

100/125 kW, 1500 Vdc String Inverters for North America

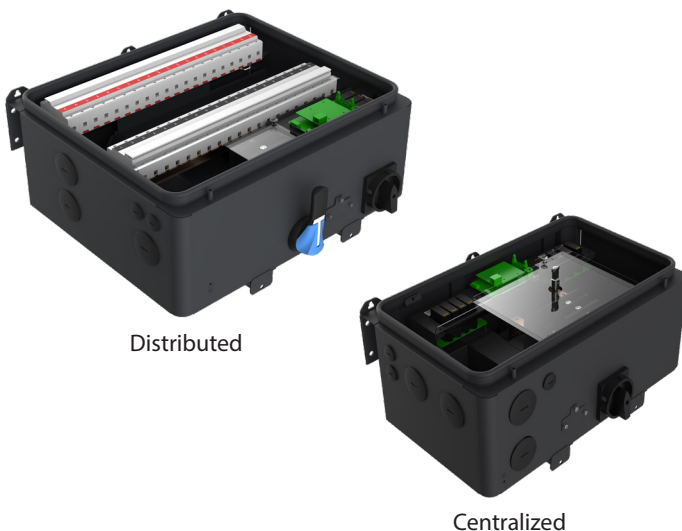


CPS SCH100/125KTL-DO/US-600

The 100 and 125 kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced, and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges, and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125 kW products ship with the Distributed or Centralized Wire Box, each fully integrated and separable with AC and DC disconnect switches. Enhanced DC Wire Boxes are available to allow DC disconnection under short circuit conditions. The CPS FlexOM Gateway enables communication, controls, and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Touch-safe DC Fuse holders add convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper- and aluminum-compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100 kW @ 0.9 PF and 125 kW @ 0.95 PF
- Generous 1.87 (100 kW) and 1.5 (125 kW) DC/AC inverter load ratios
- Separable wire box design for fast service
- Enhanced DC wire boxes available



Distributed

Centralized

Standard Wire Boxes



Distributed

Centralized

Enhanced DC Wire Boxes

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5 kW	
Max. DC input voltage	1500 V	
Operating DC input voltage range	860-1450 Vdc	
Start-up DC input voltage / power	900 V / 250 W	
Number of MPP trackers	1	
MPPT voltage range ¹	870-1300 Vdc	
Max. PV input current (Isc x1.25)	275 A	
Number of DC inputs	Distributed Wire Box: 20 PV source circuits, positive and negative fused Centralized Wire Box: 1 input circuit, 1-2 terminations per pole, non-fused	
DC disconnection type	Load-rated DC switch	
DC surge protection	Type II MOV (with indicator/remote signaling)	
AC Output		
Rated AC output power ²	100 kW	125 kW
Max. AC apparent power (selectable)	100 kVA (111 kVA @ PF > 0.9)	125 kVA (132 kVA @ PF > 0.95)
Rated output voltage	600 Vac	
Output voltage range ³	528-660 Vac	
Grid connection type ⁴	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600 Vac	96.2 / 106.8 A	120.3 / 127.0 A
Rated output frequency	60 Hz	
Output frequency range ³	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current THD	< 3%	
Max. fault current contribution (1 cycle RMS)	41.47 A	
Max. OCPD rating	200 A	
AC disconnection type	Load-rated AC switch	
AC surge protection	Type II MOV (with indicator/remote signaling)	
System		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
Standby / night consumption	< 4 W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range ²	-22°F to 140°F / -30°C to 60°C	
Non-operating temperature range ⁵	-40°F to 158°F / -40°C to 70°C	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	< 65 dBA @ 1 m and 77°F (25°C)	
Display and Communication		
User interface and display	LED indicators, Wi-Fi and app	
Inverter monitoring	Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W × H × D)	Distributed Wire Box: 45.28 × 24.25 × 9.84 in (1150 × 616 × 250 mm) Centralized Wire Box: 39.37 × 24.25 × 9.84 in (1000 × 616 × 250 mm)	
Weight	Inverter: 121 lbs (55 kg) Distributed Wire Box: 55 lbs (25 kg) Centralized Wire Box: 33 lbs (15 kg)	
Mounting / installation angle	15-90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal [3Φ] (wire range: 1/0 AWG-500 kcmil CU/AL; lugs not supplied) Screw clamp terminal block [N] (#12-1/0 AWG CU/AL)	
DC termination	Distributed Wire Box: Screw clamp fuse holder (wire range: #12-#6 AWG CU) Centralized Wire Box: Busbar, M10 bolts (wire range: #1 AWG-500 kcmil CU/AL [1 termination per pole], #1 AWG-300 kcmil CU/AL [2 terminations per pole]; lugs not supplied)	
Fused string inputs	Standard/Distributed Wire Boxes: 25 A fuses provided (fuse values up to 30 A acceptable) Enhanced DC Wire Boxes: 20 A fuses provided (fuse values up to 30 A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15	
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018 ⁶ , CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Vol-Watt	
Warranty		
Standard	5 years	
Extended terms	10, 15, and 20 years	

