

太阳能民用新产品手册

Solar New Products Manual



低碳科技 点亮未来

Low Carbon Technology, Better future

Since 1978



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甘肃自然能源研究所
Gansu Natural Energy Research Institute



国际太阳能中心
International Solar Energy Center



太阳能行业权威, 引领创新发展
Solar energy industry authority, Guiding innovation and development

目录 Contents



01	关于我们 About us	03-04
02	高效太阳能组件(非标组件) High Efficient Solar Modules(Non standard)	05
03	高效太阳能组件(标准组件) High Efficient Solar Modules(Standard)	06-07
04	电控智能调光玻璃 Electronic Control Intelligent Dimming Glass	08-09
05	太阳能分布式电站 Distributed PV Power Station	10
06	高效太阳能灶 High Efficiency Solar Cooker	11
07	太阳能景观灯 Solar Landscape Light	12
08	太阳能一体化路灯 Solar Integrated Street Light	13-15
09	便携式太阳能一体化路灯 Portable Solar Street Light	16
10	高效太阳能移动电源 High Efficient Solar Power Bank	17
11	太阳能杀虫灯 Solar Killing Light	18
12	太阳能光伏水泵 Solar Water Pump	19
13	太阳能空调 Solar Air Conditioner	20
14	太阳能冰柜 Solar Freezer	20
15	太阳能采暖系统 Solar Heating System	21
16	部分工程实例 Partial Project Example	22



甘肃自然能源研究所/国际太阳能中心/亚太地区太阳能研究与培训中心,主要从事可再生能源特别是太阳能技术的研究与应用、国内外技术合作与培训、技术咨询与交流、新产品研发与测试、太阳能技术促进与转让等工作。在太阳能研究领域的综合实力处于国内领先地位,在国际上有着重要影响,是中国南南合作网的主要创始成员单位,并于2007年12月被国家科技部授予“国际科技合作基地”,现已成为联合国工业发展组织支持的国际性技术促进转让机构。

甘肃自然能源研究所成立于1978年,开办资金人民币1.23亿元。甘肃自然能源研究所成立40余年来,在太阳能应用技术方面取得了丰硕的成果。我所拥有中国首个运行40年以上的10千瓦光伏电站系统,并实施了国家863项目--0.5兆瓦荒漠化光伏电站的建设,为我国光伏发电行业积累了宝贵的光伏电站运行数据和运维经验。

近年来,甘肃自然能源研究所基于其在太阳能光电转换研究、光热转换研究以及太阳能应用技术研究等方面的深厚技术和经验积淀,通过整合太阳能民用产品领域上下游优势资源,融合全球最新太阳能应用技术,加强了光伏新能源应用产品的研制及产业化示范、太阳能建筑一体构件研制及太阳能绿色低碳建筑工业化示范、甘肃省新能源产品检测服务平台建设,以及新能源国际化工程技术人才培养等工作。

甘肃自然能源研究所将在“人人拥有太阳能”的目标下聚焦太阳能民用和个性化使用领域,重点开展了新型太阳能光伏应用产品(太阳能移动电源、太阳能一体化路灯、太阳能景观灯、太阳能水泵)和各种节能产品关键技术研发、核心工艺设计、制造和工艺优化,并投入1000万元用于土地厂房和相关实验室建设,以进行太阳能民用产品的产业化示范工作。同时,投入1500万元建设新能源产品检测服务平台,以服务我国西部地区和“一带一路”国家的阳光事业及新能源的推广应用。

Gansu Natural Energy Research Institute/International Solar Energy Center /Asia-Pacific Research and Training Center for Solar Energy attach to Academy of Sciences of Gansu, mainly engaged in renewable energy sources, especially research and application of solar energy technology, domestic and overseas technical cooperation and training, technology consulting and exchange, new product research, development and test, solar energy technology promotion and transfer etc. Comprehensive strength in research field of solar energy is in the leading position in domestic, and has great influence internationally. It is also the main originator member of the South-south Cooperation network in China. It was awarded “International Scientific and Technological Cooperation Base” in November of 2007 by Ministry of Science and Technology of People’s Republic of China and now it has been an international technology promotion transfer agency which subordinates to, meanwhile, it is also the sole partner cooperation research institute of United Nations University in Chinese Mainland.

Gansu Natural Energy Research Institute has acquired plentiful achievement since her more than 40 years establishment. The institute possesses the first 10 kilowatt photovoltaic power station which runs over 30 years, and presides to construct the first 40MW photovoltaic power station system in China, which accumulate valuable photovoltaic power station operating data and experience for our country’s photovoltaic power generation industry.

In recent years, Since Gansu Natural Energy Research Institute has thick and plentiful technology and experience in solar energy photovoltaic conversion study, photothermal conversion study, and solar energy applied technology research, it has enhanced the research of photovoltaic new energy applied product and its industrialization, the research of solar building integrating components and solar power energy low-carbon building industrialization, the establishment of Gansu energy product testing platform construction, and the innovative talents training of new energy international engineering technology etc, by integrating upstream and downstream superior resources of solar energy business products and amalgamating global newest solar power applied technology.

Gansu Natural Energy Research Institute embrace national “innovative and entrepreneurial” requirements and at present they emphatically carry out new type solar photovoltaic application product (Solar Power Bank, Solar Integrated Street Light , Solar Landscape Light, Solar water pump), key technology research and development, important process design, manufacture and process optimization, and they put 10 million RMB to the establishment of land, workshop and related laboratory so that it can conduct solar energy business products industrialization, meanwhile, put 15 million RMB to the new energy product testing platform construction to serve Gansu “photovoltaic poverty relief ”and energy industry.





产品特点/Features

SMD系列高效太阳能标准组件, 选用优质高效单晶硅太阳能电池片、钢化玻璃层压封装, 光电转换效率高; 先进的全自动激光切割和焊接生产线, 确保了产品的高可靠性和高稳定性, 保证产品坚固耐用, 使用寿命最高可达25年以上。产品广泛应用于光伏电站系统及民用太阳能发电。

SMD series high efficient solar standard modules, selection of high quality and high efficiency monocrystalline silicon solar cell, tempered glass laminate package, high efficiency of photoelectric conversion; advanced fully automatic laser cutting and welding line, ensure high reliability and high stability of the products, It's sturdy and durable products, the maximum service life can be over 25 years.the products are widely used in photovoltaic power plant system and civil solar power generation.

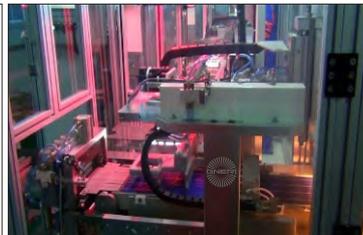
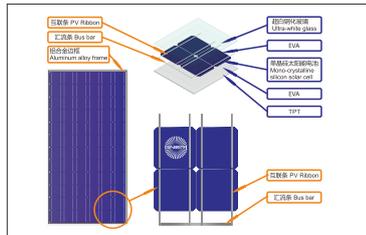
非标组件
Non Standard
Solar Module



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



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优质产品
GNERI High
Quality Products



产品参数/Spec.

