



# INTRODUCTION OF HIMIN SOLAR GROUP



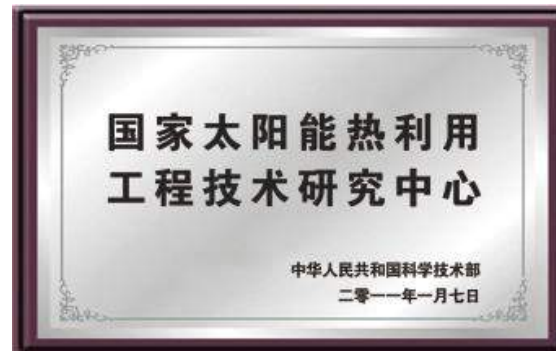


## **Sun-Moon Mansion--Head office of Himin solar group**

- As the leader in China for solar industry, Himin established in 1995 with more than 3000 employees. it insists on the mission of “for the blue sky of our Children, realize micro-emission earth” and always focuses on solutions for global energy substitution.
- Himin own 3 million square meters industry park-China solar valley. In which has built the first, most advanced and full automatic solar energy vacuum tube line with fully independent innovation in the world, the most advanced production line for solar water heater, solar collector, coated steel tube, solar panel, solar lighting and solar cooker etc.
- Himin's products have been exported to more than 100 countries including Germany, Austria, Italy, England, Sausi Arabia etc. and it will never stop pushing forward environment protection for huamn beings in the worldwide.

## Research and development--Himin has strong scientific research strength

- High-tech company identified by the Chinese government
- National intellectual property pilot enterprise
- Accredited laboratory of the CNAS
- China's Construction of Science and Technology Independent Innovation advantage Enterprises approved by the Ministry of Construction
- China National Solar Heat Utilization Engineering Technology Research Centre



**营业执照**  
(副本)

统一社会信用代码 913700001672794614 10-1

名称 皇明太阳能股份有限公司  
类型 股份有限公司(中外合资、未上市)  
住所 德州经济开发区太阳谷大道  
法定代表人 黄鸣  
注册资本 人民币 伍亿元整  
成立日期 1996年07月19日  
营业期限 1996年07月19日至 年 月 日  
经营范围 太阳能热水器等太阳能热利用产品、太阳能电池片及组件、光伏发电并销售与安装、热泵热水器(机)、净水器(机)、太阳能空调、采暖系统、太阳能干燥装置的研究、制造及技术服务;热泵冷热设备及相关设备、工程、维护服务;机电设备安装工程(凭相关资质在有效期内经营,不含特种设备安装);钢结构制作加工、钢结构安装;自产产品的销售及售后服务;太阳能零配件批发;自用、自产产品和技术的进出口贸易(依法须经批准的项目,经相关部门批准后方可开展经营活动,有效期至许可证证为准)。

登记机关  
2016年 05月 05日

提示:1.每年1月1日至6月30日通过企业信用信息公示系统报送并公示上一年度年度报告,不另行通知;  
2.《企业信息公示暂行条例》第十条规定的企业有关信息形成后20个工作日内需要向社会公示(个体工商户、农民专业合作社除外)。

- Himin Solar Co., Ltd
- Registered capital: RMB 500,000,000
- Date of establishment: 1996
- Mainly business: Solar thermal business, including solar water heater, solar hot water boiler system, solar collectors, solar vacuum tubes, CSP and solar oven

# Mainly companies of Himin Solar Group



- Himin Clean Energy Holdings Co., Ltd
- Registered capital: RMB 100,000,000
- Date of establishment: 1998
- Mainly business: Solar PV business, including solar panel, solar power system, solar lighting, solar lantern and solar gift



- Himin international business Co., Ltd
- Registered capital: RMB 50,000,000
- Date of establishment: 2014
- Mainly business: Importing and exporting business

## Himin Has independent intellectual property system

Himin has 217 units of valid patents, and the patent conversion rate is more than 90%

Category	Number
patent of invention	25
utility model	107
appearance design	85
In total	217

# Strong production capacity

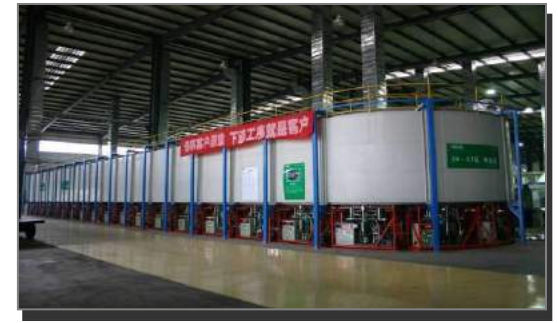
- Solar vacuum tubes: 100,000units per day
- Solar water heater: 10,000 units per day
- Solar panels: 1500units per day
- Solar light: 500units per day
- Solar cooker: 500units per day



Full-automatic vacuum tube coating line



Vacuum tube coating control center



Fully automatic vacuum line



Automatic welding line



Automatic foaming wire



Automatic packing line



Automatic solid warehouse



# Perfect technological innovation system

—With a whole set of innovation chain from core technology development to marketization

Himin Marketing department

Himin Engineering department

Industrialization and market application

Himin Engineering Technology Research Center

Himin energy-saving building design institute

Himin-Glenford Joint Laboratory

Engineering technology development  
( Building Energy supply, Solar Thermal Power Generation Mirror Field Design, etc. )

Himin Technology Development Department

Key process equipment and automation

Himin Central Research Institute of Solar Energy

Institute of Electrical Engineering, Chinese Academy of Sciences

Shanghai Energy Storage Research Division

Core technology development  
(high efficiency heat collection, energy storage, solar thermal power generation technology, etc.)

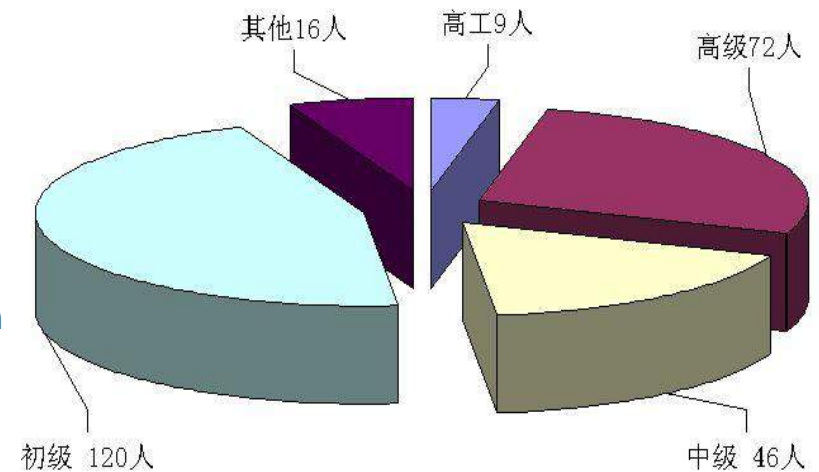
# Himin has the first-class technology R & D team in China

## High-quality R & D team (263 in total)

### Qualifications of full-time R & D personnel

Professor /researcher /Professorial Senior engineer	9person
Senior engineer	55 person
Post-doctoral	2 Person
Doctor	15 Person
Master	45 Person
One Hundred Person Project of the Chinese	1 Person
R & D personnel	136 Person

### Professional title grade of full-time R & D personnel 专职研发人员职称结构图



# Himin Test center--Leading Technology Assure the quality of products

## Test Control Test Tightening to Reassure Consumers



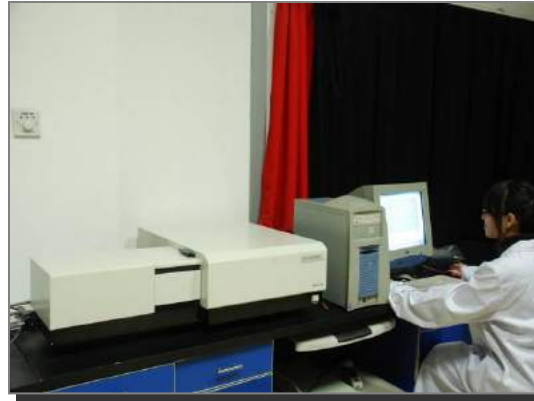
# New Testing Center



# Advanced and complete development equipment



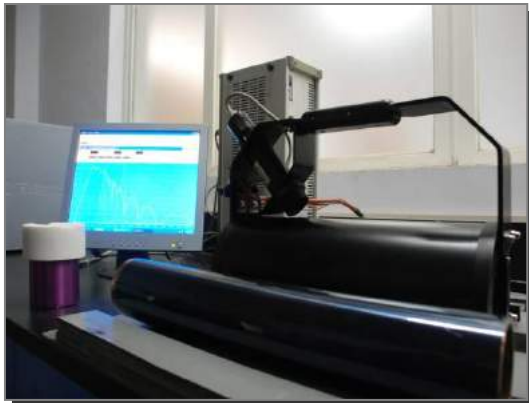
**Three-dimensional optical test bench**



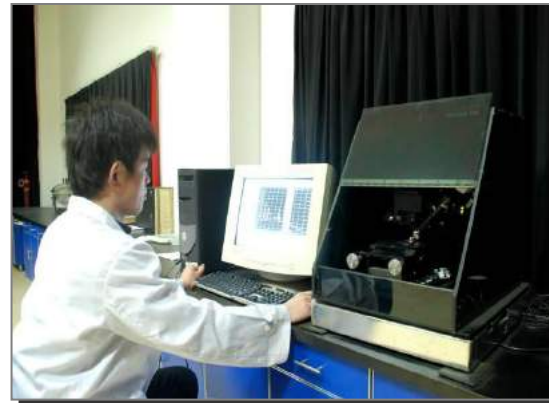
**Ultraviolet-visible-near infrared spectrophotometer**



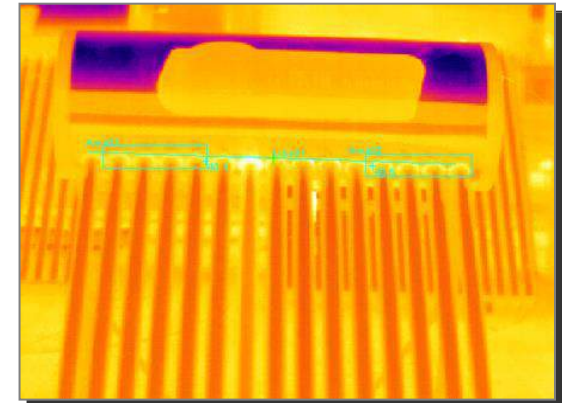
**infrared spectrophotometer**



**Rapid measuring instrument**



**film thickness gauge**



**infrared imager**

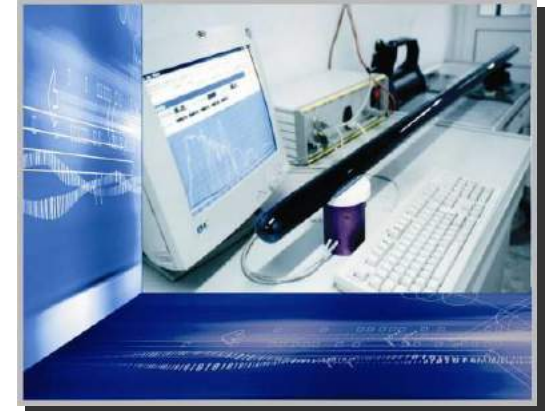
# Complete test conditions for comprehensive engineering technology