1) See user manual for further information regarding MPPT voltage range when operating at non-unity PF.

2) 100 kW active power derating begins at 113°F (45°C) when MPPT ≥ Vmin; 125 kW active power derating begins at 107.6°F (42°C) when PF = ±0.95 and MPPT ≥ Vmin, and at 113°F (45°C) when PF=1 and MPPT ≥ Vmin.

3) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.

4) Delta configurations must not be corner-grounded.

5) See user manual for further requirements regarding non-operating conditions.

6) Firmware version 12.0 or later required.

Williston G Katie Lane Solar, LLC Perimeter Fence Specifications

Project Fencing Specs:

Corner/ End/ Gate Posts

6-7 inches round x 12 feet Pressure treated Southern yellow pine

Line Posts:

4-5 inches round x 12 feet Pressure treated Southern yellow pine
Posts every 20 feet on average

Wire: [Home of the Fixed Knot Fence](#) (see attached cut sheet)

20966 Black Benzial coated
20 Horizontal Wires
96 inches(8 feet) High
6 inch Vertical spacing

Gates:

2 double drive heavy duty 2" gates (12' each in length) [Applegate Heavy Duty Gate](#) (see attached cut sheet)

Example of Fencing:



TEXAS GATE & PANEL CO.

SALES CATALOG

BRYAN, TEXAS

1-800-795-7655

"built by ranchers, for ranchers"

All gates are designed with galvanized American made tubing. All gates are 8ft. 2in. tall, with round corners. Gates come with three heavy duty hinges with 12 inch bolt hook. Vertical supports 1-8, 1-10, 2-12, 2-14, 3-16. All vertical and horizontal bars are saddle notched for superior strength. All gates are 4 inches shorter than advertised length for hinge placement. All gates come with 6 gauge 4X4 mesh panel welded to the gate frame.

Details:

- Part #DM-12
- 1.90 diameter galvanized tubing, 16 gauge in thickness with a 4"X4" 6 gauge wire panel that is welded to the frame. All tube joints are saddle-notched and welded.

