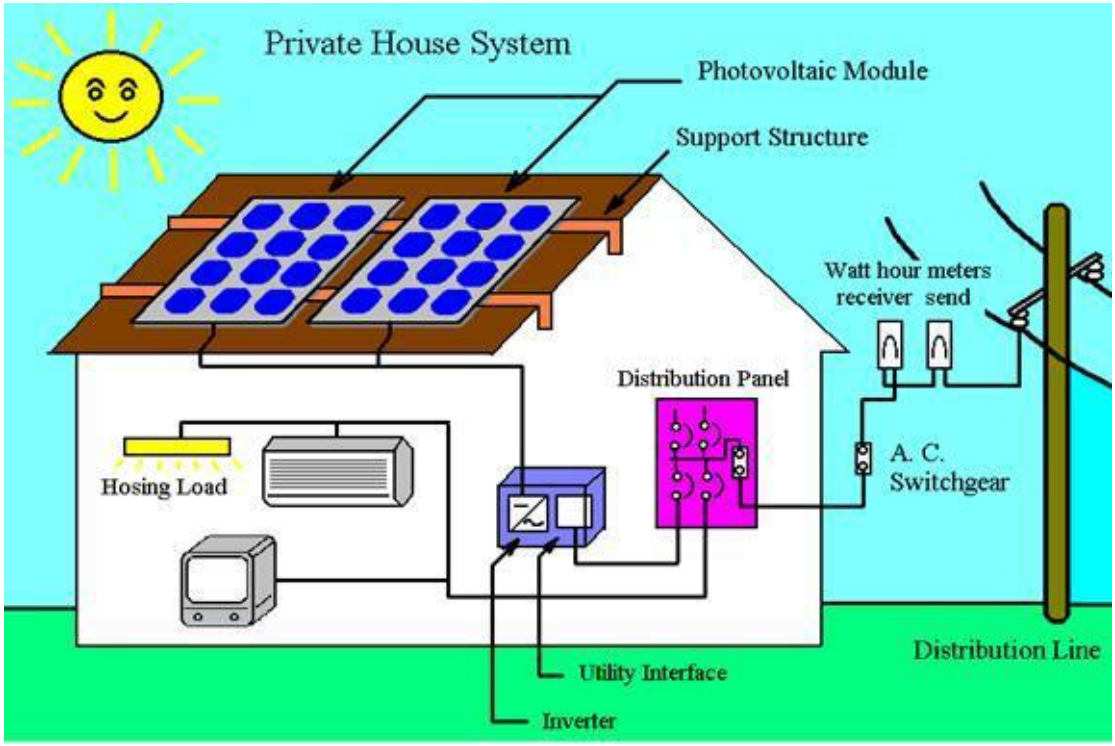
PV Grid-tied 2~3KWp Power System

Standardized Configuration Scheme



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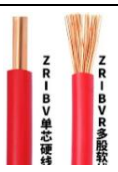
2.05KWp 并网光伏发电系统的评估 (使用单晶硅组件)
The Estimation of A 2.05KWp Grid-tied PV Power System w/i Mono-crystalline Solar Module

（1）系统配置一览表（Table of System Standard Components）：

Item	Description	Qty.	Picture of Item
PV Module	TD-410MC-108HC, mono-crystalline, 410watt w/i MC4 connectors and leading PV cables;	5	
PV Rack	PV panel mounting bracket on sloping roof	1	
	Hook		
	Guiding Rail		
DC Cable	MC4 solarline 2 (latching) extender cable of 2.5mm^2, 15m length, male /female, 2Pcs. ×15.0m /Pcs.;	2	
PV-side Disconnector Box	With DC circuit breaker, DC Surge Protection Device and DC Rated Fuses; Waterproof Grade: IP65	1	
DC Cable from Disconnector Box to	BV/BVR1*4mm^2,2*10m length; plus one pair of MC4 Connector;	1	

PV Grid-tied Inverter	MG3KTL	1	
AC Grid-tied Box	single-phase grid connection	1	
	合计价格(Grand-total Price)		

Remarks:

① The PV panel of this system, if being fixed on your rooftop, could occupied an area of about 10㎡.

② To pursue a high-efficiency of this power generation system, when in installation, please pay attention to keeping the consistency of all PV module' level &orientation, so that to avoid a mismatch of the PV modules.

③ With high-quality and efficiency of our components, you could only positively expected an average annual output of solar electricity to be at a quite high level; If you use unqualified components, it may let you down.

