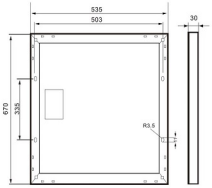
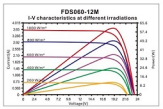
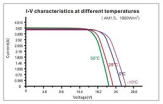
60W Mono 单晶







25 YEARS OUTPUT POWER WARRANTY

10 YEARS PRODUCT WARRANTY

ISO9001
ISO14001
OHSAS18001
IEC TS 62941

IEC CE RoHS

SPECIFICATIONS:

ELECTRICAL DATA (STC)	
Model Number	FDS060-12M
Rated Power in Watts-Pmax(Wp)	60
Open Circuit Voltage-Voc(V)	23.0
Short Circuit Current-Isc(A)	3.43
Maximum Power Voltage-Vmpp(V)	19.0
Maximum Power Current-Impp (A)	3.16
Module Efficiency (%)	16.8
Minimum Power Tolerance	0~+3%

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

MECHANICAL DATA	
Solar cells	Mono-crystalline 156.75x52.25mm, 5BB
Cell configuration	36 cells(4×9)
Module dimensions	535×670×30mm
Weight	4.0kg
Superstrate	3.2 mm, High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6063T5, Silver color
J-Box	IP67
Cables	—

TEMPERATURE & MAXIMUM RATINGS	
Nominal Module Operating Temperature(NMOT)	45°C ± 2°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	0.05%/°C
Temperature Coefficient of Pmax	-0.39%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1000VDC
Max Series Fuse Rating	10A
Limiting Reverse Current	10A

PACKAGING CONFIGURATION		
	40ft	20ft
Number of modules per container	3600	1800
Number of modules per pallet	180	180
Number of pallets per container	20	10

Product Catalog 产品目录

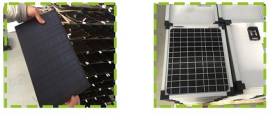
Mono Module \ 单晶组件

SN	Maximum Power (Pmax) 最大功率 (W)	Module sizes L*W*H(H) 组件尺寸 (mm)	Maximum Power Voltage (Vmp) 最大工作电压(I) (V)	Maximum Power Current (Imp) 最大工作电流 (A)	Open-circuit Voltage (Voc) 开路电压 (V)	Short-circuit Current (Isc) 短路电流 (A)	Module Weight 组件重量 (Kg)
1	5	230×185×17 (17)	18.6	0.27	22.6	0.29	0.4
2	10	230×345×17 (17)	18.6	0.54	22.6	0.58	0.8
3	20	370×345×25 (20)	19	1.06	23	1.14	1.4
4	30	545×345×25 (20)	19	1.58	23	1.71	2
5	40	375×670×25 (20)	19	2.11	23	2.28	2.6
6	50	455×670×25 (20)	19	2.64	23	2.86	3.2
7	60	535×670×30 (25)	19	3.16	23	3.43	4
8	70	610×670×30 (25)	19	3.69	23	4	4.5
9	75	650×670×30 (25)	19	3.95	23	4.29	4.8
10	80	690×670×30 (25)	19	4.21	23	4.57	5.1
11	85	770×670×30 (25)	18.8	4.52	22.8	4.91	5.6
12	90		19	4.74	23	5.14	
13	100	845×670×30 (25)	19	5.27	23	5.72	6.3
14	110	925×670×30 (25)	19	5.79	23	6.29	6.8
15	120	1005×670×30 (25)	19	6.32	23	6.86	7.4
16	130	1080×670×30 (25)	19	6.85	23	7.44	8
17	140	1160×670×30 (25)	19	7.37	23	8.01	8.5
18	150	1240×670×35 (30)	19	7.9	23	8.58	9.2
19	160	1480×670×35 (30)	18.6	8.61	22.6	9.35	11.2
20	170		19.2	8.85	23.2	9.6	
21	180		19.6	9.2	23.6	9.75	
22	200	1120×990×35 (30)	37.2	5.38	45.6	5.78	12.8
23	295	1640×992×35 (35)	32.25	9.15	38.8	9.7	18.7
24	300		32.65	9.2	39.1	9.75	
25	305		33	9.25	39.4	9.8	
26	355	1956×992×40 (35)	38.8	9.15	47	9.65	22
27	450	2094×1038×40 (35)	41.4	10.87	49.6	11.58	
28	Other						