DEER MASTER GATES

1-7/8 16 ga. GALVANIZED TUBING

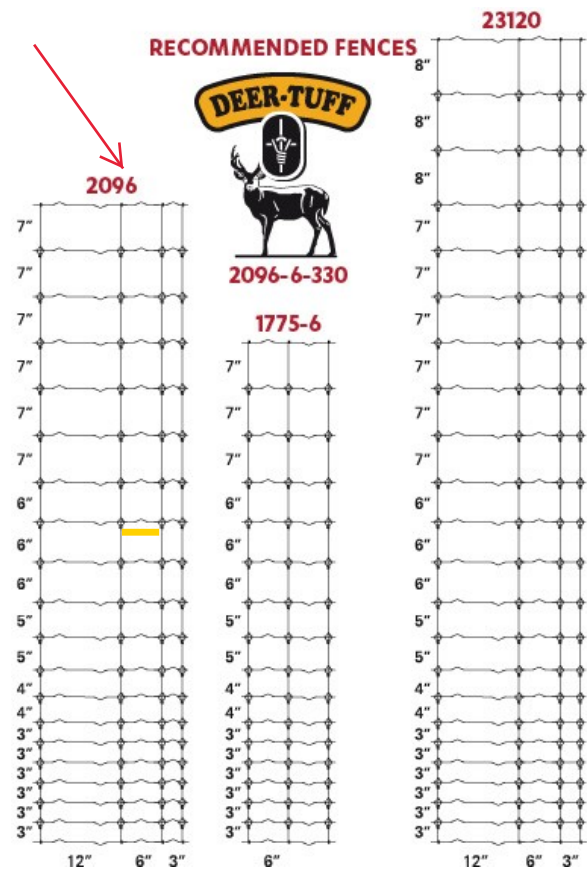
4X4 WIRE MESH GATE

<u>ORDER</u>	<u>LENGTH</u>	<u>WT.</u>
TG-DM-04	4FT.	44
TG-DM-06	6FT.	66
TG-DM-08	8FT.	88
TG-DM-10	10FT.	110
TG-DM-12	12FT.	132
TG-DM-14	14FT.	154
TG-DM-16	16FT.	176
TG-DM-18	18FT.	198
TG-DM-20	20FT.	220

***Gates also made with walkthrough man gate.**



23120-6	Boundary fence, medium to high pressure	Strong, cost-saving 6" spacing
23120-3	Breeding & Fawn Pens, high pressure areas	Strongest fence with 3" spacing



Stay-Tuff
Fence Mfg Inc.
1000 N.
Walnut Ave. Suite 225,
New Braunfels Texas 78130
USA

Toll Free
1888 223 8322

Fax
1 800 608 5114

Email
sales@staytuff.com

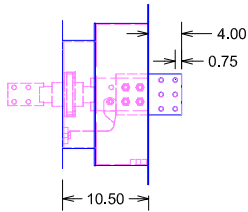


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[SafetyGuidelines](#) [Warranty](#)



ITEM	DESCRIPTION
1	Welded Cover w/ Handhole
2	Cooling Corrugate
3	Cooper Bayonet Fusing w/ Dripshield
4	Current Limiting Backup Fuses (Internal)
5	Drain Valve with Sampler
6	Ground Pad .50-13 Tap
7	Ground Strap and Nut
8	Ground Strap and Pad
9	Ground Shield Bushing
10	Ground Strap and Pad
11	H0 Bushing
12	9.0kV (7.65kV MCOV) Elbow Arrester (boxed)
13	High Security Cabinet w/ Pentahead Door Bolts
14	35kV 200 Amp HV Bushing Well w/ 15kV Insert
15	Lifting Lug
16	Liquid Temperature Gauge
17	1.2kV LV Bushing w/ 6 Hole Spade w/ 6 Hole Adapter
18	Magnetic Oil Level Gauge
19	Nameplate
20	One Inch Upper Press. Conn. and Fill Plug
21	Parking Stand
22	Pressure Relief Device
23	Pressure Relief Valve
24	Pressure Vacuum Gauge
25	Schrader Valve
26	Seismic Anchor Provisions
27	Tank Base w/ Jacking and Rolling Facilities
28	5-Position Tap Changer
29	X0 Bushing
30	External Visible Loadbreak Window
31	Two Position Loadbreak Switch w/ Padlockable Cover
32	LV Bushing Throat

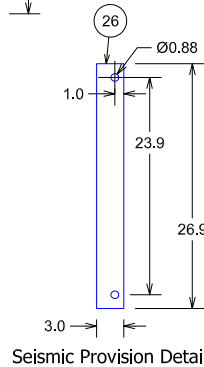
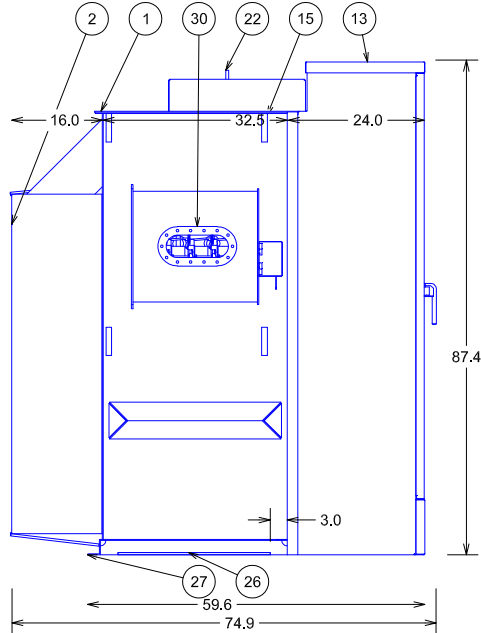
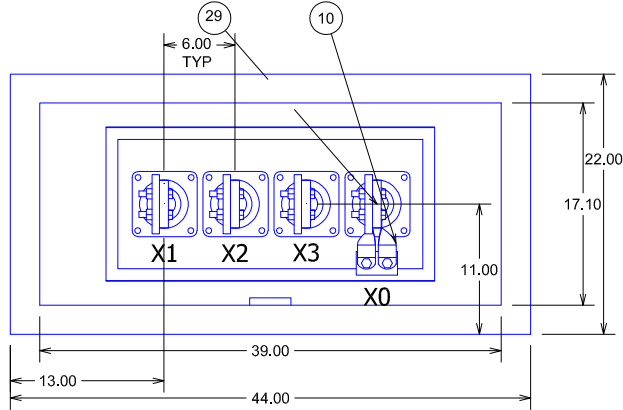
LV Throat Detail