④ For the confirmation of ordering PV mounting rack and accessories, you need to have a further discussion with our salesman to clear necessary information.

2.46KWp 并网光伏发电系统的评估 (使用单晶硅组件)
The Estimation of A 2.46KWp Grid-tied PV Power System w/i Mono-crystalline Solar Module

（1）系统配置一览表（Table of System Standard Components）:

Item	Description	Qty.	Picture of Item
PV Module	TD-410MC-108HC, mono-crystalline, 410watt w/i MC4 connectors and leading PV cables;	6	
PV Rack	PV panel mounting bracket on sloping roof	1	
	Hook		

	Guiding Rail		
DC Cable	MC4 solarline 2 (latching) extender cable of 2.5mm^2, 15m length, male /female, 2Pcs. ×15.0m /Pcs.;	2	
PV-side Disconnector Box	With DC circuit breaker, DC Surge Protection Device and DC Rated Fuses; Waterproof Grade: IP65	1	
DC Cable from Disconnector Box to	BV/BVR1*4mm^2,2*10m length; plus one pair of MC4 Connector;	1	
PV Grid-tied Inverter	MG3KTL	1	
AC Grid-tied Box	single-phase grid connection	1	
	合计价格(Grand-total Price)		

Remarks:

① The PV panel of this system, if being fixed on your rooftop, could occupied an area of about 12m^2.

② To pursue a high-efficiency of this power generation system, when in installation, please pay attention to keeping the consistency of all PV module' level &orientation, so that to avoid a mismatch of the PV modules.

③ With high-quality and efficiency of our components, you could only positively expected an average annual output of solar electricity to be at a quite high level; If you use unqualified components, it may let you down.

④ For the confirmation of ordering PV rack and accessories, you need to have a further discussion with our salesman to clear necessary information.

2.87KWp 并网光伏发电系统的评估 (使用单晶硅组件)
The Estimation of A 2.87KWp Grid-tied PV Power System w/i Mono-crystalline Solar Module

（1）系统配置一览表（Table of System Standard Components）：

Item	Description	Qty.	Picture of Item
PV Module	TD-410MC-108HC, mono-crystalline, 410watt w/i MC4 connectors and leading PV cables;	7	
PV Rack	PV panel mounting bracket on sloping roof	1	
	Hook		
	Guiding Rail		
DC Cable	MC4 solarline 2 (latching) extender cable of 2.5mm^2, 15m length, male /female, 2Pcs. ×15.0m /Pcs.;	2	
PV-side Disconnector Box	With DC circuit breaker, DC Surge Protection Device and DC Rated Fuses; Waterproof Grade: IP65	1	
DC Cable from Disconnector Box to	BV/BVR1*4mm^2,2*10m length; plus one pair of MC4 Connector;	1	

PV Grid-tied Inverter	MG3KTL	1	
AC Grid-tied Box	single-phase grid connection	1	
	合计价格(Grand-total Price)		

Remarks:

① The PV panel of this system, if being fixed on your rooftop, could occupied an area of about 15㎡.

② To pursue a high-efficiency of this power generation system, when in installation, please pay attention to keeping the consistency of all PV module' level &orientation, so that to avoid a mismatch of the PV modules.

③ With high-quality and efficiency of our components, you could only positively expected an average annual output of solar electricity to be at a quite high level; If you use unqualified components, it may let you down.

④ For the confirmation of ordering PV rack and accessories, you need to have a further discussion with our salesman to clear necessary information.

3.28KWp 并网光伏发电系统的评估 (使用单晶硅组件)
The Estimation of A 3.28KWp Grid-tied PV Power System w/i Mono-crystalline Solar Module

（1）系统配置一览表（Table of System Standard Components）：

Item	Description	Qty.	Picture of Item
PV Module	TD-410MC-108HC, mono-crystalline, 410watt w/i MC4 connectors and leading PV cables;	8	
PV Rack	PV panel mounting bracket on sloping roof	1	
	Hook		

	Guiding Rail		
DC Cable	MC4 solarline 2 (latching) extender cable of 2.5mm^2, 15m length, male /female, 2Pcs. ×15.0m /Pcs.;	2	
PV-side Disconnector Box	With DC circuit breaker, DC Surge Protection Device and DC Rated Fuses; Waterproof Grade: IP65	1	
DC Cable from Disconnector Box to	BV/BVR1*4mm^2,2*10m length; plus one pair of MC4 Connector;	1	
PV Grid-tied Inverter	MG3KTL	1	
AC Grid-tied Box	single-phase grid connection	1	
	合计价格(Grand-total Price)		

Remarks:

① The PV panel of this system, if being fixed on your rooftop, could occupied an area of about 17㎡.