产品型号 Product Model	输出功率 Maximum Output Power(Pm)	工作电压 Maximum Operating Voltage(Vmp)	工作电流 Maximum Operating Current(Imp)	开路电压 Open Circuit Voltage(Voc)	短路电流 Short Circuit Current(Isc)	最大系统电压 Max. System Voltage	组件效率 Average Power Efficiency	产品尺寸 Product Size	产品净重 Net Weight
SMD50	50W	18V	1.28A	21.6V	3.25A	1000V	17.5%	600×540×3.5mm	3.5kg
SMD100	100W	18V	5.56A	21.6V	6.5A	1000V	17.5%	1200×540×35mm	7.5kg
SMD170	170W	18V	9.45A	21.6V	10.5A	1000V	18.5%	1480×670×35mm	10.7kg
SMD260	260W	30V	8.67A	36.0V	9.5A	1000V	18.5%	1640×992×40mm	18.5kg
SMD300	300W	36V	8.33A	43.2V	9.0A	1000V	18.5%	1990×992×40mm	20.5kg

测试条件/Test Condition(STC): 1000W/m², AM1.5, 25°C, 执行标准/Executive Standard: GB/T18911-2002, IEC61646



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标准组件
Standard
Solar Module



半片
电池片技术
Half-cut
Solar Cell Tech.



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



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产品参数/Spec.

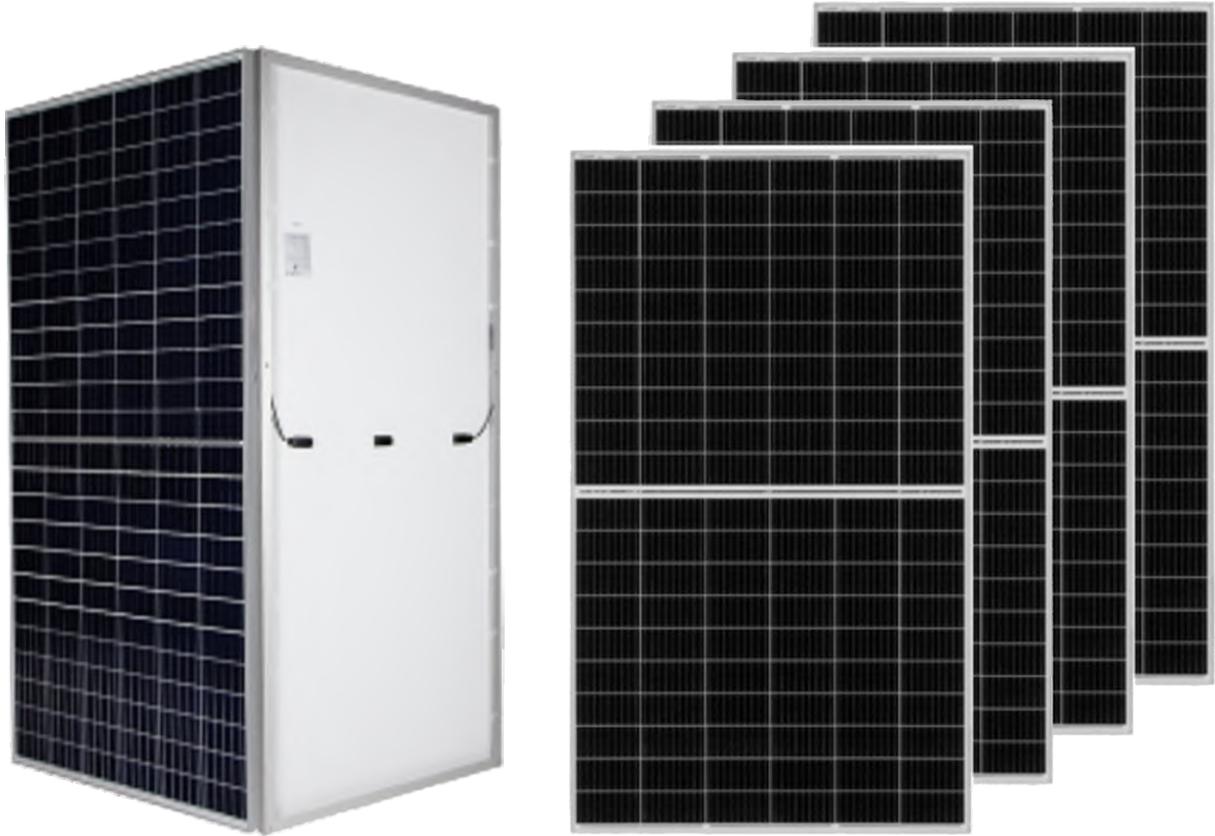
组件型号Module Type	SMD430	SMD435	SMD440	SMD445	SMD450	SMD455	SMD460
测试条件Test Condition	标准测试条件(STC): 1000W/m ² , AM1.5, 25°C, 执行标准/Executive Standard: GB/T18911-2002, IEC61646						
最大功率(Pmax/W)	430	435	440	445	450	455	460
开路电压(Voc/V)	48.5	48.7	48.9	49.1	49.3	49.5	49.7
短路电流(Isc/A)	11.31	11.39	11.46	11.53	11.60	11.66	11.73
峰值功率电压(Vmp/V)	40.7	40.9	41.1	41.3	41.5	41.7	41.9
峰值功率电流(Imp/A)	10.57	10.64	10.71	10.78	10.85	10.92	10.98
组件效率Module Efficiency(%)	19.8	20.0	20.2	20.5	20.7	20.9	21.2
组件规格Module Spec.	2094×1038×35mm, 23.3kg						



产品特点/Features

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标准组件
Standard
Solar Module



半片
电池片技术
Half-cut
Solar Cell Tech.



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



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产品参数/Spec.