**Thermal performance test platform**



**Full spectrum direct-reading plasma emission spectrometer**



**On-line rapid measuring instrument**



**Material weathering laboratory**



**Chemical laboratory of solar material**



**Valve laboratory**

# Himin Culture

## FVVM

- **Faith: Appreciate the nature and revere the truth**
- **Vision: Devote far ahead in global micro emission**
- **Value: Focus on sustainability**
- **Mission: For the blue sky of our children, realize micro emission earth**

## Successful hosting of the fourth World Sun City Congress

More than 5000 experts, officials and entrepreneurs from more than 50 countries and regions gathered in Dezhou to discuss new energy development plans





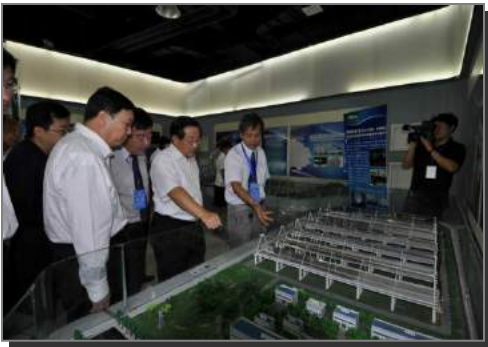
# The concern and support of the Chinese Government



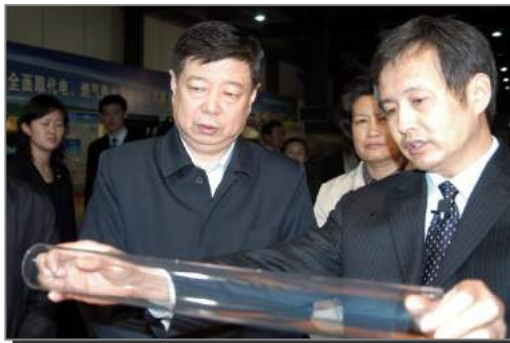
**Former Chinese Chairman Hu Jintao visits Model of Badaling Solar Thermal Power Station (2009.3.20)**



**Chinese chairman Xi Jinping visits the Badaling Solar Thermal Power Station Model (2010.9.18)**



**Minister Wan Gang visited Himin to guide the work. (2010.9.16)**



**Jiang Yikang, secretary of the provincial party committee, visited the Himin to guide the work. (2008.4.20)**



**Jiang Daming, Governor of Shandong Province, visited Himin to guide the work. (2008.4.3)**

# The International Academy of Solar Technology was established in Himin in 2009



## Huang Ming- Solar King of China

- Board Chairman of Himin Solar
- Vice President of International Solar Energy Society (ISES)
- First Chinese Entrepreneur Who Addressed the UN Forum
- Deputy of the 10th and 11th National People' s Congress
- Promoter of PRC Renewable Energy Law
- Winner of the 2011 Honorary Award "The Right Livelihood Awards"



# Mr. Huang Ming, Nominated as vice president of ISES



ISES - Wilsenstraße 50 • D-79115 Freiburg

Mr. Ming Huang  
Himin Solar Energy Group Co. Ltd.  
37 Hubinbei Road  
253090 Dezhou

China

Date: 31 December 2009  
Phone: +49 - 761 - 45906-45  
Fax: +49 - 761 - 45906-99  
E-mail: [president@ises.org](mailto:president@ises.org)

Dear Huang Ming,

## Executive Committee Election & Approval 2009

It is my great pleasure to inform you that you have been approved by the Board of Directors of the International Solar Energy Society as Vice President for Solar Industry.

Your term of office will commence on 1 January 2010 and terminate on 31 December 2011.

I am looking forward to seeing you at the upcoming ExCo Meeting in Freiburg on 5-6 March 2010, where we will have our preparation for the ExCo priorities for the upcoming two years.

Best regards,

**INTERNATIONAL SOLAR ENERGY SOCIETY**

Monica Oliphant  
President



**ISES**  
International  
Solar Energy  
Society

**ISES Vision:**  
Rapid Transition  
to a Renewable  
Energy World

**International Headquarters**  
Völk Teamcenter  
Wilsenstraße 50  
79115 Freiburg  
Germany  
Tel.: +49 761 45906-0  
Fax: +49 761 45906-99  
E-mail: [hq@ises.org](mailto:hq@ises.org)  
Web: <http://www.ises.org>

**President**  
Monica Oliphant  
**Executive Director**  
Christine Hamzich

**Banking**  
Sparkasse Freiburg  
BIC: SWMF3333  
FR SP DE 66

EURO Account / IBAN:  
DE33 2512 0110 0002 1001 50

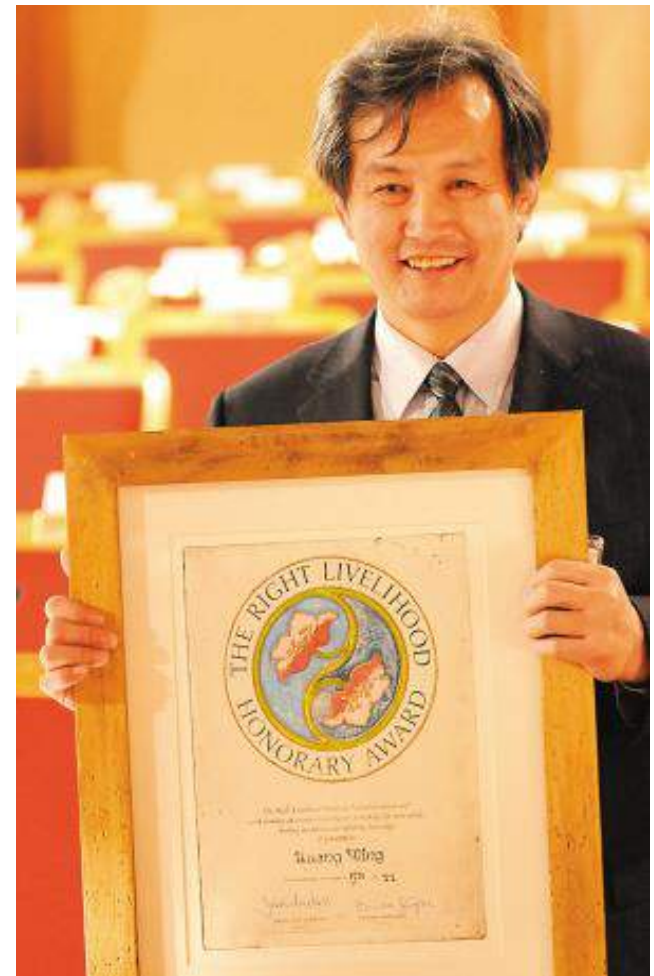
**VAT Identification**  
No.: DE 177 191 424

## Himin Honor

In 2011, BBC News-Europe: Solar power pioneer **Huang Ming** wins "Alternative Nobel Prize"—**Right Livelihood Award**

This is the first award to Chinese for 30 years since the establishment of this award

In the same city, Nobel Prize was held two days later.



## Chinese entrepreneur introduce China solar mode at UN



**NO. 14 UN. Sustainable development congress in 2005**



**U.N. Asia-Pacific Business Forum in 2008**

## Great Concern to Chinese Solar Hi-tech from US



***“Just recently, China became the home to the world’s largest private solar research facility”***  
From President Obama’s State of Union Address in 2011

**Former President Jimmy Carter saw the solar collector formerly atop White House which is now displayed in the solar museum when he visited China this September**





## Talk about Sino-US Development on Renewable Energy with CA Governor Schwarzenegger

Took part in the Good Morning America, famous American talk show with Californian Governor Mr. Schwarzenegger 与国际影视巨星、美国加州州长施瓦辛格在美国访谈节目《早安美国》( Good Morning America ) 对话气候变化



## Invitation from Dr. Angela Merkel, German Chancellor



# Meet former prime minister of UK , Mr. Anthony Charles Lynton Blair



# Ambassador of Germany--Mr Michael Schaefer visited Himin Company



## Mr. Li Zhaoxing, Former Foreign Minister of China visited Solar Valley



## Meet With Chief Executive of Hong Kong, Mr. Tung Chee Hwa



# Chief Executive of Macau Special Administrative Region, Mr. Ho Hau Wah Visits Himin Solar Valley



## Mr. John Leslie Prescott, the Former UK Premier visited Himin solar museum





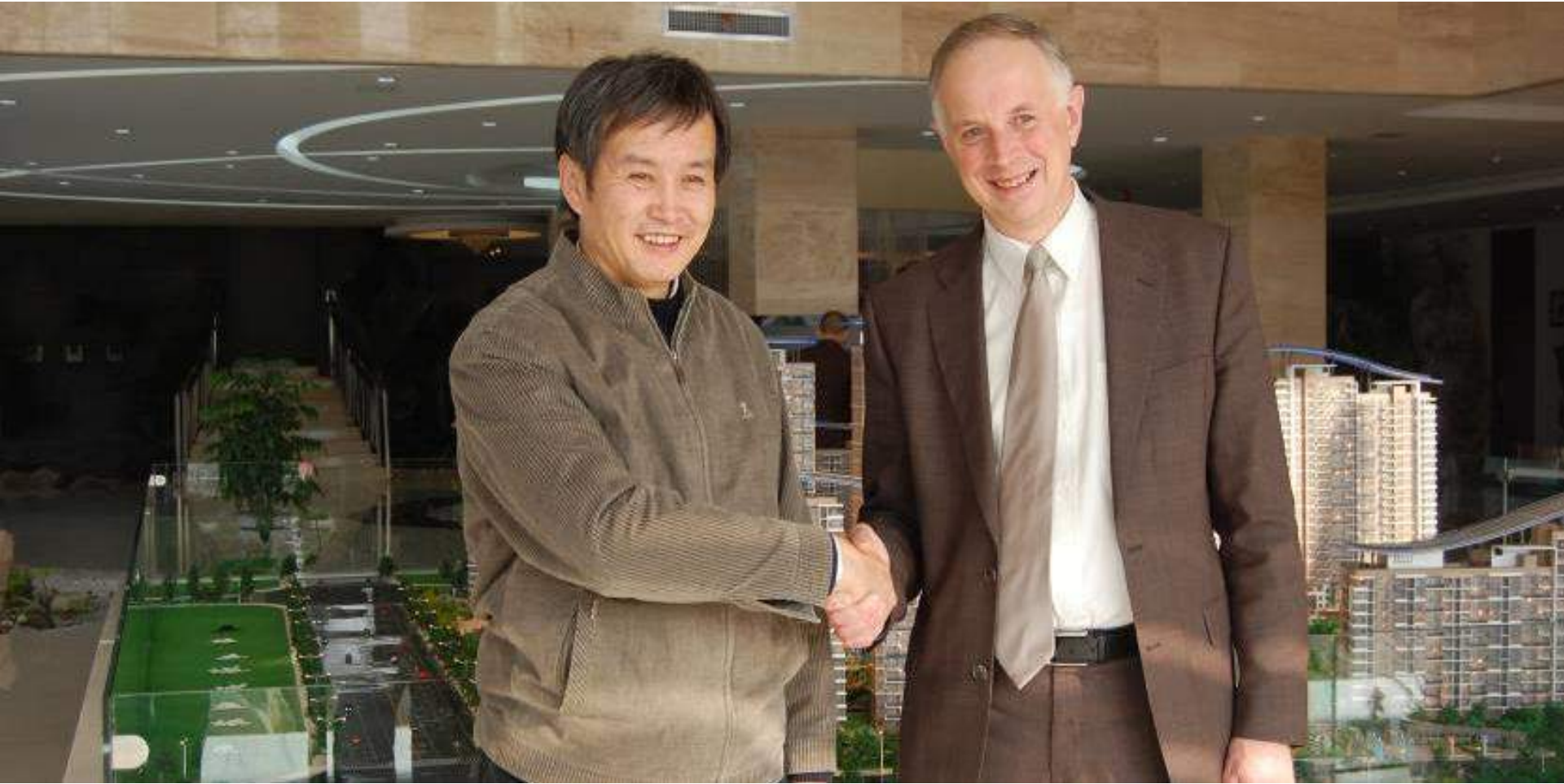
## Meet With Former Ambassador of US to China, Mr. Clark T. Randt