3PH Padmount Transformer 60Hz
2500.0 kVA KNAN 75 AWR FR3
HV 12470Y/7200 95 kV BIL
LV 600Y/347 30 kV BIL
5.76 %IZ
Munsell Green Topcoat
Mild Steel Construction
UL Listed

SO 217866620,13
PO PS1387-SV0580
Lawrence Brook Solar LM9672

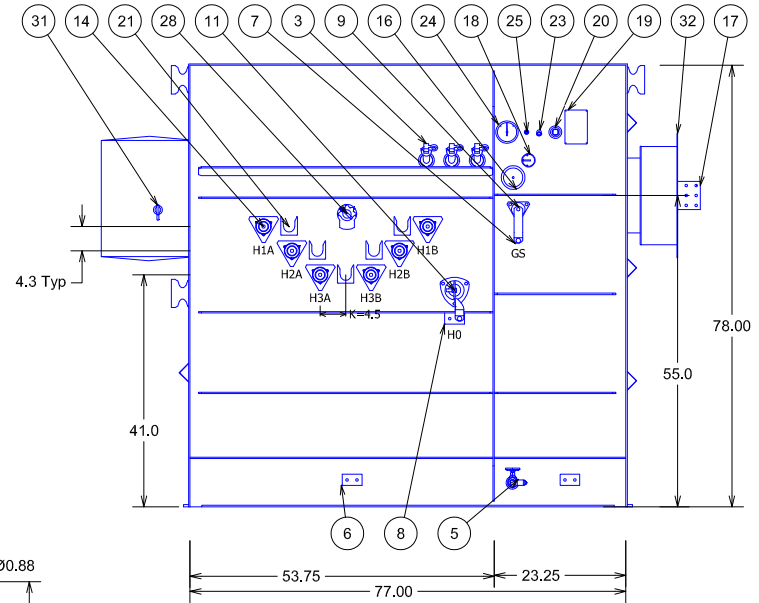
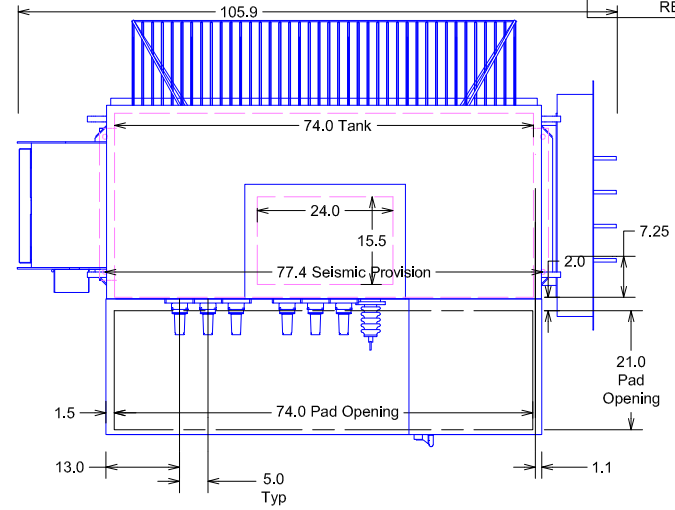
LV Bushing Throat Detail



Seismic Provision Detail

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REVISIONS



MATERIAL:

ALL DIMENSIONS ARE IN INCHES [MM]