组件型号Module Type	SMD530	SMD535	SMD540	SMD545	SMD550
测试条件Test Condition	标准测试条件(STC): 1000W/m ² , AM1.5, 25°C, 执行标准/Executive Standard: GB/T18911-2002, IEC61646				
最大功率(Pmax/W)	530	535	540	545	550
开路电压(Voc/V)	49.20	49.35	49.50	49.65	49.80
短路电流(Isc/A)	13.71	13.78	13.85	13.92	13.98
峰值功率电压(Vmp/V)	41.35	41.50	41.65	41.80	41.95
峰值功率电流(Imp/A)	12.82	12.90	12.97	13.04	13.12
组件效率Module Efficiency(%)	20.7	20.9	21.1	21.3	21.5
组件规格Module Spec.	2256×1133×35mm, 27.2kg				



什么是调光玻璃

What is The Dimming Glass

调光玻璃是一种将PDLC膜复合进两层玻璃中间,经高温高压胶合后一体成型的夹层结构的新型特种光电玻璃产品。使用者通过控制电流的通断与否控制玻璃的透明与不透明状态。玻璃本身不仅具有一切安全玻璃的特性,同时又具备控制玻璃透明与否的隐私保护功能;结合智能控制模块(如语音、手势、物联网远程网关控制等),可轻松实现智能控制。

Dimming glass is a new special photoelectric glass product with sandwich structure, which combines PDLC film into two layers of glass and is integrated after high temperature and high pressure gluing. The user controls the transparent and opaque state of the glass by controlling whether the current is on or off. The glass itself not only has the characteristics of all safety glasses, but also has the function of privacy protection to control whether the glass is transparent or not; Combined with intelligent control modules (such as voice, gesture, Internet of things remote gateway, etc.), intelligent control can be easily realized.



GNERI INTELLIGENT DIMMING GLASS

GNERI调光玻璃的应用场所非常广泛,覆盖行政办公、汽车制造、公共服务、商业娱乐、家居生活、广告传媒、展览展示、影像、公共安全等诸多领域。

GNERI Dimming glass is widely used in many fields, such as administrative office, public service, commercial entertainment, home life, advertising media, exhibition, image, public safety and so on.



全自动
智能控制
Smart
Auto-control



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优质产品
GNERI High
Quality Products



居家Home



产品特点/Features

- 1. 隐私保护功能:** 智能调光玻璃的最大功用是隐私保护功能,可以随时控制调光玻璃的透明不透明状态。
 Privacy protection function: the biggest function of intelligent dimming glass is privacy protection function, which can control the transparent and opaque state of dimming glass at any time.
- 2. 环保特性:** 调光玻璃中间的调光膜及胶片可以隔热、阻隔99%以上的紫外线及98%以上的红外线。屏蔽部分红外线减少热辐射及传递。而屏蔽紫外线,可保护室内的陈设不因紫外辐射而出现退色、老化等情况,保护人员不受紫外线直射而引起的疾病。
 Environmental protection characteristics: the dimming film and film in the middle of the dimming glass can insulate and block more than 99% ultraviolet and more than 98% infrared. Shield part of infrared ray to reduce heat radiation and transmission. Shielding ultraviolet rays can protect indoor furnishings from fading and aging due to ultraviolet radiation, and protect personnel from diseases caused by direct ultraviolet radiation.
- 3. 隔音特性:** 调光玻璃中间的调光膜及胶片有声音阻尼作用。可部分阻隔噪音。
 Sound insulation characteristics: the dimming film and film in the middle of the dimming glass have sound damping effect. Noise can be partially blocked.



GNERI调光玻璃应用在汽车天窗上



应用范围/Application

推荐应用于商场、银行、珠宝店及博物馆、展览馆办公区域、会议室、监控室的橱窗、办公区域、会议室、监控室隔断,住宅阳台飘窗,浴室、卫生间隔断等,正常应用时保持透明状态,改善空间布局,增加光亮调节自由度,为保持安全感,又可调节到不透明状态,保证不同区域的私密性。It is recommended to be used in shopping malls, banks, jewelry stores, museums, exhibition halls, office areas, meeting rooms, partitions of monitoring rooms, floating windows on residential balconies, partitions of bathrooms and toilets, etc. during normal application, it can be kept transparent, improve space layout, increase brightness and adjustment freedom. In order to maintain a sense of security, it can be adjusted to an opaque state, Ensure the privacy of different areas.

高强度PVE膜夹层安全玻璃



05

太阳能分布式电站

Distributed PV Power Station



并网式光伏电站系统/Grid-Connected PV power station supply system



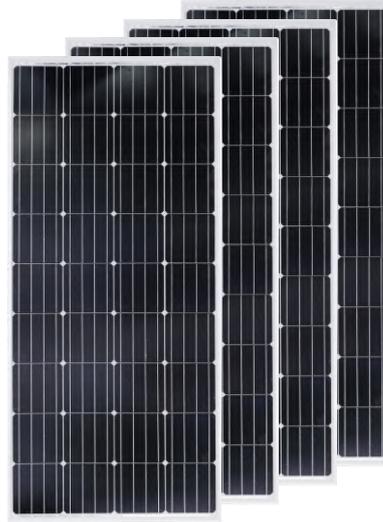
高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



全自动
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Auto-control



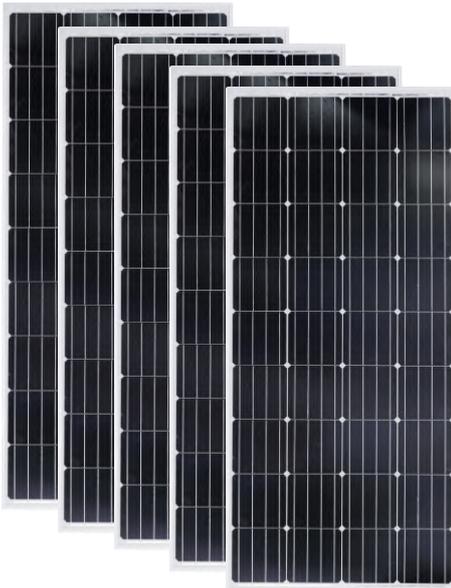
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产品参数/Spec.

产品型号 Product Model	额定功率 Nominal Power	工作电压 Operating Voltage(Vmp)	标准配置 Standard Edition Configuration(SEC)
GCP3000	3000W	220V/110V	组件Solar Module SMD30260*12pcs, 光伏逆变器PV Inverter*1pcs, 汇流箱Confluence box*1pcs, 安装配件Installation of accessories*1set
GCP6000	6000W	220V/110V	组件Solar Module SMD36300*20pcs, 光伏逆变器PV Inverter*1pcs, 汇流箱Confluence box*1pcs, 安装配件Installation of accessories*1set

离网式光伏电站系统/Off-grid PV power station supply system



磷酸铁锂电池储能系统
LFP Battery Energy Storage System



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



绿色节能
无市电安装
Green Energy
no Need
Extra Power



全自动
智能控制
Smart
Auto-control



高能量锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



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产品参数/Spec.