# Meet with Former Secretary of US, Mr. Colin Luther Powell



## Meet with Mr. Kornelis Blok, consultant of Himin UTOPIA GARDEN, and Peace Nobel Price winner as draftsman of *Kyoto Protocol*



## Swedish Premier' s Formal Visit to Himin Exclusive Shop in Nanjing





ologies

Sun is the future!

Barrier-free design

无障碍设计

## Meet with the Swedish Princess Victoria



## Mr. Anders Muld, General Director of Swedish Energy Agency visit Himin







# German "Handelsblatt" reporter with Huang Ming



# Himin Solar Valley



# Silicon Valley in America, Solar Valley in China



**Solar Thermal Power Plant 热发电基地**

**ISCC Center 太阳能贝壳**

**World Expo. of Solar Architectures 太阳能万国建筑博览园**

**Solar Stadium 太阳能体育场**

**Sun-Moon Mansion 太阳能鸟巢—日月坛**

**Wetland Park 城市绿肺—减河湿地公园**

**PV Production Line 光伏生产线**

**Solar Micro-E Hotel 太阳谷微排国际酒店**

**Solar SPA Center 太阳能鸟蛋—天地温泉**

**SUN-MOON Mansion--The world largest solar energy, it can save 88 percentage energy.**



# Himin Micro-emission international Hotel



## Intelligent control 智控

Property information  
物业信息系统  
Intelligent security  
智能安防系统

## Guest rooms 客房环境

Energy-efficient windows&doors  
节能门窗  
air ventilation  
新风系统  
certain, lighting system  
窗帘、灯光系统  
Pv sun-shading  
光电遮阳

## Dining area 酒店餐饮区

Web checking for information, entertainment, etc.  
查询系统保证查询、通讯、娱乐、上网  
显示当前所处环境的相关状态。

## Landscape lighting 酒店景观景点

BIPV  
光伏组件建筑一体化  
Sunrooms  
阳光房

## Solar water heating 热水供应技术

Much more hot water than needed is supplied  
太阳能锅炉海量热水，即开即热连续阴雨天气照常使用。

## Solar drying 干燥技术

Drying of clothing is from solar  
利用太阳能进行干燥除湿，节约能源，衣服床品清洗后只留阳光的味道。

# Dream Gate--Gate of China Solar Valley



# Special “seven-planet” solar garden villa group

**Mercury—Taichi Palace**  
太极轩

**Uranus**  
天王星公馆一道馆

**Venus**  
金星公馆

**Jupiter**木星  
公馆

**Saturn**土星公馆

**Mars**火星  
公馆

**Neptune**海王  
星公馆



# Mercury hotel





# Venus hotel



# Jupiter villa



# Mars Villa



# Saturn Villa



# Neptune Villa



# Douglas Villa

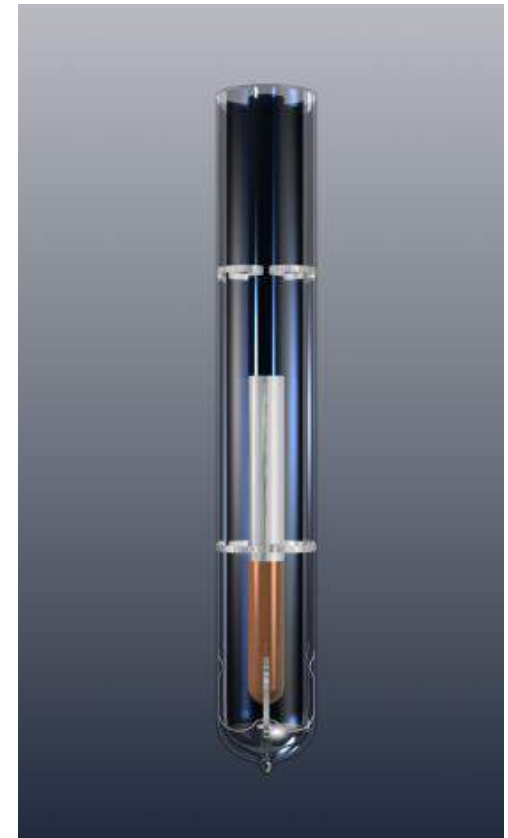


Douglas, the famous America solar architect  
designer of the Douglas Villa



## 1. UTLE (Ultra Low Emission) Solar vacuum tube

- >> Full automatic vacuum tube production line and advanced & strict testing processing
- >> Vacuum degree can reach to  $5 \times 10^{-4}$  Pa
- >> The stagnation temperature higher than  $270^{\circ}\text{C}$
- >> Patent technology enable its working temperature from  $-40^{\circ}\text{C}$  to  $40^{\circ}\text{C}$
- >> 5 production lines guarantee production capacity of 100,000



**Inner focusing film vacuum tube**

## 2. Solar water heater—Never freeze in winter

- >> Inner tank material: SUS304 stainless steel ,0.5mm in thickness.
- >> Insulation material: polyurethane foaming.
- >> Outer tank material: plastic coated galvanized steel plate ,0.5mm in thickness.
- >> Frame material: plastic coated galvanized steel plate ,2.0mm in thickness.
- >> Vacuum tube material: borosilicate glass 3.3





### 3. Pressurized solar water heater



#### **Split solar water heaters**

<< **Collectors: U-pipe/ heat pipe/ manifold**

<< **Tubes: 1.8m, 2.1m (U-pipe);**

**1.8m (heat pipe)**

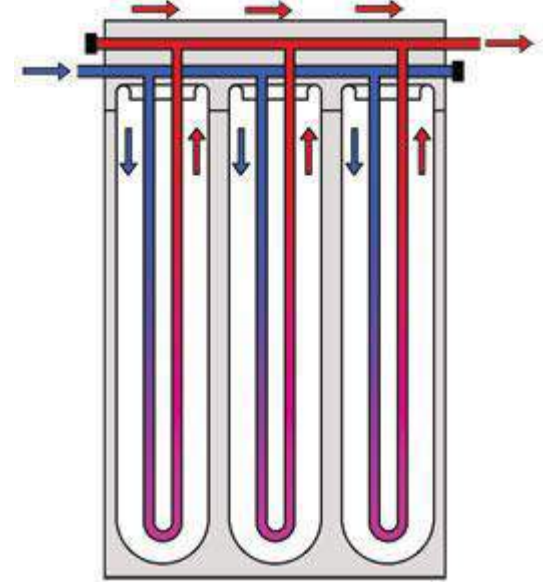
<< **Capacity: 200L/300L**



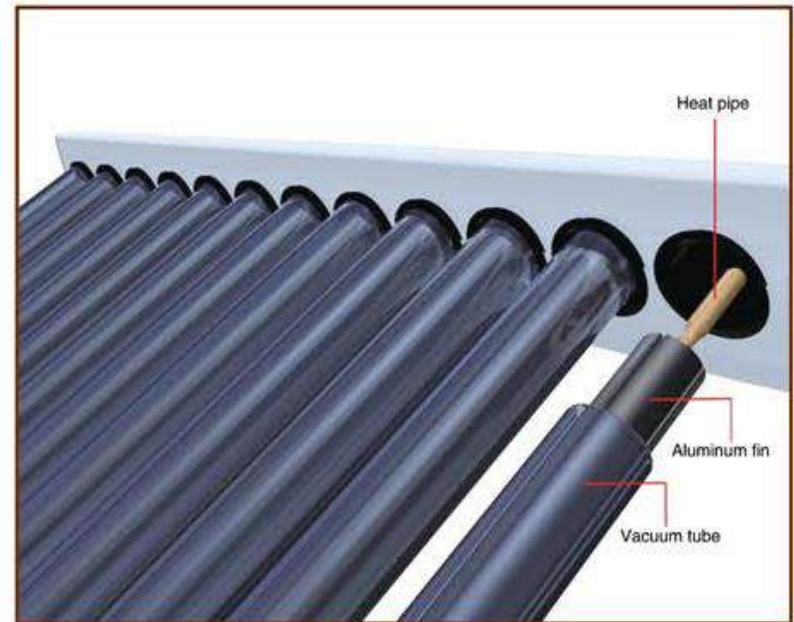
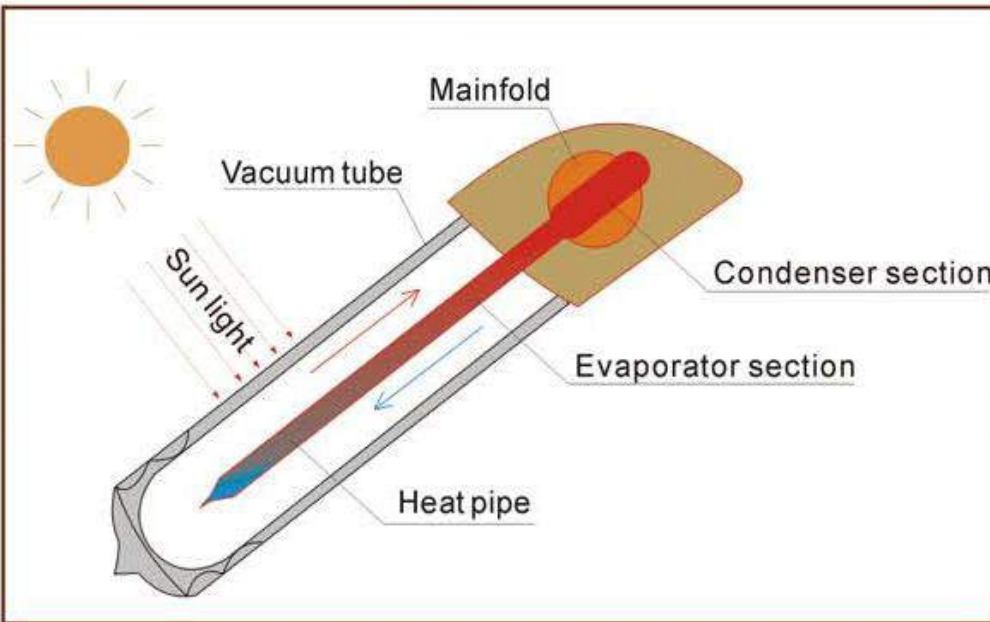
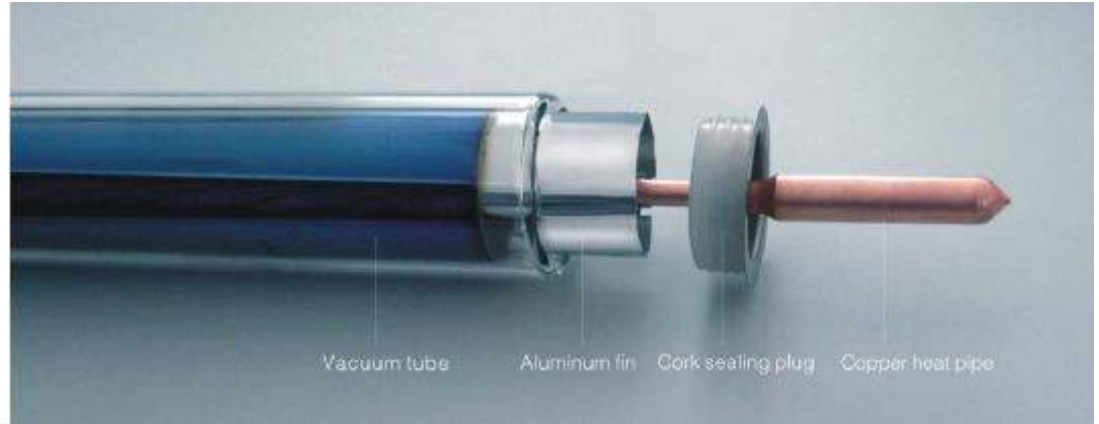
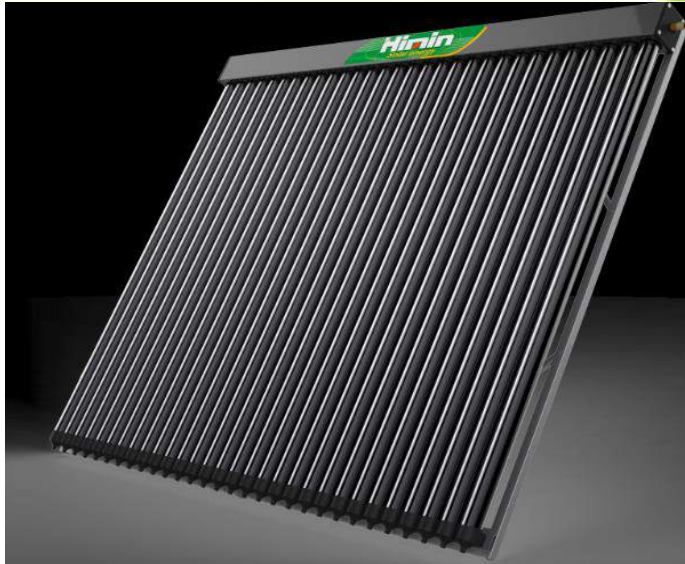
#### **Flat panel Solar water heater**