② To pursue a high-efficiency of this power generation system, when in installation, please pay attention to keeping the consistency of all PV module' level &orientation, so that to avoid a mismatch of the PV modules.

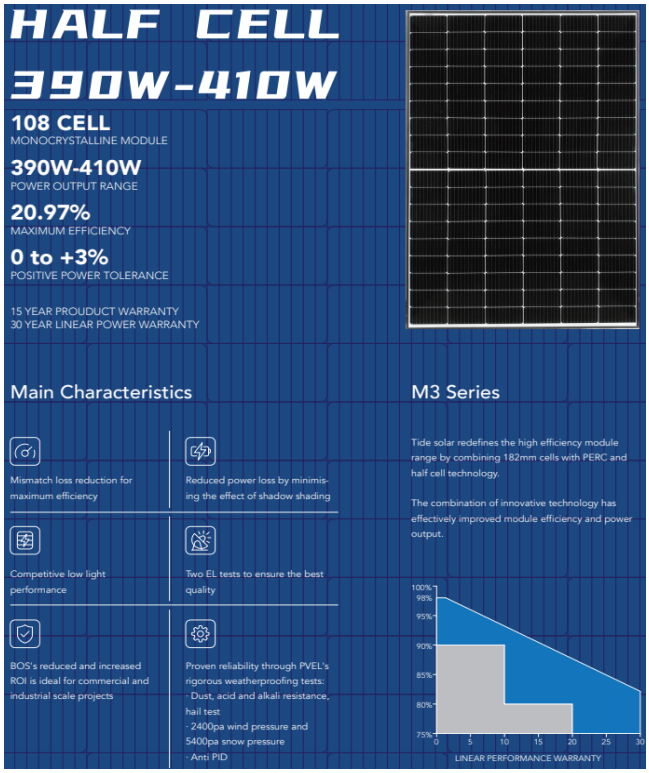
③ With high-quality and efficiency of our components, you could only positively expected an average annual output of solar electricity to be at a quite high level; If you use unqualified components, it may let you down.

④ For the confirmation of ordering PV rack and accessories, you need to have a further discussion with our salesman to clear necessary information.

以上各设计系统中拟使用的系统主要部件的参数一览表
List of Parameters for Main Components in the Above System Designed

拟用太阳能电池组件的参数（Parameters of Proposed PV Module）：

108 CELL
MONOCRYSTALLINE MODULE
390W-410W
POWER OUTPUT RANGE
20.97%
MAXIMUM EFFICIENCY
0 to +3%
POSITIVE POWER TOLERANCE
LINEAR PERFORMANCE WARRANTY
15 Year Product Warranty
30 Year Linear Power Warranty



Structural Characteristics

Module Size	1724x1134x30mm
Weight	21kg
Battery	single crystal PERC182x91mm (108pieces)
Glass	3.2mm tempered coated glass, low iron
Frame	anodized aluminum alloy
Junction Box	IP68, 3 diodes
Output Lead	4.0mm 2250mm(+) / 350mm(-) or customized
Mechanical Load	front 5400pa / back 2400pa

Packing Method

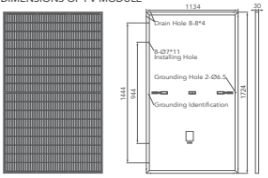
Module Size	1724x1134x30mm
Container	40' HQ
Quantity Per Pallet	36
Number Of Pallets Per Container	26
Quantity Per Container	936

Electrical Characteristics

Component Model	TD-390MC-108HC	TD-395MC-108HC	TD-400MC-108HC	TD-405MC-108HC	TD-410MC-108HC
Maximum Power (PMP)	STC	STC	STC	STC	STC
	390	395	400	405	410
Open Circuit Voltage (VOC)	36.9	37.01	37.12	37.22	37.32
Short Circuit Current (ISC)	13.4	13.5	13.6	13.7	13.8
Maximum Power Voltage (VMP)	30.59	30.69	30.81	30.93	31.05
Maximum Power Current (IMP)	12.78	12.88	12.99	13.10	13.20
Component Efficency (η_t)	19.95	20.20	20.46	20.72	20.97
Power Tolerance	(0, +3%)				
Maximum System Voltage	1500V DC				
Maximum Rated Fuse Current	25 A				