产品型号 Product Model	额定功率 Nominal Power	工作电压 Operating Voltage(Vmp)	标准配置 Standard Edition Configuration(SEC)
OGP3000	3000W	220V/110V	组件Solar Module SMD30260*12pcs, 光伏逆变器PV Inverter*1pcs, 汇流箱Confluence box*1pcs, 磷酸铁锂电池储能系统LFP Battery Energy storage system*1est (可选铅酸蓄电池Optional lead-acid cell), 安装配件Installation of accessories*1set
OGP6000	6000W	220V/110V	组件Solar Module SMD36300*20pcs, 光伏逆变器PV Inverter*1pcs, 汇流箱Confluence box*1pcs, 磷酸铁锂电池储能系统LFP Battery Energy storage system*1est (可选铅酸蓄电池Optional lead-acid cell), 安装配件Installation of accessories*1set

太阳能充电时间或LED照明时间是指在晴朗的夏季强烈阳光照射6-8小时后得出的数据, 测于甘肃兰州(北纬36°, 东经 103°40'), 实际使用中, 太阳能充电时间可能会因地域、季节、环境、太阳光照方向及光照强度等因素不同而有变化。
The working time data comes from the test in Lanzhou, Gansu (North latitude 36°, East longitude 103°40') under the condition of sunny summer day which the product charged 6-8 hours. The actual working time may differ due to the conditions of territory, season, sun light brightness & direct.



产品特点/Features

本太阳能灶反光板采用优质钢板冲压成型,反光板的反光面采用优质真空镀膜铝膜,确保产品的高效耐用;防锈防腐处理的优质钢材支架,结实耐用。可拆卸式设计;拆下时,包装体积小,方便运输及携带;安装简单,使用方便。

本产品只要放置在阳光充足的地方就可以烧水、做饭、炒菜,方便实用,一次投资终身收益。是太阳能在光热转换中的代表性产品。The reflective plate of this product is stamped with high-quality steel plate, and the reflective surface of the reflective plate is made of high-quality vacuum aluminium film, which ensures the high efficiency and durability of the product, and the high-quality steel bracket with rust-proof and anticorrosive treatment is strong and durable. Removable design. When disassembled, the packing volume is lower, which is convenient for transportation and carrying; the installation is simple and the use is convenient. The solar cooker can boil water, cook food and stir-fry vegetables as long as it is placed in a sunny place, which is convenient and practical, and has a lifelong investment income. It is the representative product of solar energy in photothermal conversion.



SC200



SC250

SC150



绿色节能
无市电安装
Green Energy
no Need
Extra Power



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Quality Products

注意:安装时,反光板的反光面一定要背对太阳光,以免烧伤人体或衣物。

Attention: When installing, the reflective surface of the reflective plate must be back to the sunlight so as to avoid burning the body or clothing.



产品参数/Spec.

产品型号 Product Model	功率 Power	光斑温度 Spot temperature	反光板规格 Reflector spec.	操作高度 Operating altitude	截光面积 Effective Light Section	焦距 Focal Length	包装尺寸 Packing Size	含包装重量 Gross Weight
SC150	1500W	约about 800°C	0.5mm ×Φ1500mm	1000mm	约about 1.8m ²	600mm	110mm×710mm ×810mm	约 about 16.8kg
SC 200	2000W	约about 1000°C	0.7mm×1250mm ×1800mm	1100mm	约about 2.3m ²	750mm	120mm×700mm ×700mm	约 about 22.8kg
SC 250	2500W	约about 1000°C	0.7mm×1800mm ×1800mm	1200mm	约about 3.5m ²	750mm	130mm×700mm ×700mm	约 about 28.8kg

最大仰角:90°,最小俯角:30°,能360°旋转,手动调节式,操作简单,调节稳定。

Maximum elevation angle: 90°, Minimum elevation angle: 30°, Can rotate 360°, Manual adjustment, Simple operation, Stable regulation.



产品特点/Features

SL系列太阳能景观灯采用优质太阳能光伏板,产品设计新颖,外观精美。产品采用太阳能直接充电、内置电池储能,无需外接电源;长寿命,高可靠性的自动控制电路,智能识别、全自动切换充电及照明模式。IP65防水等级,无需另外安装防水装置;七彩变幻的LED光源,营造震撼视觉效果。

本产品安装简易、后期维护成本低,是市政公园、广场、家庭庭院等户外休闲场地的理想景观灯具,是太阳能在民用景观照明领域的代表性产品。

SL series solar landscape light is a new design with define shape which adopts high quality solar photovoltaic panel. the product is charged buy sun light and have built-in battery to storage the energy, no extra power is needed; Long life, stable and high efficient control circuit, smartly and automatic switch the charging and lighting model. IP65 water-proof, no extra water-proof fix. Colorful LED source create fantastic vision. The product is easy to install and maintain. It is a ideal and popular solar product which used in family guard, public park, plaza ect.



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



绿色节能
无市电安装
Green Energy
no Need
Extra Power



全自动
智能控制
Smart
Auto-control



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优质产品
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Quality Products

产品参数/Spec.

产品型号 Product Model	太阳能板功率 Solar Panel Power	LED光源 LED source	电池组 Battery Pack	照明时间 Lighting Time	控制器 Controller	转换效率 Solar Panel Efficiency	产品尺寸 Product Size	产品净重 Net Weight
SL160	6V/1.5W	3.6V/0.6W	3.6V/2000mAh /7.2Wh	每晚工作9小时, 阴雨天工作3-4天 9 hours/ night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	15.5%	Φ200mm×110mm	约 about 1.5kg
SL 200	6V/2.0W	3.6V/1.0W	3.6V/2600mAh /9.36Wh	每晚工作9小时, 阴雨天工作3-4天 9 hours/ night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	15.5%	300×100×80mm	约 about 2.0kg
SL 260	6V/3.0W	3.6V/1.6W	3.6V/4000mAh /14.4Wh	每晚工作9小时, 阴雨天工作3-4天 9 hours/ night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	15.5%	300×180×80mm	约 about 2.5kg