- pressurized operation
- enamel inner tank
- excellent anticorrosion performance
- anticorrosive protection of Magnesium rod
- blue film flat plate collector

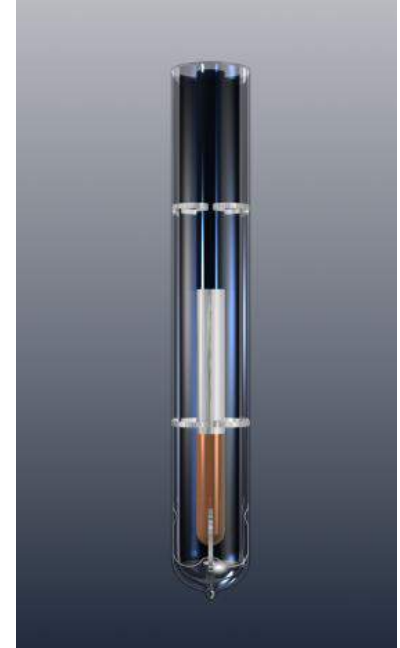
## 4. U-pipe solar collectors



## 5. Heat-pipe solar collectors



## 6. CPC solar collectors



The CPC collector is a medium temperature collector for industrial thermal field with temperature requirements between  $80^{\circ}\text{C} \sim 250^{\circ}\text{C}$ . It is composed of vacuum tube, header module, frame and bracket. It USES solar heating medium and transmits heat to the system's hot water storage tank through circulation pipeline, thus obtaining hot water.

## 6. Solar hot water boiler system

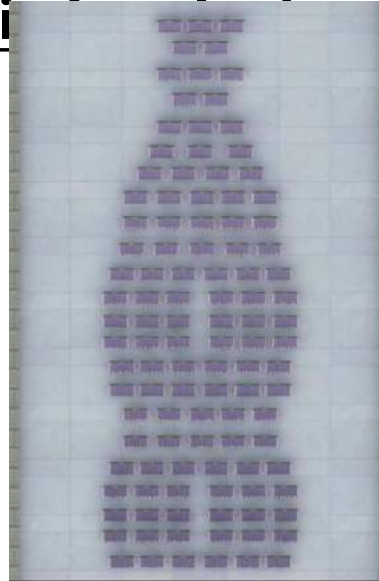
### How to get cheap and green hot water problem in hospitals, schools and factories ?

Use Himin solar hot water system to replace the diesel, gas and carbon boilers, it will help to reduce energy consumption and increase benefits.

#### 8-Non and 3-High of Himin solar hot water boiler system:

##### 8-Non

- Non scald
- Non electric shock
- Non water leakage
- Non freezing
- Non assemble dangers
- Non corrosion
- Non excessive lead
- Non overheating



##### 3-High

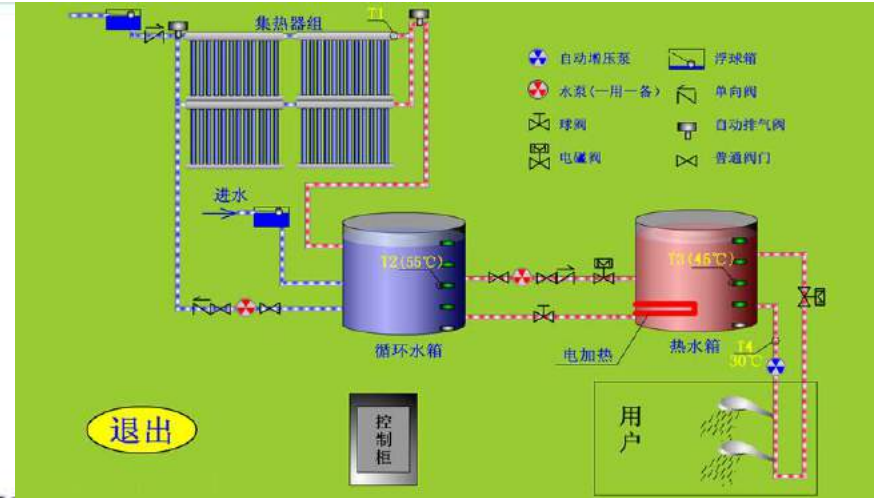
- Plenty hot water in winter
- Instant hot water
- Remote control data platform

## Characteristics of Himin Solar Hot Water Boiler system

1. Hot water can be uniformly supplied to each place, with high intelligence and remote monitoring,
2. Constant pressure water supply, variable frequency, stable water outlet pressure,
3. Turn on the faucet and there's hot water coming out immediately,
4. Constant water temperature, anti-scald, anti-colds, to ensure that the elderly, children, infants bath water temperature is appropriate,
5. High health standards, prevention of Legionella
6. 24 hours hot water supply, Measurable water supply is available
7. Himin solar hot water system can provide hot water even in



## Operation principle of solar hot water system



- Hot water collecting tank (high temperature) is connected to solar collector, The solar collector circulate and heat the water in the storage tank on sunny days, supply high-temperature water to the hot water supply tank (relative constant temperature) continuously.
- Hot water supply tank (relative constant temperature) could maintain the set temperature in 24 hours, so that hot water is available at any time.
- The water tank is equipped with auxiliary electric heating. When the weather of the cloudy and rainy days, the solar heating is insufficient, the electric heating starts the auxiliary heating, so that hot water supply is guaranteed at any time.

# (1). Himin projects for Stadium

← Chairman MAO Memorial Hall Solar hot water



2008 Beijing Olympic Game Shooting Gymnasium solar hot water project ↑



← 2008 Beijing Olympic Game Pentathlon Stadium solar hot water project





**2008 Beijing Olympic Game Bicycle Stadium solar hot water project**



**Grenada National Stadium solar hot water project**



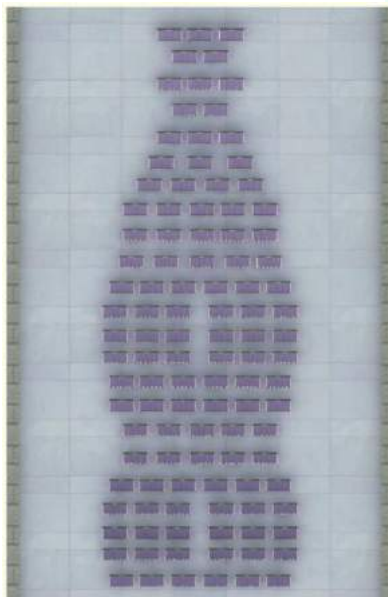
**Shanghai World Expo UK Pavilion solar PV and solar hot water project**

