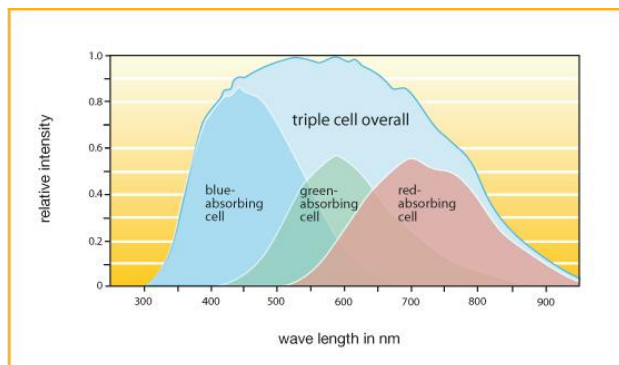
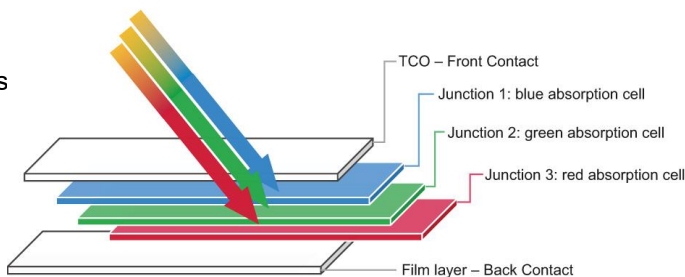
Roll-up thin film solar panels on stainless steel plates are manufactured by a roll-to-roll process. Which allows the company to produce triple-junction thin-film silicon solar cells on rolls of thin stainless steel substrates, three feet wide and up to one mile long.

The long stainless steel web is guided through a series of vacuum chambers for the deposition of nine semiconductor layers using a plasma enhanced chemical vapor deposition process, and back-reflector and top electrode layers using a sputtering process.

The combined thickness of the layers for the triple-junction solar cell is approximately one hundredth of the thickness of a typical sheet of paper.

Therefore, only a small amount of silicon is used.

We have made advancements to the manufacturing process that allows it to market these products at a very attractive price point. However, the basic technology used in the cells and packaging techniques used in the modules are well proven, predictable and have an operating history of over ten years in the field.



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