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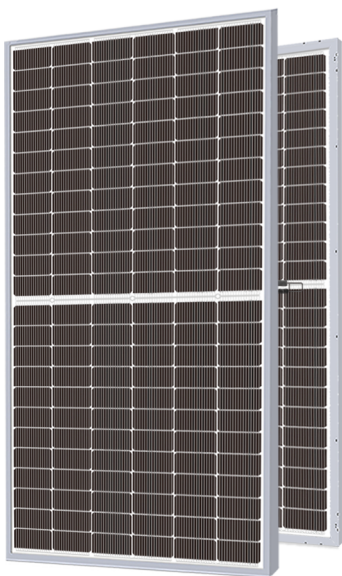


TITLE: Distribution Transformer Outline Drawing
DESC: **COOPER POWER SERIES** THREE-PHASE
PAD-MOUNTED COMPARTMENTAL TYPE

DWG: PTP DATE: 5/11/2020 REF: P3D V04R00M06 SHEET #: 1 OF 1 SCALE: REV: 00

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1189611A8461 REVISIONS	MATERIAL:	 Powering Business Worldwide					
	ALL DIMENSIONS ARE IN INCHES [MM]						
	THE INFORMATION ON THIS DOCUMENT WAS CREATED BY EATON. IT WAS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT WAS SUPPLIED.	TITLE: LASER NAMEPLATE DESC: COOPER POWER SERIES 0002TA66XHAA					
		DWG: PTP	DATE: 5/12/2020	REF:	SHEET #: 1 of 1	SCALE: 1=1	REV: 00
	1189611A8461						



ZXM7-UHLDD144 Series

16BB HALF-CELL N-Type TOPCon Bifacial Double Glass
Monocrystalline PV Module

555-580W

POWER RANGE

22.45%

MAXIMUM EFFICIENCY

0.40%

YEARLY DEGRADATION



12 YEARS PRODUCT WARRANTY



30 YEARS OUTPUT GUARANTEE



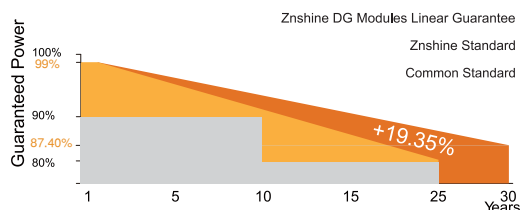
IEC 61215/IEC 61730

ISO 14001: Environmental Management System

ISO 9001: Quality Management System

ISO45001: Occupational Health and Safety Management System

*As there are different certification requirements in different markets, please contact your local znshine sales representative for the specific certificates applicable to the products in the region in which the products are to be used.



*Please check the valid version of Limited Product Warranty which is officially released by ZNSHINE PV-TECH Co., Ltd.

Key Features



Excellent Cells Efficiency

SMBB technology reduce the distance between busbars and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



TIER 1

Global, Tier 1 bankable brand, with independently certified advanced automated manufacturing.



Excellent Quality Management System

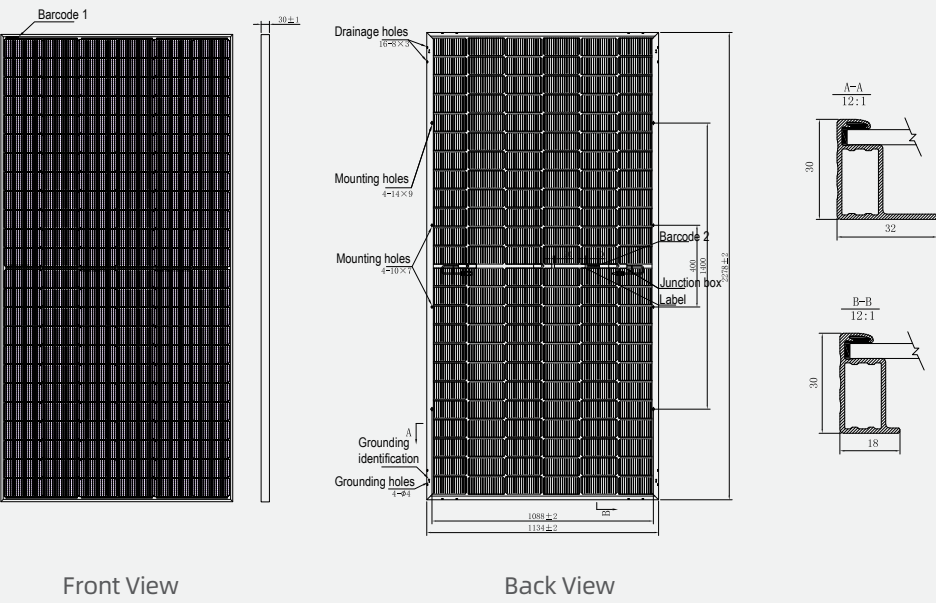
Warranted reliability and stringent quality assurances well beyond certified requirements.