## (2). Himin projects for factory



**Coca Cola Wuhan factory  
solar hot water project**

**Coca Cola  
zhengzhou  
factory solar  
hot water  
project**





← **Pepsi~Cola Harbin factory  
solar hot water project**



↑ **Malaysia Mosit Chicken  
slaughterhouse solar hot water  
project**



← **Water tank room of Pepsi~Cola  
Harbin factory solar hot water  
project**



**Shanghai baosteel group factory solar hot water project**



**Sinosteel group factory solar hot water project**



**Solar heating project for oil storage tank of Shengli oil-field**



**Morgan Mills Co. LTD factory solar hot water project**



**Beijing Yanshan Petrochemical factory solar hot water project**



**Siemens High Voltage Switchgear Co., Ltd factory solar hot water project**

### **(3). Himin projects for Government agencies and military camp**



← **Xinjiang Foreign Trade Building solar hot water project**



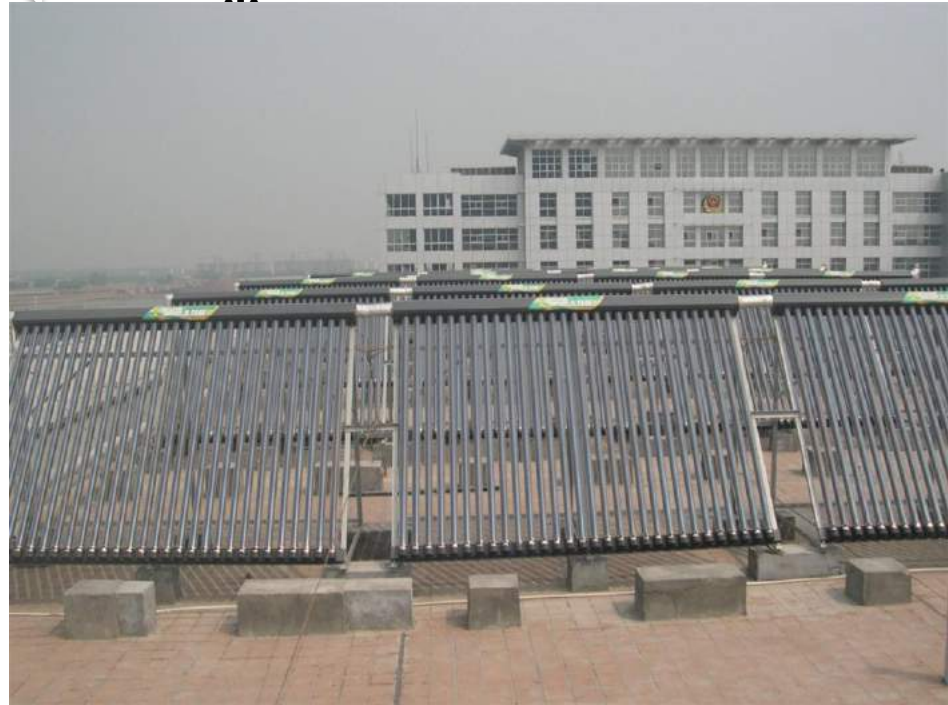
↑ **Publicity Department of the Communist Party of China solar hot water project**

**Publicity Department of the Communist Party of China solar hot water project**





**Solar hot water project for**



**National Security Department of  
Hebei Province solar hot water  
project**



**Solar hot water project for military  
camp**

## (4). Himin projects for hotel

← XI'an Huashan Hotel solar hot water



↑ Inner Mongolia Lanbao Hotel solar hot water project

Solar hot water project for Yunlong hotel in Yunnan province







**Solar hot water project for Lanzhou hotel in Lanzhou city (East building)**



**Solar hot water project for Lanzhou hotel in Lanzhou city (South building)**





**Solar hot water project for  
Wansheng hotel in Gansu province**



**Solar hot water project for Hyatt  
hotel (5-stars) in Guiyang city**



**Solar hot water project for Ningwo  
hotel (5-stars) in Gansu province**



**Solar hot water project for Shengkang hotel in Shigatse, Tibet**



**Solar hot water project for Tianxiyuanyi hotel in Xichang city**

**Solar hot water project for Lidu holiday hotel (4-stars) in Linyi city**

## (5). Himin projects for School



**Solar hot water project for Xiamen national accounting**



**Solar hot water project for Biguiyuan school in Guangdong**

**Solar hot water project for Jiangmen middle school**



**Solar hot water project for  
Quzhou middle school in  
Fujian**



**Solar hot water project for  
Bazhou Special-education  
schools, Xinjiang**



**Solar hot water project for  
Shandong Jiaotong University**



**Solar hot water project for  
Xuzhou middle school in Jiangsu**



**Solar hot water project for  
Nanjing Foreign Languages  
University**



**Solar hot water project for  
Lanzhou Petrochemical  
Kindergarten**



**Solar hot water project for  
Dalian University of Technology**



**Solar hot water project for  
Meishan middle school, Sichuan  
province**



**Solar hot water project for Himin  
solar technology university,  
Dezhou city**



**Solar hot water project for  
Binzhou medical university**



**Solar hot water project for  
Binzhou medical university  
(Yantai school)**





## (6). Himin projects for Hospital

**Solar hot water project for Xiamen hospital**



**Solar hot water project for Fengcheng hospital, Jiangxi**

## Solar hot water project for Malaysia hospital (Ministry of Health, Malaysia )



## **(7). Himin projects for Swimming**



**Solar hot water project for China park swimming pool, Shanghai city**



**Solar hot water project for  
Huairou swimming pool, Beijing  
city**

## **(8). Himin projects for Public bathroom**



**Solar hot water project for  
public bathroom in villages**

## (9). Himin projects for Public



**Solar hot water project for public bathroom in villages**



## (10). Himin projects for tourist attraction



**Solar hot water project for Shanghai Chongming island wetland park**



**Solar hot water project for Heyang wetland Park, Weinan city, Shanxi province**

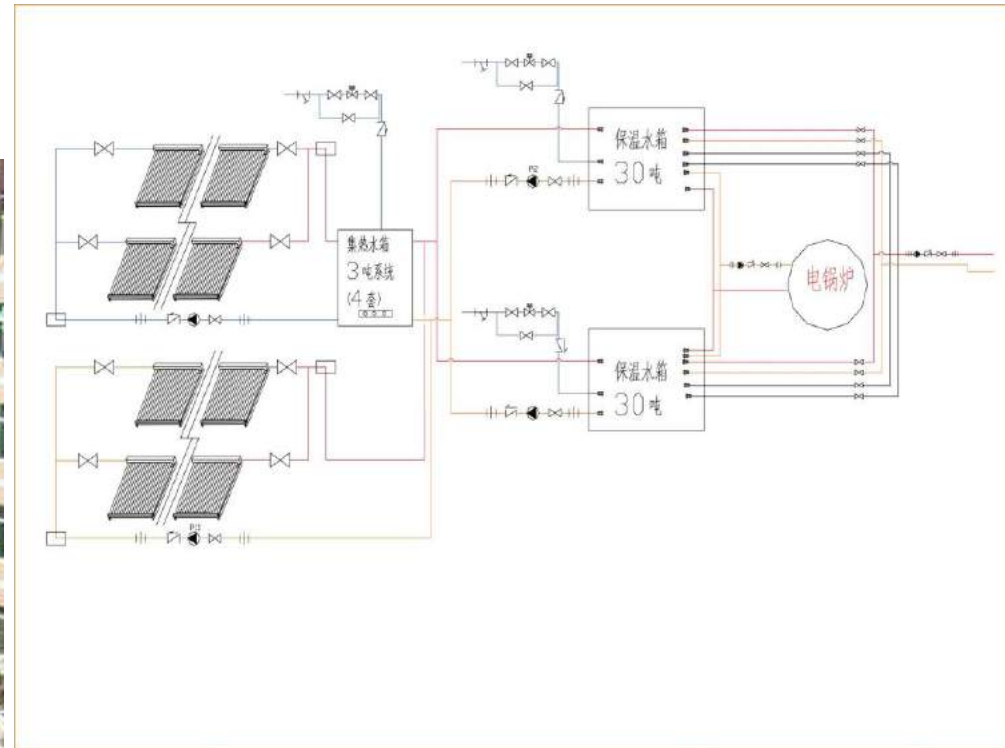
**Solar hot water project for Mengshan Forest Park, Linyi**