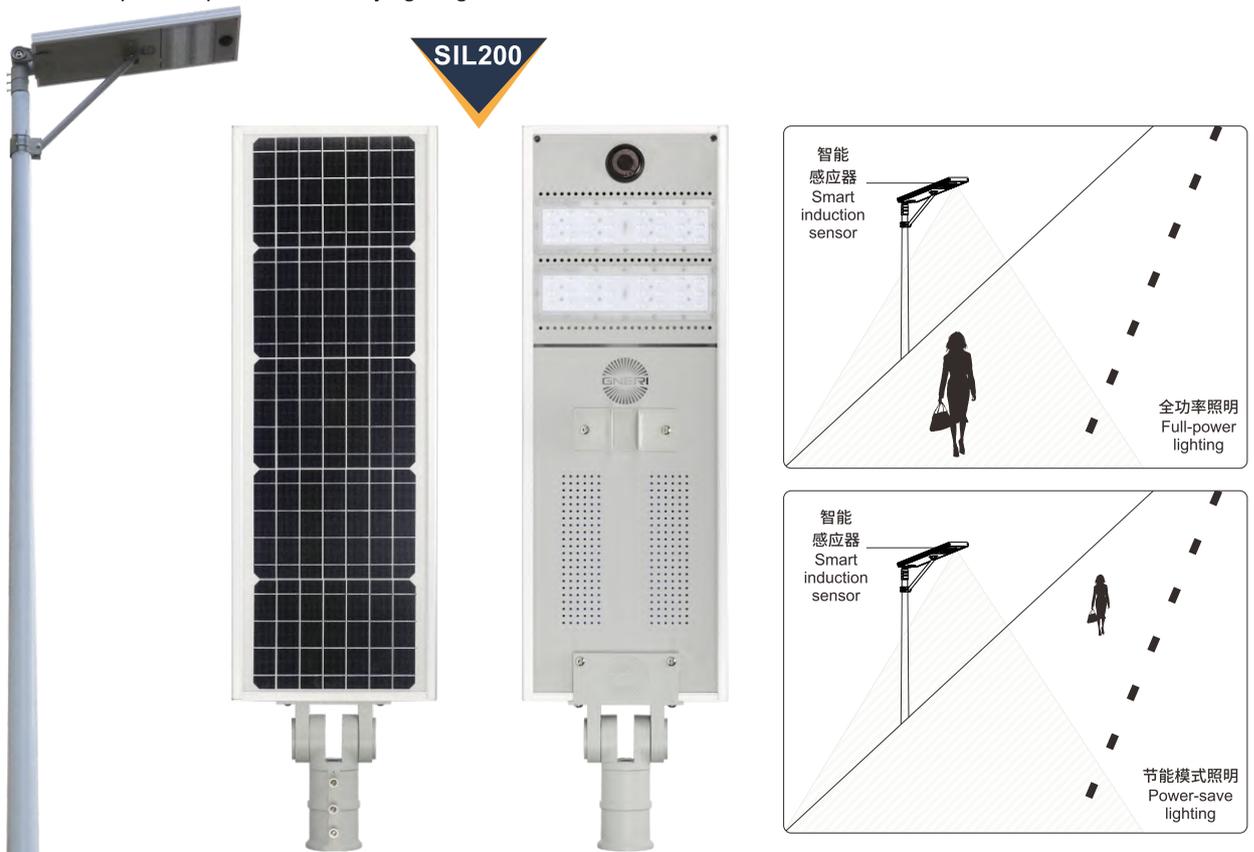
产品特点/Features

SIL系列太阳能一体化路灯采用高效太阳能光伏板,产品设计简洁,外观流畅精致。产品采用高功率单晶太阳能板充电,转换效率高。长寿命,高可靠性的控制电路,集光电子控制、光感应、时控、能量管理+防雷、红外及微波感应于一身,智能识别、全自动控制,绿色环保。产品无需外接电源,内置超大容量磷酸铁锂电池储能,满充电后,满足8-9小时以上照明,安全稳定。IP65防水等级,无需额外加装防水装置。全铝合金外壳,轻巧坚固,散热性能好,安装电杆可就地使用原有电杆,方便实用。

本产品安装简易,无需外接市电,使用时间长,使用成本极低,后期基本无维护,是替代现有街道及公路传统路灯、家庭传统路灯的理想选择,是太阳能在市政路灯及家庭路灯照明领域的明星高科技产品。

SIL series Integrated solar street light is green product designed with compact and refine shape which adopts high quality high efficient mono-crystalline solar photovoltaic panel to charge and long life, stable control circuit. The product integrates a lot of functions such as electronic switch control, light induction, time control, energy management, IR induction, smart identify, automatic adjust. with built-in battery pack which can provide more than 9 hours lighting after fully charged. IP65 water-proof, no extra water-proof fix. metal aluminum shell is light to move and provide good heat emission. Colorful LED source create fantastic vision.

The product can installed on the normal street lamp post. the product is easy to install and maintain, no need to connect extra power. It is a ideal and popular solar product which used in family guard, public park, plaza ect. It is a good solution to replace traditional lamp in the public and family lighting.



太阳能科技, 锂电新能源, LED照明科技的创新完美结合
Perfect combination of solar technology, New lithium energy, LED lighting science and technology innovation.



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



绿色节能
无市电安装
Green Energy
No Need
Extra Power



全自动
智能控制
Smart
Auto-control



高亮度
LED光源
High Bright
LED Source



高能量锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



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Quality Products

标准包装
Standard Packing





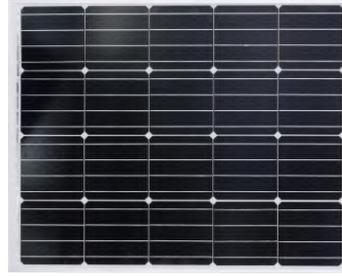
产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	LED光源 LED source	磷酸铁锂电池组 LFP Battery Pack	照明时间 Lighting Time	控制器 Controller	主灯尺寸 Main Light Size	主灯净重 Main Light Weight
SIL100	18V/18W	10W	12.8V/9.6Ah/123Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	46×245×590mm	约 about 6.3kg
SIL200	18V/32W	20W	12.8V/19.2Ah/246Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	46×295×830mm	约 about 11kg
SIL300	18V/55W	30W	12.8V/35.2Ah/451Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	46×380×1010mm	约 about 16kg
SIL400	18V/80W	40W	12.8V/51.2Ah/655Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	46×460×1150mm	约 about 21.5kg

太阳能充电时间或LED照明时间是指在晴朗的夏季强烈阳光照射6-8小时后得出的数据, 测于甘肃兰州(北纬36°, 东经 103°40'), 实际使用中, 太阳能充电时间可能会因地域、季节、环境、太阳光照方向及光照强度等因素不同而有变化。
The working time data comes from the test in Lanzhou, Gansu (North latitude 36°, East longitude 103°40') under the condition of sunny summer day which the product charged 6-8 hours. The actual working time may differ due to the conditions of territory, season, sun light brightness & direct.