STC: Irradiance 1000 W/m² module temperature 25 ℃ AM=1.5

DIMENSIONS OF PV MODULE



Temperature Characteristics

Maximum Power Temperature Coefficient	-0.35 % / ℃
Temperature Coefficient Of Open Circuit Voltage	-0.27 % / ℃
Temperature Confficient Of Short Circuit Current	+0.05 % / ℃
Working Temperature	-40 ~ +85 ℃
Nominal Operating Cell Temperature (NOCT)	45 ± 2 ℃

拟用光伏汇流箱的参数（Parameters of PV Sting DC Combiner Box）：

Product Advantages:

• High Reliability

With DC FUSE;

With DC Surge Protection Device;

With DC circuit breaker or DC load isolation switch;

• Strong Adaptability

IP65 design, waterproof, anti dust and anti ultraviolet;

Strict test for high and low temperature, used widely;

The simple installation,the simplified system wiring; the convenient wiring;

The box body is made of cold rolled steel and other metal materials;

TECHNICAL PARAMETERS

Name	SHLX-PV1/1	
	Electric parameter	
System maximum dc voltage	550	1000
Maximum input current for each string	15A	
Maximum input strings	1	
Maximum output switch current	16A/20A	
Number of inverter MPPT	1	
Number of Output strings	1	
	Lightning protection	
Category of test	II grade protection	
Nominal discharge current	20kA	
Maximum discharge current	40kA	
Voltage protection level	2.8kV	3.8kV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
	System	
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV dc fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating Temperature	-25℃~+55℃	
Elevation of temperature	2km	
Permissible relative humidity	0-95%，no condensation	
	Mechanical parameter	
Width×High×Depth	300×260×140	

拟用太阳能并网逆变器的参数（Parameters of Proposed PV On-grid Inverter）：

Model		Single-phase				
		3kW	4kW	4.6kW	5kW	5.5kW
Input (DC)	Max. DC voltage (V)	500	600	600	600	600
	Starting voltage (V)	120	120	120	120	120
	MPPT voltage(V)	120-450	125-550	125-550	125-550	125-550
	Operation voltage (V)	210-400	240-500	240-500	250-500	250-500
	MPPT/strings per MPPT	1/2	1/2	1/2	1/2	1/2
	Max. DC power (W)	3300	4000	4600	5000	5500
	Max. input current (A)	15×1	16×1	18×1	20×1	23×1
	Isc PV	16.5	18	20	22	25
	Max inverter backfeed current to the array(A)	0	0	0	0	0
	DC switch	Optional				
Output (AC)	Max output power	3000	3680	4200	4600	5000
	Voltage(V)/ frequency(Hz)	180~270Vac、50Hz(47~51.5Hz) / 60Hz(57~61.5Hz) VDE0126& AR-N4105、AS4777.2/AS4777.3、CQC、G83-2、G59-3、C10/11、TF3.2.1、PEA				
	Max. AC current (A)	13	16	18.3	20	24
	Maximum output overcurrent protection	22.0	33.5	37.9	40.2	40.2
	Maximum output fault current	40A ,19.5ms	104A,37.2ms			
	AC inrush current	Less than 10 A	Less than 2 A			
	Power factor	-0.9~+0.9 (adjustable)				
	Harmonic distortion	< 3% (rated power)				
System	Cooling	Natural cooling				
	Maximum efficiency	97.60%	97.60%	97.40%	97.50%	97.50%
	European efficiency	96.50%	96.50%	96.50%	96.50%	96.50%
	MPPT efficiency	99.9%				
	Protection degree	IP65				
	Power consumption	< 1W				
	Isolation mode	Transformerless				
	Protective class	VI				
	Overvoltage category	AC:III,PV:II				
	inverter topology	Non-isolated				
	Pollution degree	3				
	Operation temperature	(-25℃~+60℃)，derate after 45℃				
	Relative humidity	4~100%, Condensation				
	Max. altitude(m)	<2000 (derate if the altitude>2000)				
	Displaying	LED/ LCD, backlit display				
	Systerm language	English, Chinese, German, Dutch				
	Communication	RS485 (standard); handheld keypad; WiFi (optional)				
	DC terminal	BC03A/ BC03B				
	Noise dB(A)	≤25				
	Installation mode	Wall installation				
Protection	Input overvoltage protection, input overcurrent protection, DC isolation monitoring, DC monitoring, grounding fault current monitoring, grid monitoring, island protection, short circuit protection, overheating protection					