# (11). Himin projects for room heating



## Solar room heating project for Radio Authority, Lasa, Tibet





## (12). Himin projects for drying



**Solar drying project for Qingdao  
Tiandihui food factory**



**Solar drying project for Sludge  
disposal project of Jinan  
Government**



**Solar desulphurizer drying project  
for Jiangsu Hengsheng new material  
company**

# **(13). Himin projects for Real estate community and villas**

**Solar hot water project for Shenhua group real estate high building**



**Solar hot water project for Fuyang yalin apartment in Zhejiang province**



**Solar hot water project for Licai yihe real estate project, Xianyang city**



**Solar hot water project for  
Jinboyuan community in Yunnan  
province**



**Solar hot water project for  
Chunjianghuayue community,  
Xinyu city, Jiangxi province**



**Solar hot water project for  
Huaming Town government,  
Tianjin**



**Balcony split solar hot water project for Beijing Fifth Design Institute**



**Balcony split solar hot water project for Qingdao Yixinyuan community**



**Balcony split solar hot water project for Hefei Minghang family community**



**Balcony split solar hot water project for Changsha Hanlinyuan community**



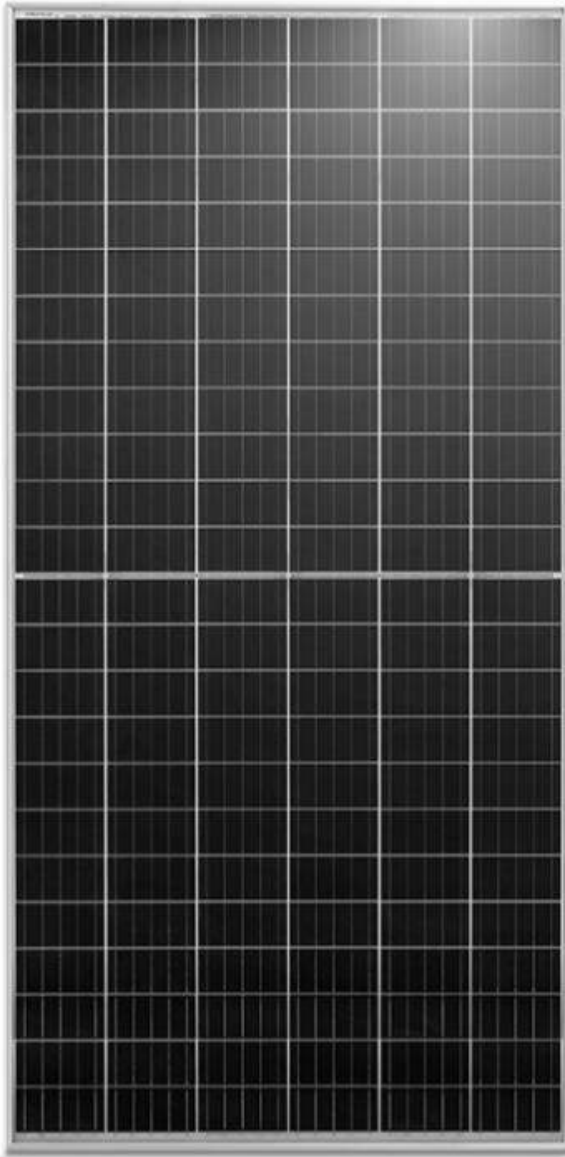




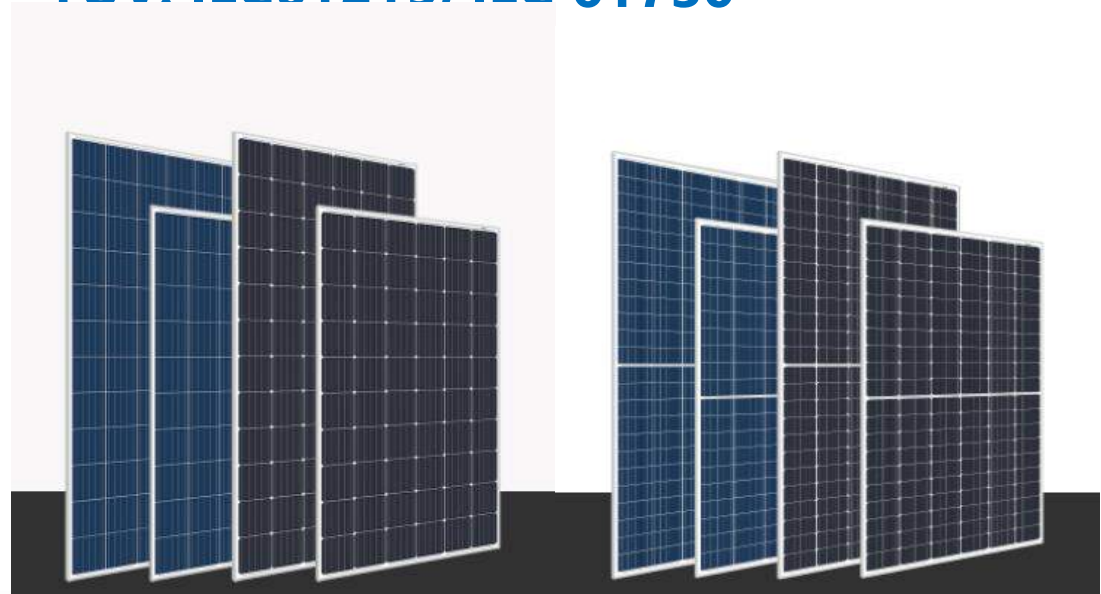
# ***Himin solar Photovoltaic***







- **Model:**  
**Monocrystalline/Polycrystalline**
- **Type: Full cells and half cells**
- **Power: 10W-590W**
- **Linear Performance Warranty**
- **12-year Product Warranty**
- **25-year Linear Power Warranty**
- **Approvals and certificates:**  
**TUV: IEC61215, IEC 61730**

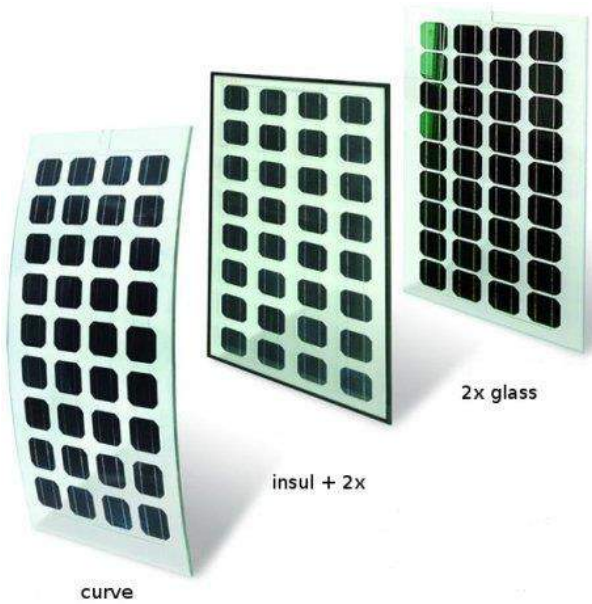


## Himin Solar Module--Black Module

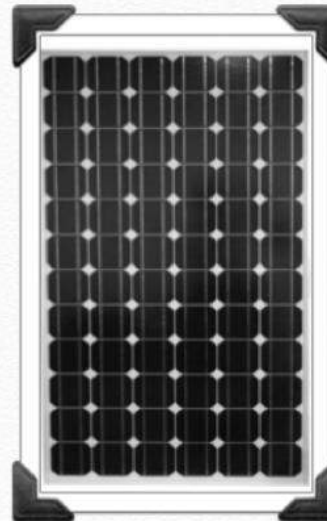
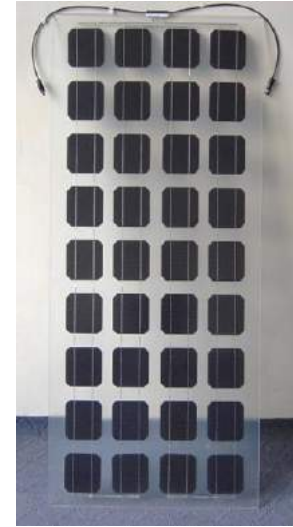


# Himin BIPV Solar Module

## Transparent Solar Module



## Solar Module without frame



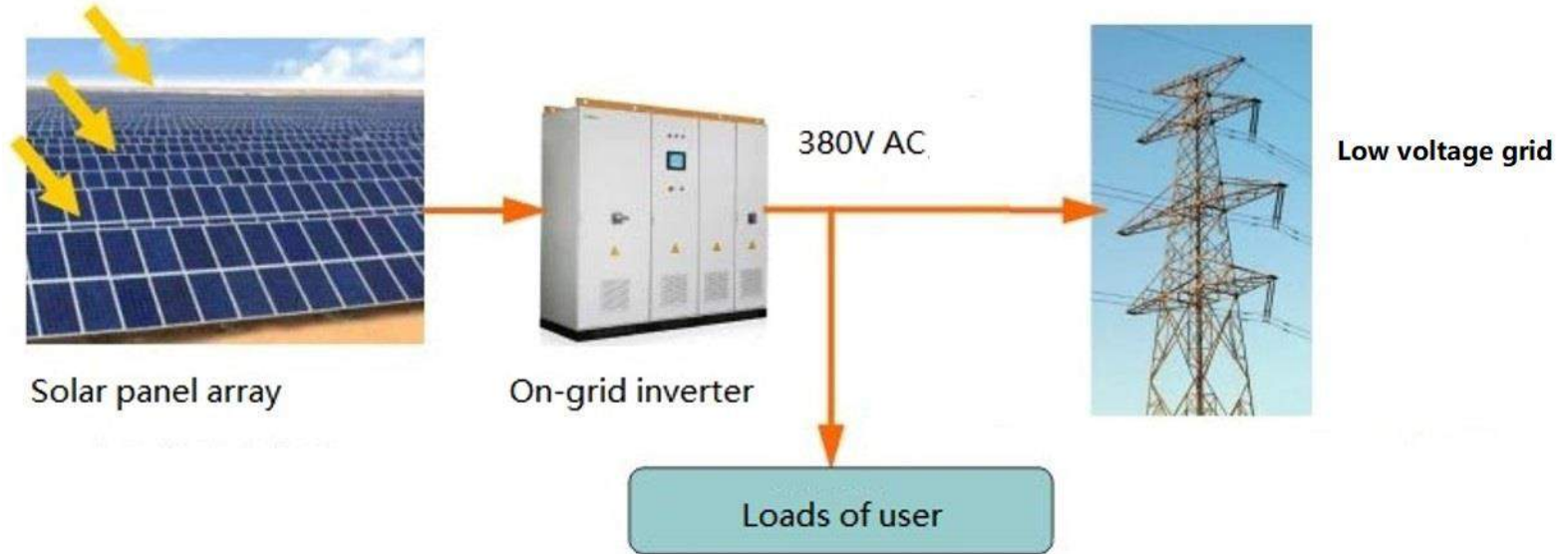
## Certificates for Himin solar modules



***Fire Test***

***Salt Test***

## (1). On-grid solar power system



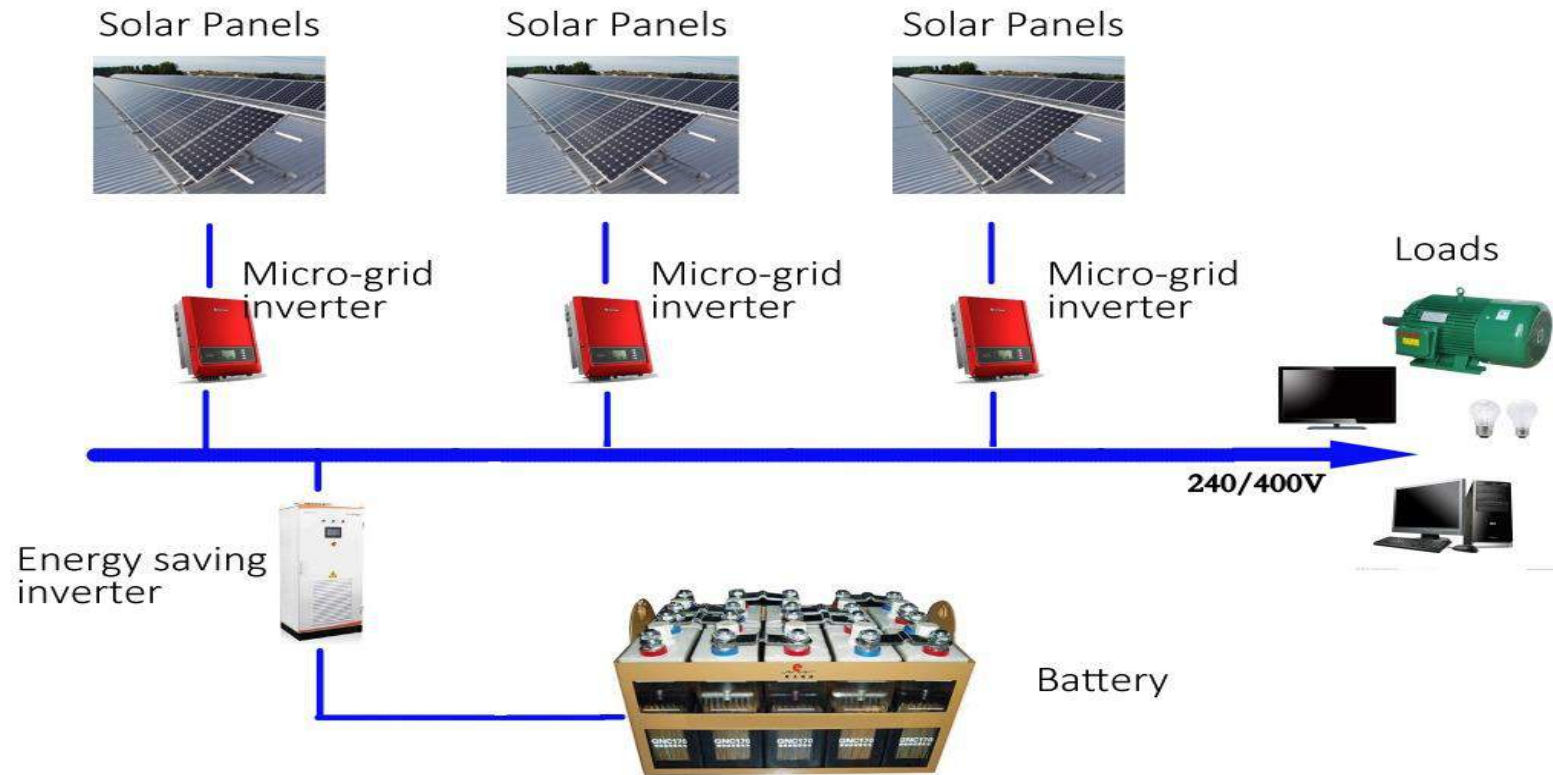
## **Solar power system for hospitals, schools and factories**

- **On-grid solar power system: Green energy, Environmental protection, Energy saving, Zero pollution,**
- **Micro-grid solar power system: Save energy+ Emergency standby power supply**

# Operational principle

- The on-grid solar power system will connect to the utility.
- At day time, the DC electricity that generated by solar panels will be combined by combiner box and send to inverter, the inverter will output AC electricity and supply green energy to the loads.
- At night, the solar power system will automatic stop work and the load will be powered by electricity from utility grid.
- The electricity generated by solar power system will make sure the using of users first, If there's any remaining power, you can sell it to the grid for revenue.
- In this way, the on-grid solar power system could help users save electricity cost and get benefit.