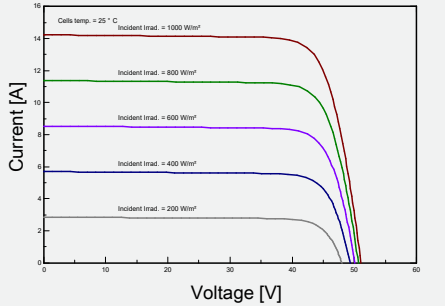
Bifacial Technology

Up to 25% additional power gain from back side depending on albedo.

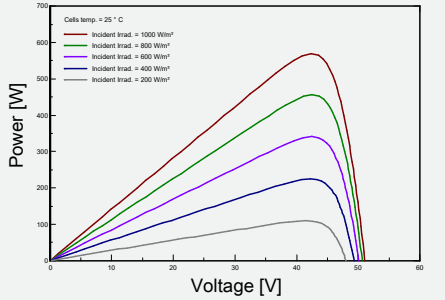
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(570W)



P-V CURVES OF PV MODULE(570W)



ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	555	560	565	570	575	580
Maximum Power Voltage Vmp(V)	41.80	42.00	42.20	42.40	42.60	42.80
Maximum Power Current Imp(A)	13.28	13.34	13.39	13.45	13.50	13.56
Open Circuit Voltage Voc(V)	50.50	50.70	50.90	51.10	51.30	51.50
Short Circuit Current Isc(A)	14.05	14.11	14.17	14.23	14.29	14.35
Module Efficiency (%)	21.48	21.68	21.87	22.07	22.26	22.45

*The data above is for reference only and the actual data is in accordance with the practical testing
*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25±2°C, AM 1.5
*Measuring uncertainty: ±3%, all the electrical characteristics such as Power, Im, Vm and FF are within ±3% tolerance.

MECHANICAL DATA

Solar cells	N-type Monocrystalline
Cells orientation	144 (6×24)
Module dimension	2278×1134×30 mm (With Frame)
Weight	31.5±1.0 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68, 3 diodes
Cables	4 mm² ,350 mm (With Connectors)
Connectors*	MC4-compatible

*Please refer to regional datasheet for specified connector

ELECTRICAL CHARACTERISTICS | NMOT*

Maximum Power Pmax(Wp)	419.00	422.80	426.40	430.30	433.90	437.80
Maximum Power Voltage Vmp(V)	39.30	39.50	39.70	39.90	40.00	40.20
Maximum Power Current Imp(A)	10.65	10.70	10.74	10.79	10.83	10.88
Open Circuit Voltage Voc(V)	47.70	47.80	48.00	48.20	48.40	48.60
Short Circuit Current Isc(A)	11.34	11.39	11.44	11.48	11.53	11.58

*NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS WITH 25% REAR SIDE POWER GAIN*

Front power Pmax/W	555	560	565	570	575	580
Total power Pmax/W	694	700	706	713	719	725
Vmp/V(Total)	41.90	42.10	42.30	42.50	42.70	42.90
Imp/A(Total)	16.56	16.63	16.70	16.76	16.83	16.90
Voc/V(Total)	50.60	50.80	51.00	51.20	51.40	51.60
Isc/A(Total)	17.52	17.59	17.67	17.74	17.82	17.88

*Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

TEMPERATURE RATINGS

NMOT	44°C ±2°C
Temperature coefficient of Pmax	(-0.30±0.03)%/°C
Temperature coefficient of Voc	-0.25%/°C
Temperature coefficient of Isc	0.046%/°C
Refer. Bifacial Factor	(80±10)%

WORKING CONDITIONS

Maximum system voltage	1500 V DC
Operating temperature	-40°C~+85°C
Maximum series fuse	30 A
Front Side Maximum Static Loading	Up to 5400Pa
Rear Side Maximum Static Loading	Up to 2400Pa

*Remark: Do not connect Fuse in Combiner Box with two or more strings in parallel connection

PACKAGING CONFIGURATION*

Piece/Box	36
Piece/Container(40'HQ)	720

*Customized packaging is available upon request.
*Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.
*Caution: Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.