SIL200S



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



绿色节能
无市电安装
Green Energy
no Need
Extra Power



全自动
智能控制
Smart
Auto-control



高亮度
LED光源
High Bright
LED Source



高容量锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



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产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	LED光源 LED source	磷酸铁锂电池组 LFP Battery Pack	照明时间 Lighting Time	控制器 Controller	主灯净重 Main Light Weight
SIL200S	18V/55W	20W	12.8V/19.2Ah/246Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 12kg
SIL350S	18V/70W	35W	12.8V/35.2Ah/451Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 16kg
SIL450S	18V/80W	45W	12.8V/51.2Ah/655Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 21kg
SIL600S	18V/120W	60W	12.8V/54.4Ah/696Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 23kg

SIL200SE



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



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Smart
Auto-control



高亮度
LED光源
High Bright
LED Source



高容量锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



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产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	LED光源 LED source	磷酸铁锂电池组 LFP Battery Pack	照明时间 Lighting Time	控制器 Controller	主灯净重 Main Light Weight
SIL200SE	18V/55W	20W	12.8V/19.2Ah/246Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 12kg
SIL350SE	18V/70W	35W	12.8V/35.2Ah/451Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 16kg
SIL450SE	18V/80W	45W	12.8V/51.2Ah/655Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 21kg
SIL600SE	18V/120W	60W	12.8V/54.4Ah/696Wh	每晚工作8-9小时, 阴雨天工作3-4天 8-9 hours/night, last 3-4 days in cloudy or rainy days	智能控制器 Smart controller	约 about 23kg

09

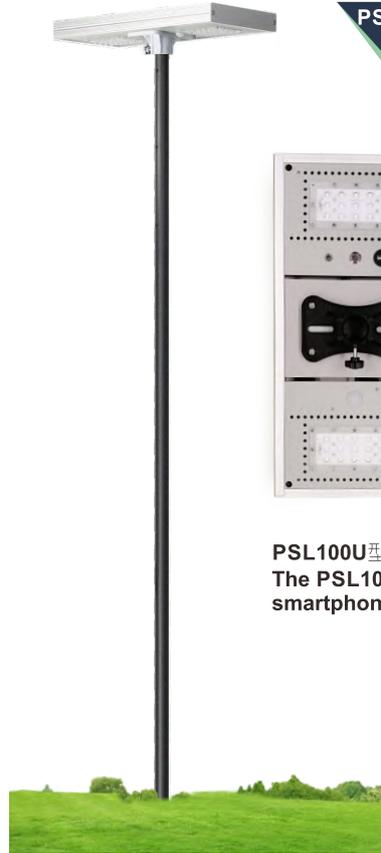
便携式太阳能一体化路灯
Portable Solar Street Light



PSL100



PSL100U



PSL100U型号产品提供手机充电功能。
The PSL100U Provide charging your smartphone.



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Solar Panel



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高亮度
LED光源
High Bright
LED Source



高能量锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



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专为草原牧民而开发 Developed for grassland herders



产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	LED光源 LED source	锂电池组 Li-ion Battery Pack	工作时间 Working Time	控制器 Controller	主灯尺寸 Main Light Size	主灯净重 Main Light Weight
PSL100	16W	10W	7.4V/10Ah /74Wh	每晚照明6-7小时 Lighting 6-7 hours/night	智能控制器 Smart controller	46×245×519mm	约 about 5.2kg
PSL100U	16W	10W	7.4V/13Ah /96.2Wh	每晚照明5-6小时, 提供手机充电功能 Lighting 5-6 hours/night, Provide charging your smartphone	智能控制器 Smart controller	46×245×560mm	约 about 6.5kg

太阳能充电时间或LED照明时间是指在晴朗的夏季强烈阳光照射6-8小时后得出的数据, 测于甘肃兰州(北纬36°, 东经 103°40'), 实际使用中, 太阳能充电时间可能会因地域、季节、环境、太阳光照方向及光照强度等因素不同而有变化。
The working time data comes from the test in Lanzhou, Gansu (North latitude 36°, East longitude 103°40') under the condition of sunny summer day which the product charged 6-8 hours. The actual working time may differ due to the conditions of territory, season, sun light brightness & direct.



产品特点/Features

SPB系列太阳能移动电源采用高效单晶太阳能光伏板,超薄折叠设计,外观简洁精致。产品采用10-20W高功率太阳能板充电,转换效率高,充电速度快,亦可选USB充电器充电,方便实用。折叠式设计,打开时可充分利用太阳能,可放置草坪或系于背包后,折叠后,体积小,携带方便。长寿命,高可靠性的控制电路,双USB 5V/2.1A输出,给智能设备充电更快。内置安全性能最佳的锂聚合物电池储能,6000-12000mAh超大容量,轻便小巧。采用防水布外被,标配精致小巧USB灯提供户外照明。

SPB系列太阳能移动电源是户外旅行、登山、徒步和露营的理想户外太阳能电源设备。是太阳能在民用消费电子领域的明星产品。

SPB series solar power bank is compact but refine with foldable structure. The product use 10-20W high efficient solar panel to charge which can be fully charged in short time. USB charging is option too. Due to the compact and foldable design, it is easy to carry and use anywhere such as put on the grass ground, hanging on your rucksack. The product has the features: long-life, and stable control circuit; Dual USB 5V/2.1A output, more fast to charge your device; with built-in 6000-12000mAh li-polymer battery, compact but powerful, easy to carry; with water-proof cloth for water-proof. The product kit includes a small USB light. It can be widely used in your outdoor travel, mountain-climbing, camping. Take a SPB Series solar power bank, enjoy you outdoor life.



太阳能极速充电,完美用户体验
Solar fast charging,
Users perfect experience.



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



高能锂
电池储能
High Capacity
Li-ion Battery for
Energy Storage



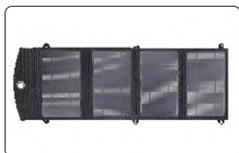
户外运动
太阳能产品
Outdoor
Solar Products



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优质产品
GNERI High
Quality Products

产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	锂聚合物电池组 Li-Polymer Battery Pack	额定输入 Rated Input	输入满充电时间 Charging Time	额定输出 Rated Output	产品尺寸(展开) Product Size(open)	产品尺寸(折叠) Product Size(fold)	产品净重 Net Weight
SPB60	5.5V/10W	3.7V/6000mAh /22.2Wh	Micro USB 5V/2A, Solar 5.5V/1.8A-Max	Micro USB 约3.5h, Solar约about 4h(强烈阳光直射 strong Direct sunlight)	双USB 5V/2.1A+2.1A (Total 5V/4.2A)	11.8×246×386mm	21×160×246mm	约 about 620g
SPB80	5.5V/15W	3.7V/8000mAh /29.6Wh	Micro USB 5V/2A, Solar 5.5V/2.7A-Max	Micro USB 约4.5h, Solar约about 3.2h(强烈阳光直射 strong Direct sunlight)	双USB 5V/2.1A+2.1A (Total 5V/4.2A)	11.8×246×553mm	26×160×246mm	约 about 790g
SPB100	5.5V/20W	3.7V/10000mAh /37.0Wh	Micro USB 5V/2A, Solar 5.5V/3.6A-Max	Micro USB 约5.5h, Solar约about 3.2h(强烈阳光直射 strong Direct sunlight)	双USB 5V/2.1A+2.1A (Total 5V/4.2A)	11.8×246×723mm	31×160×246mm	约 about 950g
SPB120	5.5V/20W	3.7V/12000mAh /44.4Wh	Micro USB 5V/2A, Solar 5.5V/3.6A-Max	Micro USB 约6.5h, Solar约about 3.5h(强烈阳光直射 strong Direct sunlight)	双USB 5V/2.1A+2.1A (Total 5V/4.2A)	11.8×246×723mm	31×160×246mm	约 about 980g



SPB60/6000mAh



SPB80/8000mAh



SPB100/10000mAh



SPB120/12000mAh

11

太阳能电击杀虫灯 Solar Killing Light



太阳能绿色杀虫, 环保无污染
Solar green killing pests,
Environmental protection
without pollution.