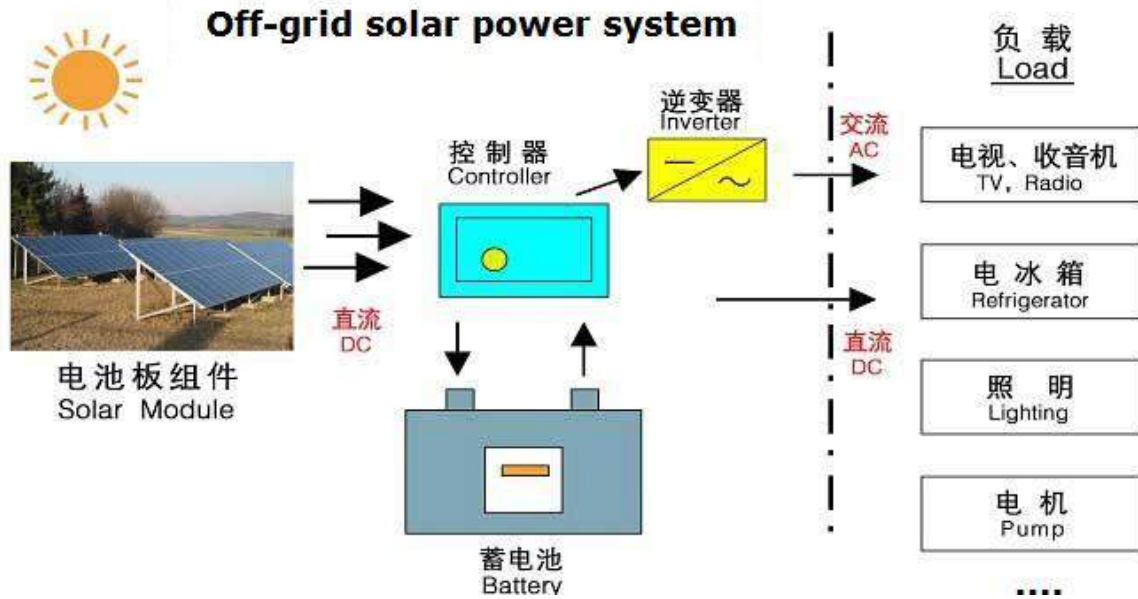
## (2). Micro-grid solar power system



The Micro-grid solar system consists of solar panels, on-grid inverters, energy storage converters, intelligent control cabinets, batteries, and so on. Solar panels convert solar energy into electrical energy under light, supplying power to the loads through inverter and charging the battery through energy storage converter; At night or when the electric power failed, the battery will supply power to the load through a bi-directional converter.



### (3). Off-grid solar power system



# Himin solar PV projects

600KW-Sicily,Italy



520KW-Maribor,Slovenia



170KW-Freistaat Bayern, Germany



85KW-Marche,Italy



**40KW-Marche,Italy**



**15KW - Switzerland**



**28.8KW –Garmisch-Partenkirchen Germany**



**40.5KW –Friedrichshafen Germany**



14.1KW –Germany



6KW-200W Mono Black Solar Module--- Denmark



4KW-200W Mono Black Solar Module--- Denmark



Jinan Yaoqiang International Airport



**2MW-China Solar Valley,Dezhou City**



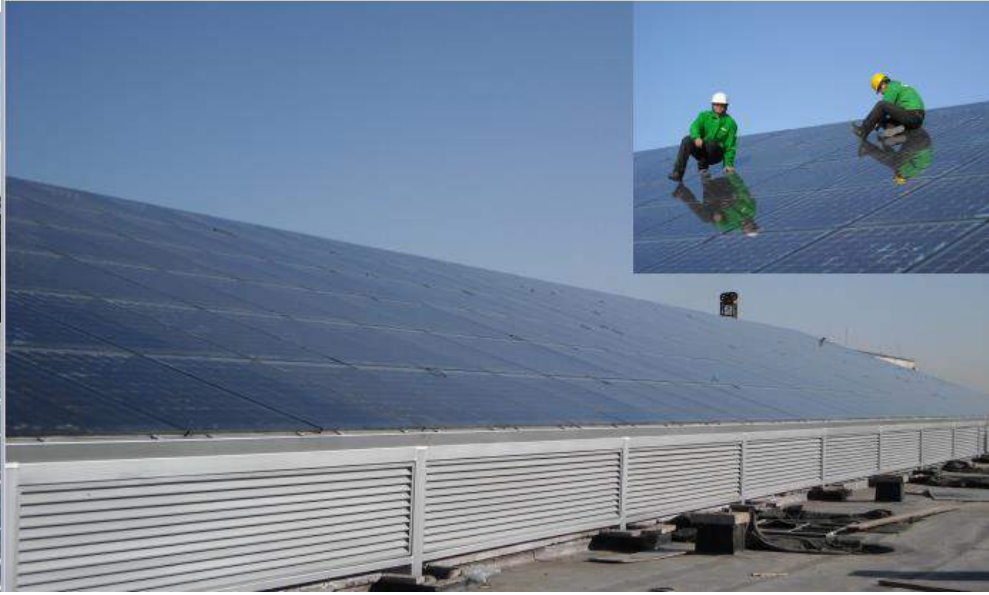
**200KW-VALENCIA-SPAIN**



**25KW-Singapore**



**150KW BIPV – Beijing China**



# Solar car shadow



**On-grid solar power system+ Car shadow**

**Make full use of the hospitals, schools and factories site to achieve multiple purposes**



# Solar project with BIPV solar panels--Solar roof for sunny room

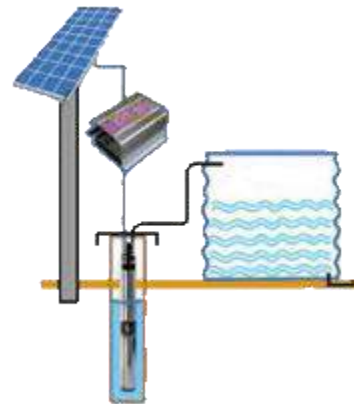
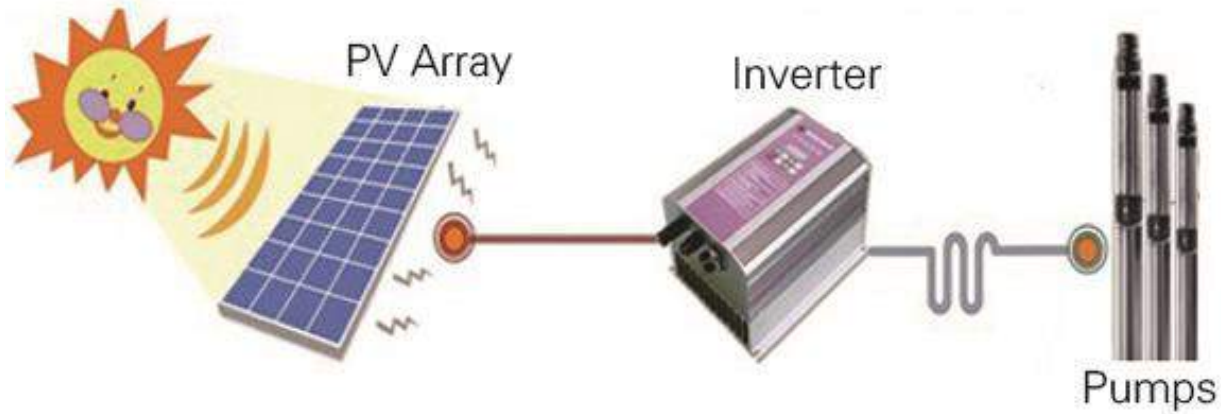




- ◆ The sunny room use translucent solar panels as its roof, so that the sunlight can shine directly through the roof into the room, people could enjoy sunlight in the room.
- ◆ At the same time, solar panels of the roof can generate electricity for use in the hospitals, schools and factories



Solar Energy





# *Himin solar lighting*



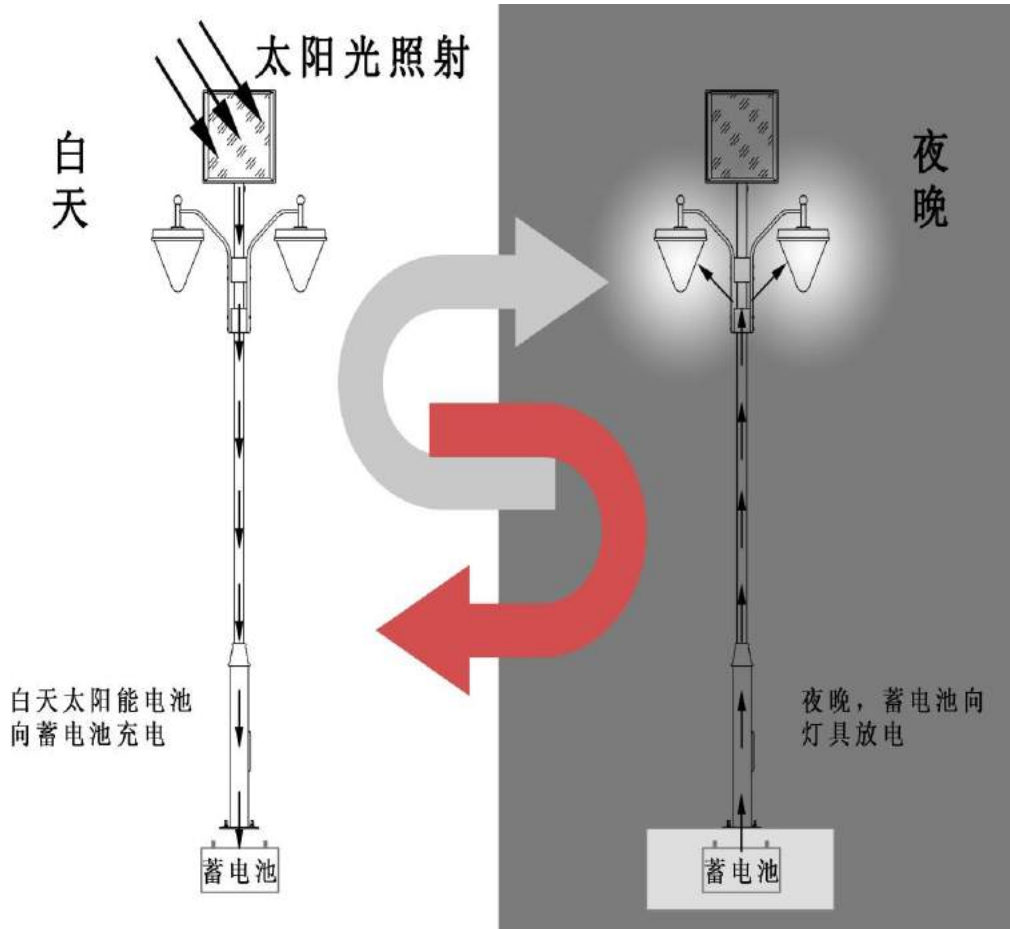
### Potential security hazards of street lights at present

- **1.** In rainy season, the climate is humid, traditional electric street lamps are in hot and humid environment for a long time. They are easy to fall off the paint layer, corrosion and fracture, even leakage of electricity, and so on.
- **2.** Even if solar streetlights are used, If the quality of solar street lamps is not up to standard, any small problem can cause the whole lamp not to work properly or even scrap. For example: light pole corrosion, lamp poor quality, controller failure, battery short life, Solar panels damaged by moisture, etc.