NOTE: 1. The module size can be customized according to customer's requirments. 其组件尺寸可以根据客户需求定制。

2. Poly module also can be customized. 多晶组件也可以根据客户需求定制。

Typical Case show 典型业绩展示



10W (Mono PET)

Cusomized PET Solar module
客户定制的 PET层压板
Ship-to: South Korea, Asia
发货地：亚洲，韩国

10W (Mono)

Cusomized Solar module
客户定制的 单晶小组件
Ship-to: Jiangxi, China
发货地：中国，江西

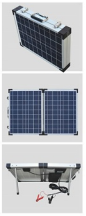
100W (Mono)

Cusomized Solar module
客户定制的 单晶小组件
Ship-to: Kenya, Africa
发货地：非洲，肯尼亚

120W (Mono)

Cusomized Solar module
客户定制的 单晶小组件
Ship-to: Saudi, Middle East
发货地：中东，沙特阿拉伯

Portable Double-Modules Camping Kit
二折叠组件发电系统



Matched Handbag
匹配手提包

Portable Double-Modules Camping Kit \ 二折叠组件发电系统

SN	Maximum Power (Pmax) 最大功率 (W)	Product size L*W*H(H) 产品尺寸 (mm)	Maximum Power Voltage (Vmp) 最大工作电压 (V)	Maximum Power Current (Imp) 最大工作电流 (A)	Open-circuit Voltage (Voc) 开路电压 (V)	Short-circuit Current (Isc) 短路电流 (A)	Module Weight 组件重量 (Kg)
1	40	370×345×75	19	2.12	23	2.28	4.3
2	60	545×345×75	19	3.16	23	3.42	6
3	80	375×670×75	19	4.22	23	4.56	7.3
4	100	455×670×75	19	5.28	23	5.72	8.5
5	120	535×670×75	19	6.32	23	6.86	10
6	140	610×670×75	19	7.3	23	8	11.6
7	160	690×670×75	19	8.42	23	9.14	13.5
8	180	770×670×75	19	9.48	23	10.28	13.5
9	200	845×670×75	19	10.54	23	11.44	15.3
10	Other						

NOTE: 1. The product size can be customized according to customer's requirments. 其产品尺寸可以根据客户需求定制.

2. Poly module also can be customized. 多晶组件也可以根据客户需求定制.

3. Can customize Portable Triple-Module Camping Kit, or more -Module , 也可以根据客户需求定制三折叠组件系统,或者更多折叠组件.

Portable Single-Module Camping Kit
单体组件发电系统

Matched Handbag
匹配手提包

Portable Triple-Modules Camping Kit
三折叠组件发电系统

Portable Solar Power Storage System
便携式太阳能储能系统

Matched Handbag
匹配手提包

电池板 Solar panel	18V40W	尺寸 Size	675×105×420 mm
电 池 Battery	12.8V 14Ah 磷酸铁锂电池 12.8V 14Ah Lifepo4 battery	重量 Weight	G. W.: 10. 80kg N. W.: 10. 20kg
输出 Output	USB 5V 2A×1 1A×1 DC 12V 5A×2 DC 12V 10A Cigarette lighter socket		

Portable Power Station 移动电源(便携储能)