产品特点/Features

太阳能杀虫, 更低使用成本; 产品采用不锈钢外框, 经久耐用; 高达4000V电击网电压, 瞬间杀死害虫, 环保无污染; 垂直设计的电击网, 方便清理杀死的害虫, 一次安装, 省心省力。

Use solar energy to kill pest, lower cost; The products are made of stainless steel frame, durable and durable; Up to 4000V electric net voltage, instantly kill pest, environmental pollution free; Vertical design of the electric shock network, convenient to clean up the killing of pests, once installed, save effort and effort .

SKL100



SKL150



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



绿色节能
无市电安装
Green Energy
no Need
Extra Power



全自动
智能控制
Smart
Auto-control



GNERI
优质产品
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Quality Products

产品参数/Spec.

产品型号 Product Model	单晶太阳能板 Mono-crystalline Solar Panel	电池组 Battery Pack	控制器 Controller	光源 Light Source	工作时间 Working Time	杀虫面积 Effective Area	主机尺寸 Products Size
SKL100	18V/40W	12V/40Ah	智能控制器, 下雨时自动关闭灯具 Smart controller, automatically close the light and lanterns when it rains	10W 紫光诱捕灯 Purple trap fluorescent tube	每晚工作7-8小时 7-8 hours/night	15,000 ~20,000m ²	238×238 ×800mm
SKL150	18V/60W	12V/60Ah	智能控制器, 下雨时自动关闭灯具 Smart controller, automatically close the light and lanterns when it rains	15W 紫光诱捕灯 Purple trap fluorescent tube	每晚工作7-8小时 7-8 hours/night	20,000 ~30,000m ²	348×348 ×1000mm

太阳能充电时间或LED照明时间是指在晴朗的夏季强烈阳光照射6-8小时后得出的数据, 测于甘肃兰州(北纬36°, 东经 103°40'), 实际使用中, 太阳能充电时间可能会因地域、季节、环境、太阳光照方向及光照强度等因素不同而有变化。
The working time data comes from the test in Lanzhou, Gansu (North latitude 36°, East longitude 103°40') under the condition of sunny summer day which the product charged 6-8 hours. The actual working time may differ due to the conditions of territory, season, sun light brightness & direct.



产品特点/Features

有阳光就工作,无需市电和蓄电池;阳光充足时,太阳能组件产生电能驱动水泵,水泵从地下抽水到水箱或直接灌溉农田;本产品广泛应用于农业、城市绿化等。

While there is sunshine, the solar module produce electricity to drive the pump, water is pumped from underground to water tank or to irrigate farmland directly; high efficiency solar water pump technical specs, applicable to agriculture, urban greening and so on.



分体式永磁太阳能水泵
Separate Permanent magnet
Solar Water Pump



产品参数/Spec.

产品型号 Product model	泵功率 Pump power	泵类型 Pump type	工作电压 Working voltage	最大出水量 Water flow	扬程 Lift	出水口 Outlet	泵尺寸 Pump size	太阳能板功率 Solar panel power	太阳能板连接方式 Solar panel power connect
SWP75	750W	永磁螺杆泵 Permanent magnetism Screw pump	AC110V/DC150V	3.8m³/hrs	50m	Φ25mm	Φ76*600mm	30V/250W*5pcs	5串1并5S1P
SWP150	1500W		AC220V/DC300V	3.4m³/hrs	160m	Φ32mm	Φ100*825mm	36V/300W*8pcs	8串1并8S1P
SWP300	3000W		AC380V/DC540V	6.8m³/hrs	160m	Φ32mm	Φ100*800mm	30V/250W*18pcs	18串1并18S1P



高效单晶
太阳能板
High Efficient
Monocrystal
Solar Panel



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全自动
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Auto-control



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Quality Products

宽幅工作电压,稳定高效。

Wide working voltage, stable and efficient.

水泵内置MPPT控制器,水泵可直接连接

太阳能板,简单方便。MPPT controller is installed inside the pump, and the pump can directly connect to the solar panel, which is simple and convenient.

高低电压自动保护,安全实用。

High and low voltage automatic protection, safe and practical.

一体式太阳能水泵
Integrated style
Solar Water Pump



13

太阳能空调 Solar Air Conditioner



产品特点/Features

更低运行成本,有阳光就工作,晚上兼容市电无缝切换;先进的进口直流变频压缩机,稳定可靠;使用环保制冷剂,适用宽泛电压段,更稳定运行在16°C~31°C之间。

No need any electricity if in sunshine day and can automatic switch to AC power at night, also can provide the power to grid electricity, save the cost every time; High quality, advanced all import DC inverter compressor; Frequency 50/60hz, refrigerant R410a/R22, Voltage 10-30V;DC inverter solar air conditioner can run smoothly at 16°C~31°C.



产品参数/Spec.

产品型号 Product Model	额定功率 Nominal Power	适用面积 Suitable Area	标准配置 Standard Edition Configuration(SEC)
SAC260-1HP	2600W	10-15㎡	太阳能空调主机Solar Air Conditioner*1set, 组件Solar Module SMD30260*3pcs(Total:30V/780W), 控制器Controller *1pcs, 电池储能系统Battery Energy storage system*1set, 安装配件Installation of accessories*1set
SAC350-1.5HP	3500W	12-25㎡	太阳能空调主机Solar Air Conditioner*1set, 组件Solar Module SMD30260*4pcs(Total:30V/1000W), 控制器Controller *1pcs, 电池储能系统Battery Energy storage system*1set, 安装配件Installation of accessories*1set
SAC520-2HP	5200W	20-35㎡	太阳能空调主机Solar Air Conditioner*1set, 组件Solar Module SMD30260*5pcs(Total:30V/1200W), 控制器Controller *1pcs, 电池储能系统Battery Energy storage system*1set, 安装配件Installation of accessories*1set
SAC720-3HP	7200W	25-45㎡	太阳能空调主机Solar Air Conditioner*1set, 组件Solar Module SMD30260*6pcs(Total:30V/1400W), 控制器Controller *1pcs, 电池储能系统Battery Energy storage system*1set, 安装配件Installation of accessories*1set

14

太阳能冰柜 Solar Freezer



产品特点/Features

更低运行成本,有阳光就工作;晚上兼容市电无缝切换;先进的进口直流变频压缩机,稳定可靠;使用环保制冷剂,适用宽泛电压段,更稳定运行在6°C~-24°C之间。

No need any electricity if in sunshine day and can automatic switch to AC power at night, also can provide the power to grid electricity, save the cost every time; High quality, advanced all import DC inverter compressor; Frequency 50/60hz, refrigerant R410a/R22, Voltage 10-30V;DC inverter solar air conditioner can run smoothly at 6°C~-24°C.