## Potential security hazards of street lights at present

## Why Himin solar street light



- **Safety:** absolutely no electric shock, fire and other accidents; the voltage of solar light are 12V-24V, which is lower than the human safety voltage 36V, very safe.
- **Energy Saving:** inexhaustible Solar Energy.
- **Environmental protection:** no pollution, no noise, no radiation.
- **Convenience:** simple installation, no need to set up lines, and no worry of power cut-off.
- **High grade:** science and technology products, green energy, hospitals, schools and factories image will be improved.

- **Less investment:** one-time investment, long term use

# Features of Himin solar lights

## 3-advantages:

- High stability,
- high efficiency
- high durability

## 5-preventative measures:

- Anti-corrosion of light post
- Anti-moisture and premature power attenuation of solar panel
- Anti-malfunction of controller
- Anti-short battery life
- Anti-poor quality of lamp

### Anti-moisture and premature power attenuation of solar panel

By using high quality crystalline silicon solar panels, a lifetime of more than 25 years is ensured.

The efficiency of solar panel is more than 16 %, and the power attenuation is less than 20 % over 25 years.

### Refuses poor quality lights holder

The protection class of light holder can reach IP65, strict detection, professional waterproofing, and original security anti-theft system;

High efficiency and energy saving LED lights were selected due to the fact that it uses 60% less electricity compared to conventional lights. The efficiency of the product is the highest with a low power light source, with a possible life span of 100,000 hours.

### Anti - light pole's corrosion

High quality structural steel, with accurate calculation of light-pole strength according to 50 years wind force

The light-pole is treated by hot dip galvanizing, and plastic powder spray, using imported anticorrosive plastic powder. This guarantees strong adhesion and no discoloration

### Anti - electric control failure

Anti-interference up to 3000V, thereby guaranteeing performance is reliable

Includes float charging function, enhancing the charging efficiency of the system

Intelligent charging function increases the charging voltage regularly, thereby prolonging the battery life.

### Anti - short battery life

The special solar energy storage battery has a strong recharging performance, even after long usages, even without immediate or timely charging; the capacity can be fully recharged.

The battery is designed with thick plates to enhance corrosion resistance and greatly improve the lifespan of the battery;

The original secondary activation technology prolongs the battery life to the maximum extent



# 1. Solar street light for main road brightening



- The anti-wind design of street lamp is up to 12 grade, the surface treatment adopts hot-dip galvanizing and spraying plastic, the life of lamp pole is up to 20 years ;
- Intelligent charge-discharge control system
- Unique waterproof structure design, the production grade of lamp could up to IP65 ;
- Unique Waterproof and Theft-proof structure for Battery



# Himin solar light projects









## 2. Solar garden light



More designs are available, OEM is acceptable



**Langfang sanitarium solar energy lighting**



**Xiamen Gulangyu solar energy lighting**



**Binzhou villa solar lighting**

## Changhe park solar lighting



## Anqing Yangtze river bund park solar lighting

## Anqing Yangtze river bund park solar lighting



## Solar lawn lamp for lawn and garden brightening and beautification

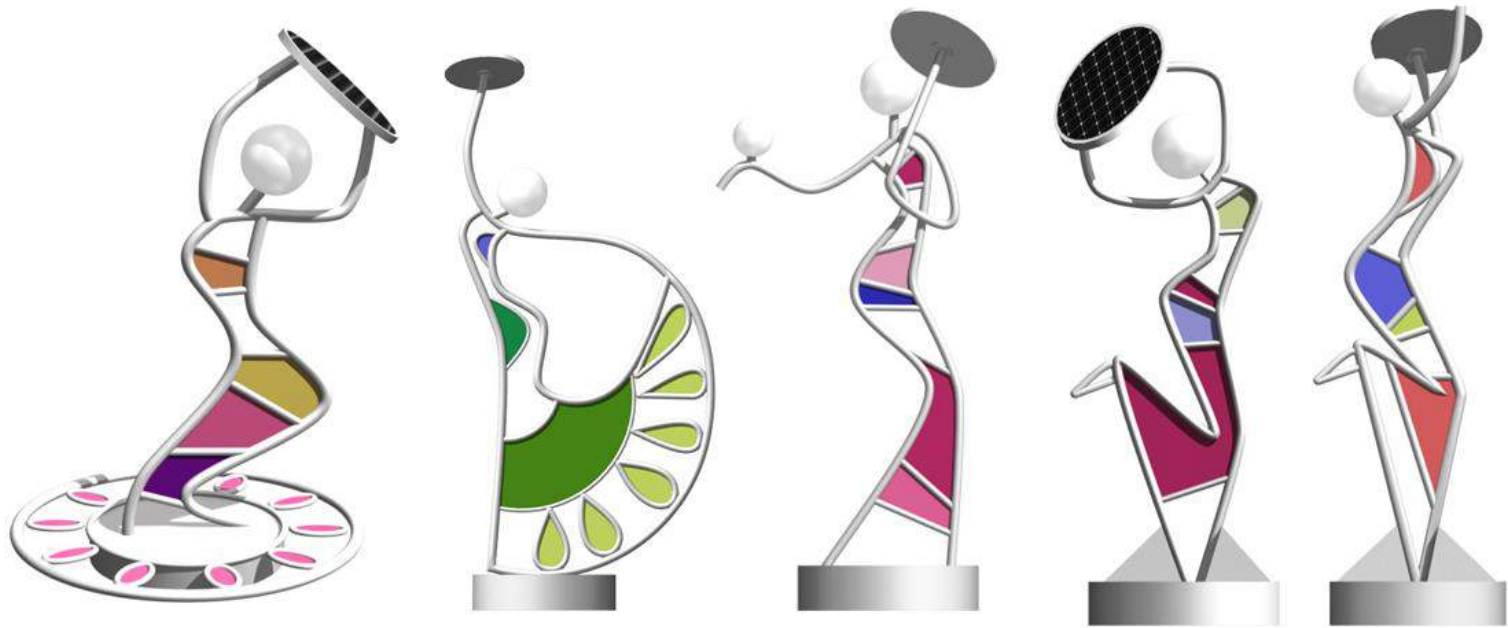


- Solar lawn lamp is a green energy landscape lighting which integrates energy saving, environmental protection, lighting and beautification, it can be installed in the hospitals, schools and factories lawn and garden.
- The light source adopts LED, to realize circular discoloration,
- Automatic control, energy saving,
- Convenient installation and simple construction.





## Solar dance lamp for lawn and garden brightening and beautification



- The shape of the solar dance lamp is integrated into the dance movement and has a strong sense of innovation and visual impact.
- Dynamic dance modeling combined with photovoltaic lighting technology, to achieve the perfect combination of technology and art. It is sculpture by day and light by night.

## Solar insect killing light

Light control & rain control insecticidal light, with no need for manual duty.

Physical pest control, non-toxic and harmless, energy conservation, and environment protection with a long performance life

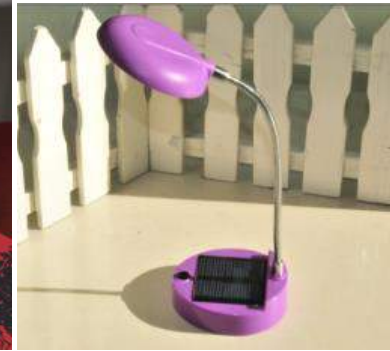




## Solar charger



## Solar lighting



## Solar toys



## Solar decorations





 <b>BBQ</b> 10 - 30 mins	 <b>Coffee&amp;Tea</b> 15 - 25 mins	 <b>San&amp;Ham</b> 5-20 mins	 <b>Soup</b> 20 mins~	 <b>Popcorn &amp; Nuts</b> 3 - 6 mins 8 - 15 mins	 <b>Camping</b> Even in cloudy days
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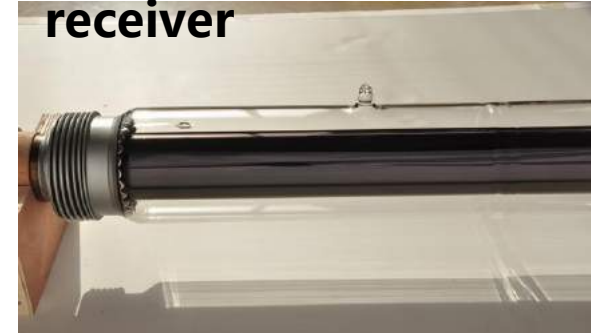
# *Himin CSP*



## Fresnel receiver

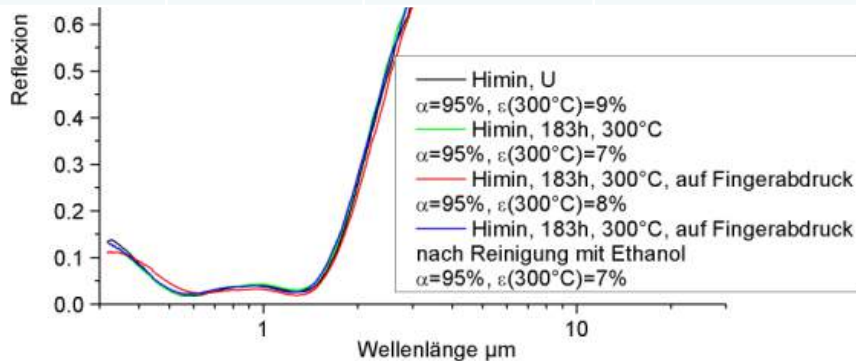


## Parabolic trough receiver



Diameter	70±0.5m m	Absorption	≥94% (AM1.5)
Thickness	40±0.3m m	Emission	≤8% (300°C)
Length	2000±5m m 2200±5m m	Coating stability	At 350°C, performance degradation ≤2%

Receiver tube length(mm)	4060	Effective length for heat collection(mm)	>3860(room temperature)
Outer diameter of collector tube(mm)	70	Outer diameter of glass tube(mm)	120
Vacuum degree(Pa)	<0.01	Glass tube transmittance(%)	95%(AM1.5)
Emission	<12% (400°C)	Absorption	≥95%(AM1.5)
Operating temperature(°C)	400°C (oil medium) 500°C (molten salt medium)	Heat loss(w/m)	≤280



# The Fresnel solar thermal power plant & the most advanced auto. vacuum tube production line



## **Himin coated steel tubes in PE1 solar thermal project**



# Project for SHP Australia



**Thanks for your visit  
China solar valley!**