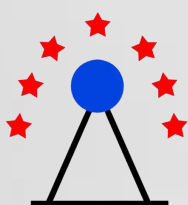




| CIGS Flex Modules (Serie 03)

Hanergy Technology

The FLEX Series module is a CIGS based flexible thin-film PV module that provides high power density for many types of applications. The panels are the highest efficiency, flexible, thin-film product on the market today, with >17% cell efficiency. The FLEX Series module bonds to surfaces with a simple peel-and-stick adhesive. This adhesive approach provides significant benefits such as superior wind resistance, a seamless low-profile look and eliminating the need for racking or penetrations into the surface. The FLEX Series module is IEC 61646 & IEC 61730, UL 1703 and Class A over TPO: Slope 2.5:12 certified. The modules also have an enhanced uniform dark color scheme throughout obtained through specially engineered material upgrades. These modules provide customers the following significant benefits: Low weight, Shatterproof, No surface penetrations, eliminating the worry of leakage and damage. An aesthetically pleasing solar solution, blending into the structure surface. Superior wind resistance and a seismic advantage over silicon where their higher profile and breakable nature increases the likelihood of damage in a hurricane or earthquake. Customizable for all possibilities and the highest efficiency.



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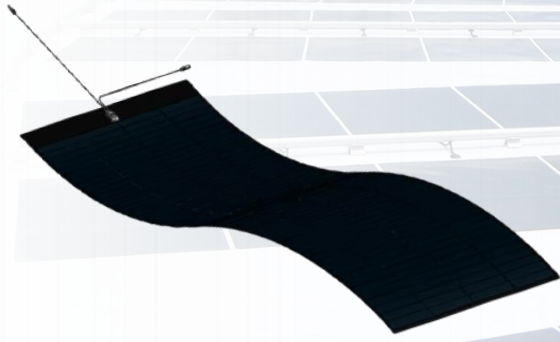
FLEX SERIES -O3N

CIGS Flexible Modules:
High power density in a flexible Form Factor

FLEX-02 / FLEX-03 COMPARISON

FLEX-02 N and FLEX-03 N Comparison

	FLEX-02 NS	FLEX-03 NS	FLEX-02 N	FLEX-03 N	FLEX-02NL	FLEX-03NL
Length	1722±7 mm (67.8+.3in)	1710 mm(67.3 in)	2597±7 mm (102.2+.3 in)	2585 mm (101.8 in)	5922±7 mm (233.1+.3 in)	5910 mm (232.7 in)
Width	363±13 mm (14.3+.5 in)	348 mm(13.7 in)	363±13 mm (14.3t.5 in)	348 mm (13.7 in)	363±13 mm (14.3±.5 in)	348 mm (13.7 in)
Power	65-85W	70-85W	110-130W	110-130W	265-305W 2	260 – 310W
Maximum Power Voltage(V_{Mpp})	17.7-20.8	18.3-19.8	28.9-32.0	28.5-30.5	69.0-75.3 6	67.3 – 72.3
Open Circuit Voltage(V_{oc})	23.2-25.3	23.5-24.3	37.1-39.1	36.5-37.7	87.9-92.1	86.2 – 89.0
Maximum Power Current(I_{Mpp})	3.67-4.09	3.85-4.30	3.81-4.06	3.87-4.26	3.84-4.05	3.88 – 4.29
Performance	Avg.16.5%	Avg.16.5%	Avg.16.5%	Avg.16.5%	Avg.16.5% A	Avg. 16.5%
Weight w/adhesive	1.9 kg(4.11b)	1.3 kg(2.9 lb)	2.7 kg(5.9 lb)	1.9 kg(4.3 lb)	5.9 kg(13.1lb) 4.	4.3 kg (9.5 lb)
Tab Color	White	Black	White	Black	White	Black
Systems Rating (UL)	1000V/600V	1000V	1000V/600V	1000V	1000/600V	1000V
Cable Length	750 mm	550/750/1200 mm	750 mm	550/750/1200 mm	750mm	550/750/1200 mm
Label Location	Back of module	Wrapped on cord	Back of module	Wrapped on cord	Back of module	Wrapped on cord



FLEX SERIES -O3M

CIGS Flexible Modules:
High power density in a flexible Form Factor

FLEX-02 / FLEX-03 COMPARISON

FLEX-02 W and FLEX-03 M and W Comparison

	FLEX-02 Ws	FLEX-03 MS*	FLEX-02 W	FLEX-03 M
Length	1722±7 mm (678±.3in)	1710 mm(673in)	2597±7 mm (102.2±.3 in)	2580 mm(101.6 in)
Width	993±13 mm (39.1±.5 in)	1000 mm(39.4in)	993±13 mm (39.1±.5 in)	1000 mm(39.4 in)
Power	210-250W	210-260W	340-380W	350-390W
Maximum Power Voltage (VMPP)	18.4-20.6	18.3-19.9	29.3-315	29.2-305
Open Circuit Voltage(Voc)	238-25.3	23.5-244	375-390	369-377
Maximum Power Current (IMPP)	11.43-12.16	11.85-13.06	1161-1205	1200-1278
Performance	Avg.16.5%	Avg.16.5%	Avg.165%	Avg.165%
Weight w/adhesive	42 kg(9.2 lb)	42kg(92lb)	62kg(137lb)	62kg(137lb)
Tab Color	White	Black	White	Black
Systems Rating (UL)	1000V1600V	1000V	600V	1000V
Cable Length	750 mm	550/750/1200 mm	750 mm	550/750/1200 mm
Label Location	Back of module	Wrapped on cord	Back of module	Wrapped on cord



FLEX SERIES -03W

CIGS Flexible Modules:
High power density in a flexible Form Factor

FLEX-02 / FLEX-03 COMPARISON

FLEX-02 W and FLEX-03 M and W Comparison

	FLEX-03 Ws	FLEX-03 W
Length	1010 mm(398 in)	2585 mm(1018 in)
Width	1293 mm(50.9 in)	1293 mm(509 in)
Power	160-190W	470-510W
Maximum Power Voltage (VMPP)	205-220	585-606
Open Circuit Voltage(Voc)	262-270	739-75.1
Maximum Power Current (IMPP)	782-8.64	8.04-8.42
Performance	Avg.165%	Avg.16.5%
Weight w/adhesive	25kg(561b)	66kg(146lb)
Tab Color	Black	Black
Systems Rating (UL)	1000V	1000V
Cable Length	550/750/1200 mm	550/750/1200 mm
Label Location	Wrapped on cord	Wrapped on cord



500W Emergency power kit

Quick disassembly and all-round protection

- 500W/345WH power supply capacity
- 220V, 12V, 5V output
- Solar energy/external power supply multi-purpose
- 100W components, 50/100W power generation paper compatible
- Overcurrent protection
- Over power protection
- Over discharge protection
- Overvoltage and undervoltage protection
- Overcharge protection

Safety and environmental protection, excellent performance

Intelligent mode: Adopt unique intelligent CPU control mode, button-type control of each output

Concise design: the power and each output are displayed on the LED screen, which is clear at a glance

Backup power supply: unique AC AC DC5V, DC12V three-way output backup power system at same time

Lightweight and portable: light weight, small size, large capacity

Modified sine wave: Modified sine wave mode adopted for AC output, which can supply power to inductive load equipment

Larger load: the lithium battery is applied to the outdoor emergency power system, and the load power is up to 1000W

Portable power product parameters

Product number	ES-500A	ES-500B	ES-500C
battery capacity	12V41AH(453WH)	12V31AH(345WH)	12V26AH(288WH)
Output Power	Rated 500W, maximum 1000W		
Input voltage	AC: AC 110V~220V 50/60Hz, Solar or wind energy DC 18-36V input, car 12V input, no controller.		
The output voltage	220V 50Hz/110V 60Hz		
DC output	12V/4A four, USB5V/2A four		
LED lights	1W, maximum 3W		
Solar charging	18V100W		
Car charging	12V output, please do not use 24V		
Output waveform	Pure sine wave		
Power failure response time	≤5 ms		
overload	After overload, the AC output is disconnected, the indicator light is red, disconnect the load, restart to recover		
Short circuit	After a short circuit, the AC output is disconnected, the load is disconnected, and the restart is restored		
lithium battery	Cycle life more than 500 times		
weight	Net weight 3.0kg, 3.5kg after packaging		
size	11x13.5x28cm		
colour	Yellow (multiple colors can be customized)		



1000W Emergency power kit

Quick disassembly and all-round protection

- 1000W/1032WH power supply capacity
- 12V/10A 5V/2A 24V/20 220V AC output
- Solar energy/external power supply multi-purpose
- 100W components, 50/100W power generation paper compatible
- Overcurrent protection
- Over power protection
- Over discharge protection
- Overvoltage and undervoltage protection
- Overcharge protection

Safety and environmental protection, excellent performance

- The battery adopts high-capacity, long-life, high-reliability imported lithium batteries, with a lifespan of more than 3 years, and can continue to power desktop computers for about 18 hours
- Intelligent chip design improves the storage capacity of lithium batteries
- Compatible with laptop adapters and supports synchronous charging and discharging functions
- The high integrated circuit design is convenient and quick to supply power for notebook computers, digital cameras and other products, and provides AC 220V pure sine wave output voltage
- Strong compatibility, suitable for all digital products and laptops on the market. Humanized panel design

Portable power product parameters

Product number	ES-1000A
battery capacity	24V 43AH(1032WH)
Output Power	Continuous output power: 1000W, peak power: 2000W
Input voltage	Adapter 25.2V/7A
The output voltage	12V/10A 5V/2A 24V/20A
DC output	220V 50Hz / 110V 60Hz
LED lights	Pure sine wave 220V
Solar charging	Pure sine wave 220V
Car charging	≤5 ms
Output waveform	After overload, the AC output is disconnected, the indicator light is red, disconnect the load, restart to recover
Power failure response time	After a short circuit, the AC output is disconnected, disconnect the load, restart to recover
overload	Cycle life more than 1000 times
Short circuit	13.5kg
lithium battery	410*330*20MM
weight	-20°C~60°C
size	Army green, black color, yellow color, camouflage color