产品参数/Spec.

产品型号 Product Model	额定功率 Nominal Power	有效容积 Effective Volume	储藏温度 Storage Temperature	产品尺寸 Product Size
SF 100	800W	100L	-24°C~6°C	720×1000 ×793mm
SF 150	1500W	328L	-24°C~6°C	890×2005 ×1009mm
SF 200	2000W	538L	-24°C~6°C	940×840 ×1999mm
标准配置 Standard Edition Configuration (SEC)	太阳能冰柜主机Solar Freezer*1set, 组件Solar Module SMD30260*3pcs(Total:30V/780W), 控制器Controller *1pcs, 电池储能系统Battery Energy storage system*1set, 安装配件Installation of accessories*1set			

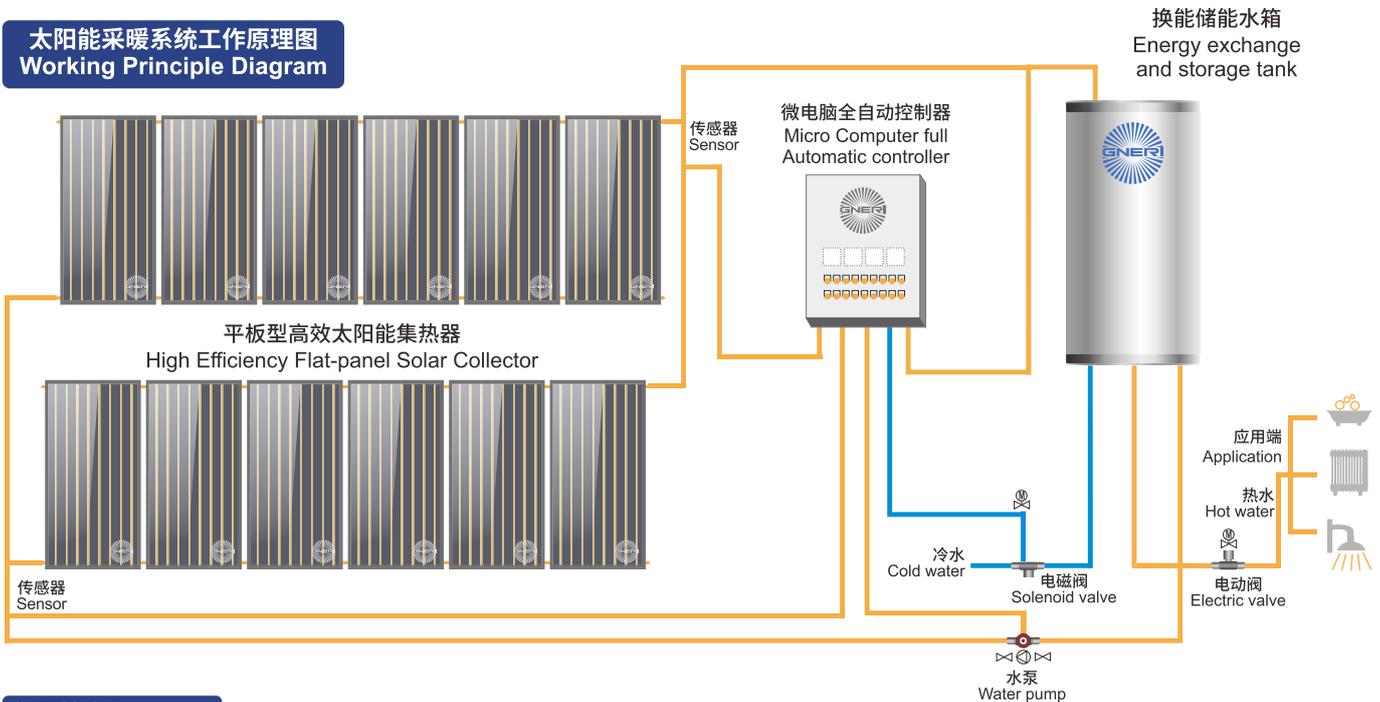


太阳能充电时间或LED照明时间是指在晴朗的夏季强烈阳光照射6-8小时后得出的数据,测于甘肃兰州(北纬36°,东经 103°40'),实际使用中,太阳能充电时间可能会因地域、季节、环境、太阳光照方向及光照强度等因素不同而有变化。The working time data comes from the test in Lanzhou, Gansu(North latitude 36°, East longitude 103°40') under the condition of sunny summer day which the product charged 6-8 hours. The actual working time may differ due to the conditions of territory, season, sun light brightness&direct.



太阳能采暖系统工作原理图

Working Principle Diagram



产品特点/Features

采用进口吸热板芯,集热效率高;承压式设计,安全可靠;全自动控制,使用更方便舒适;防冻设计,零下40度环境温度正常使用;分体安装,水箱位置任意摆放;其中太阳能集中供热系统,广泛应用于农业、工厂、公寓、医院等场所。

Imported heat absorbing plate core, high heat collecting efficiency; Pressure design, safe and reliable; Full automatic control, More convenient and comfortable; Antifreeze design, normal use of -40°C; Separate installation, the location of the water tank will be arranged at any time; The solar central heating system is widely used in agriculture, factories, apartments, hospitals and other places.



高效
太阳产品
High Efficient
Solar Products



全自动
智能控制
Smart
Auto-control



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优质产品
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Quality Products

产品参数/Spec.

产品型号 Product Model	水箱容量 Capacity of Water Tank	太阳能集 热器面积 Solar collector	适用人数 Applicable number
SH 15	150L	2m ²	2-3人people
SH 20	200L	4m ²	4-5人people
SH 30	300L	4m ²	5-6人people
SH 40	400L	6m ²	7-8人people
SH 50	500L	8m ²	9-10人people
SH 100	1000L	16m ²	18-20人people
SH 800	8000L	120m ²	120-160人people
SH 2000	20000L	300m ²	350-400人people
SH 3000	30000L	450m ²	500-600人people
SH 5000	50000L	750m ²	800-1000人people





甘肃礼县Gansu Li county



巴基斯坦Pskistan

甘肃兰州Gansu Lanzhou



甘肃康乐Gansu Kangle



兰州新区Lanzhou New Area



尼泊尔Nepal

甘肃临夏Gansu Linxia



甘肃文县Gansu Wen county



湖南益阳Hunan Yiyang



宁夏中卫Ningxia Zhongwei



斯里兰卡Sri Lanka



承接太阳恩泽, 创享绿色能源
Embrace the grace of sun light, Create and enjoy green energy



甘肃自然能源研究所太阳能民用产品开发部
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