S150

Battery Type	Lithium Ion Battery
Capacity	155Wh(3.7V/42000mAh) / 194Wh(3.7V/52500mAh)
AC Output	Modified Sinewave 150W 220V/50Hz or 110V/60Hz
DC Output	DC5521 9-12.6V/14.5A Max
USB-A Output	5V/2.4A/QC18W
USB-C Output	PD18W
Input Charging	DC15V/3A; Solar Panel: MPPT, 14V-22V, 3A Max
LED Lighting	Flashlight/Blink/SOS
Size	195*90*171mm
Weight	about 1.89kg
Cycle Life	>500 times

Camping Projector Backup Drones Iphone Speaker Ipad Air Action Camera

T200

Battery Type	Lithium Ion Battery
Capacity	222Wh(3.7V/60000mAh)
AC Output	Modified Sinewave 200W 220V/50Hz or 110V/60Hz
DC Output	DC5521 9-12.6V/14.5A Max
USB-A Output	5V/2.4A/QC18W
USB-C Output	PD18W
Input Charging	DC15V/3A; Solar Panel: MPPT, 14V-22V, 3A Max
LED Lighting	Flashlight/Blink/SOS
Size	210*139*123*180mm
Weight	about 2.4kg
Cycle Life	>500 times

Camping Adventure Iphone CPAP Travel Backup Speaker Cameras

T500

Battery Type	Lithium Ion Battery
Capacity	518Wh(3.7V/140000mAh)
AC Output	Pure Sinewave 500W 220V/50Hz or 110V/60Hz(Adjustable)
DC Output	DC5521 12-16.8V/14.5A Max
USB-A Output	5V/2.4A/QC18W
USB-C Output	PD18W
Cigarette Lighter Output	DC5521 12-16.8V/14.5A Max
Input Charging	DC19V/4.73A; Solar Panel: MPPT 18V-24V, 5A Max
Size	305*168*240mm
Weight	about 6.6kg
Cycle Life	>500 times

Iphone Drones Games CPAP RV Laptops Speaker Bulb

T1200(coming soon)

Battery Type	LiFePo4 Battery
Capacity	1280Wh(25.6V/50Ah)
AC Output	Pure Sinewave 1200W , Peak Power 2400W, 220V/50Hz or 110V/60Hz(Adjustable)
DC Output	DC5521x2: 13.5V/10A (12A Max)
USB-A Output	USB-Ax4: 5V/2.4A (9.6A Max), USB-Ax2: QC24W
USB-C Output	TYPE-Cx1: PD65W, TYPE-Cx1: PD100W
Cigarette Lighter Output	13.5V/10A (12A Max)
Wireless Charging	15W
LED Lighting	Flashlight/Blink/SOS
Size	192*195*305mm
Weight	about 13kg
Cycle Life	>2000 times
Input Charging	AC Adapter: DC29.2V/8A,233.6W; Solar Panel: MPPT, 10-70V, 10A Max

Iphone Drills Games CPAP RV Laptops Speaker Bulb

CE-EMC

CE-LVD

UN38.3

FCC-EMC

RoHS

Appearance Patent

More Details of T200 :
T200举例详解:

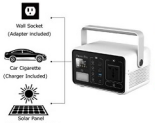
T200-Drving Loads 驱动负载

More ways to suppling power 多种充电方式

1. AC Output 交流电出:
   - 60W32" TV 电视机 : 3 hours +
   - 60W Laptop 笔记本电脑: 3 hours +
   - 60W Stand Fan 落地扇: 3 hours +
   - 40W CPAP 呼吸机: 4.7 hours +
   - UAV 无人机: 1-3 times (次)
2. DC 12V Output 直流12V输出:
   - 60W Car refrigerator 车载冰箱 : 3 hours +
   - 60W Car vacuum cleaner 车载吸尘器: 3 hours +
   - 90W Vehicle air pump 车载打气泵: 2 hours +
   - 5W LED Light LED灯: 37 hours +
   - 24W LED Light LED灯: 7 hours +
3. USB 5V Output USB5V输出:
   - Iphone 8-Plus 苹果手机: 15 times +
   - Ipad Pro 苹果平板: 6 times +
   - Go Pro 相机: 35 times +
   - Bluetooth speaker 蓝牙音箱: 6 times +

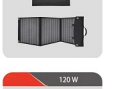
T200- How to charge

3 Ways to Recharge



For Different Countries

60 W


120 W

Power:	60W
Weight:	3.65kg
Solar panel:	4pcs
Material:	waterproof cloth+PET+EVA+solar panel
Color:	Camouflage/black
USB output:	5V 3.1A Max
DC output:	18.0V3.3A
Folded size:	360*300*65mm
Unfolded size:	1380*300*5mm

Power:	120W
Weight:	4.7 kg
Solar panel:	4pcs
Material:	waterproof cloth+PET+EVA+solar panel
Color:	Camouflage/black
USB-Type-Output:	5V2.4A/9V2.2A/12V2A Max
DC output:	18.0V 6.6A
Folded size:	520*370*65mm
Unfolded size:	1860*520*5mm

Other customer customized pinstures showing :
其它客户定制图片产品展示

Can be customized per customer's requirments (Different Power ,Shape, Working Environment,etc.) 可以根据客户的需求定制。（不同的功率、形状、或者工作条件）

Name 名称	Portable Power Station Model 移动电源	Solar Folding Bag 太阳能板折叠充电包
Example Photo 例图		
Recommended Matching of Power or Model 功率或型号的推荐匹配	S150	60W
	T200	60W
	T500	120W
	T1200	120W

Off-Grid Solar System

1kw\2kw\3kw\4kw\5kw\6kw

Product Feature:

1 Pure sine wave output;
2 Low frequency toroidal transformer lower loss;
3 Intelligent LCD integration display;
4 Hybrid solar inverter with built-in PWM or MPPT controller optional;
5 AC charge current 0-30A adjustable, three working modes selectable;
6 Peak power more than 3 times, full-automatic and perfect protection function;
7 Added fault code query function, easy to monitor the operation in real time;
8 Supports diesel or gasoline generator, adapt any tough electricity situation;
9 Inverter combine industrial and home usage, wall-mounted design, convenient installation.

Wiring Diagram:

Cases Show:

Off-Grid Solar System

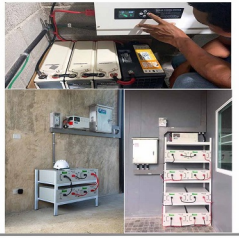
1kw\2kw\3kw\4kw\5kw\6kw\7kw

Product Feature:

1 Low frequency toroidal transformer increase efficiency. Pure sine wave output;
2 Integrated LCD display: One-button start with an external display screen (optional);
3 Dedicated DCP chip design; stable and high-speed operation;
4 AC charge current 0-30A adjustable; battery capacity configuration more flexible;
5 Three types working modes adjustable:AC first, DC first, energy-saving mode;
6 AVR output, all-around automatic protection function;
7 Solar inverter with built-in PWM or MPPT controller optional;
8 Added fault codes query function,facilitate user to monitor the operation state in real time;
9 Supports diesel or gasoline generator, adapt any tough electricity situation;
0 RS485 communication port/APP (WIFI or GPRS) optional

Wiring Diagram:

Cases Show:



Off-Grid Solar System

1kw\2kw\3kw\4kw.....8kw

Product Feature:

1 Pure sine wave output.
2 Low DC voltage, saving system cost.
3 3 phase solar inverter with built-in PWM or MPPT charge controller.
4 AC charge current 0-45A adjustable.
5 Wide LCD screen, clearly and precisely shows icon data.
6 100% imbalance loading design, 3 times peak power.
7 Setting different working modes based on variable usage requirements.
8 DC first/AC first optional.
9 Various communication ports and remote controls (RS232/RS485/APP/SNMP/GSM optional)

Wiring Diagram:

Cases Show:

Off-Grid Solar System

5kw\6kw\7kw\8kw....160kw

Product Feature:

1 Pure sine wave output.
2 Low DC voltage, saving system cost.
3 3 phase solar inverter with built-in PWM or MPPT charge controller.
4 AC charge current 0-45A adjustable.
5 Wide LCD screen, clearly and precisely shows icon data.
6 100% imbalance loading design, 3 times peak power.
7 Setting different working modes based on variable usage requirements.
8 DC first/AC first optional.
9 Various communication ports and remote controls (RS232/RS485/APP/SNMP/GSM optional)

Wiring Diagram:

Cases Show:

CHAORAN 超然 www.chaorantech.com

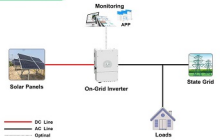
Grid-tied Solar System

3kw\5kw\.....100kw\110kw

Product Feature:

1. Single Phase Inverter:
   (3-5-8)K series inverter is designed for residential PV plants.
   Which is compatible with high-efficiency modules and bi-facial modules.
   Compact and lightweight design, bring easy installation.
   The protection level is increased to IP66.
   Integrated AFCI function can proactively reduce the risk of fire.
2. Three Phase Inverter:
   (5-8-10).....50-100-110K series inverter is designed.
   It is 3-phase low voltage string inverter which is the world's largest unit-power currently .
   It is specially designed for large LV-grid PV projects to reduce LCOE.
   Including C&I roof, large-scale PV plant, higher generation efficiency.
   Strings intelligent monitoring, Smart I-V Curve Diagnosis supported.

Wiring Diagram:



Cases Show:

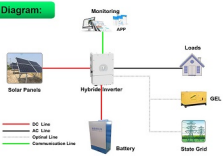
Medium Energy Storage System

3kw\5kw\6kw\8kw\10kw\15kw

Product Feature:

1 Colorful touch LCD, IP65 protection degree
2 6 time periods for battery charging/discharging
3 Max. charging/discharging current of 190A
4 Frequency droop control, Max.16pcs parallel
5 DC couple and AC couple to retrofit existing solar system
6 Support storing energy from diesel generator
7 48V low voltage battery, safe and reliable
8 Unique Smart Load application and Grid peak shaving function
9 4ms fast transfer from on-grid to off-grid mode, ensuing the traditional fixed frequency air conditioner works well.

Wiring Diagram:



Cases Show:

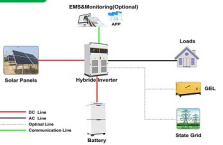
Medium Energy Storage System

30kw\50kw\100kw\150kw\250kw

Product Feature:

1 Various working modes can be set flexibly.
2 Flexible Battery Type(li-ion,lead-acid).
3 PV controller can be expanded to facilitate flexible. configuration of photovoltaic capacity.
4 Integrated design to support loads, batteries, power grids, diesel generators and PV be connected.
5 Integrated EMS function, power supply security and stability, maximum utilization of new energy.
6 Prediction intelligent battery management and discharge time.
7 CAN and RS485 communication interface, modbus protocol.
8 Seamless transfer between on and off grid. Strong load adaptability.
9 Perfect protection function to protect inverters and batteries.

Wiring Diagram:



Cases Show:

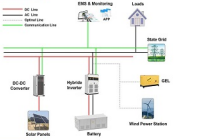
Large Micro-Grid System

50kw\100kw\150kw .....

Product Feature:

1 Compatible with most kinds of batteries.
2 Wide battery voltage range.
3 Support on-grid charge/discharge andoff-grid independently working.
4 Reactive power and active power can be adjusted.
5 Support black start , support multi - machine parallel function.
6 Flexible communication mode , receive BMS instructions in real time.
7 Small size, convenient for easy operation and maintenance.
8 Using high performance DSP, the system is more stable and effective.
9 Patent software control and detection algorithm ensure that the equipment fault can be found in time,and the
10 running status of the equipment is available via EMS.
11AC/DC double power supply backup to ensure control system is always power on.

Wiring Diagram:



Cases Show: