



**CHUBB  
INSURANCE**



# SYP285S~SYP320S

## POLYCRYSTALLINE MODULE 72x6"

### Characteristics & Performance

- Use of only certified materials at highest quality standards.
- The process of cell and module production is fully automated with 100% quality control and product traceability.
- Heavy load mechanical resistance: TÜV certified (5400Pa tested against snow and 2400Pa test against wind)
- Excellent performances even during low solar radiation
- Guaranteed positive tolerance 0 to +3% of power for each module

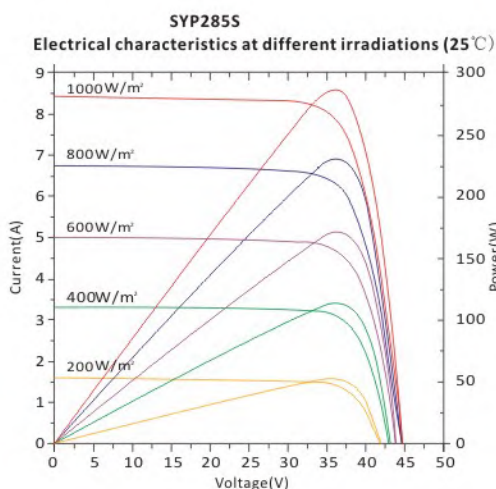
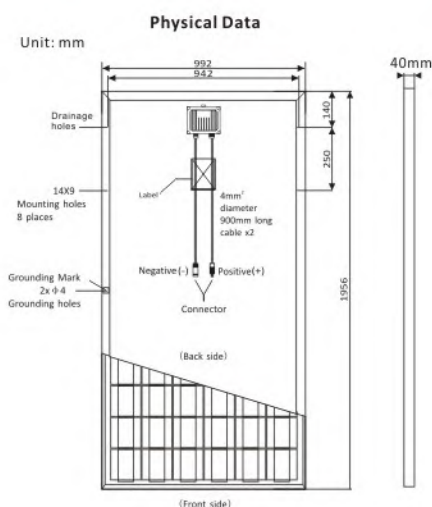
### Certifications for Incentives

- **Quality, Environment, Health & Safety**  
ISO9001:2008, ISO14001:2004, OHSAS18001:2007  
Full Member PV Cycle Association AISBL
- **Product Certifications**  
Quality and Robustness: IEC61215:2005  
Safety: IEC61730 -1/-2, MCS, CEC, UL  
Resistance to salt corrosion (salt fog): IEC61701:2000  
Resistance to ammonia fumes: Ammonia Resistance Test

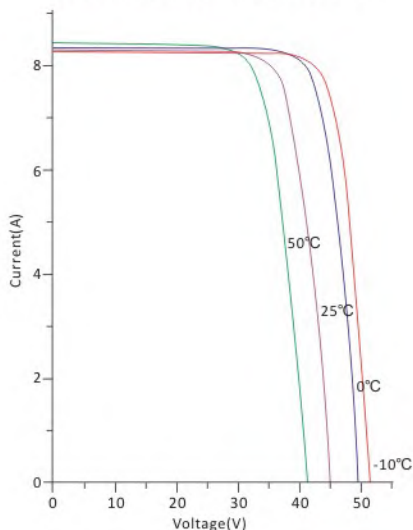
### 25 Year Linear Power Guarantee

- **Commercial**  
12 years on material and manufacturing defects
- **Performance**  
Power not less than 90% of power peak during the first 12 years  
Power not less than 82% of power peak during the subsequent 13 years.





**I-V characteristics at different cell temperatures (AM1.5, 1000W/m $^2$ )**



### Electrical Characteristics at STC

Type	SYP285S	SYP290S	SYP295S	SYP300S	SYP305S	SYP310S	SYP315S	SYP320S
Maximum Power	P <sub>max</sub> (W)	285W	290W	295W	300W	305W	310W	320W
Tolerance Value for Power	%	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%	0~+3%
Maximum Power Voltage	V <sub>mpp</sub> (V)	35.32	35.41	35.60	35.90	36.20	36.40	36.80
Maximum Power Current	I <sub>mpp</sub> (A)	8.07	8.19	8.29	8.36	8.43	8.52	8.70
Open Circuit Voltage	V <sub>oc</sub> (V)	44.80	44.80	44.80	44.90	44.92	44.94	45.02
Short Circuit Current	I <sub>sc</sub> (A)	8.48	8.63	8.70	8.85	8.95	9.15	9.25
Module Efficiency	$\eta$	>14.68%	>14.94%	>15.20%	>15.46%	>15.72%	>15.98%	>16.24%

Performance at STC: Irradiance of 1000W/m $^2$ , Module temperature 77 $\pm$ 3.6°F (25 $\pm$ 2°C)  
AM 1.5 Power measurement tolerance:  $\pm$ 3%

### Electrical Characteristics at NOCT

Type	SYP285S	SYP290S	SYP295S	SYP300S	SYP305S	SYP310S	SYP315S	SYP320S
Maximum Power	P <sub>max</sub> (W)	207.95	212.95	216.74	220.70	224.13	227.85	231.25
Maximum Power Voltage	V <sub>mpp</sub> (V)	32.15	32.24	32.35	32.65	32.96	33.13	33.32
Maximum Power Current	I <sub>mpp</sub> (A)	6.47	6.61	6.70	6.73	6.80	6.87	6.94
Open Circuit Voltage	V <sub>oc</sub> (V)	40.60	40.72	41.01	41.38	41.76	42.02	42.29
Short Circuit Current	I <sub>sc</sub> (A)	6.91	7.06	7.37	7.42	7.48	7.55	7.68

Performance at NOCT: Irradiance 800W/m $^2$ , Ambient temperature 20°C, Wind speed 1m/s  
Power measurement tolerance:  $\pm$ 3%

### Temperature Coefficients(T<sub>c</sub>)

NOCT(Nominal Operating Cell temperature)	45 $\pm$ 2°C
Temperature Coefficient of VOC( $\beta$ )	-0.32%/°C
Temperature Coefficient of ISC( $\alpha$ )	+0.034%/°C
Temperature Coefficient of P <sub>max</sub>	-0.40%/°C

### Permissible Operating Conditions

Maximum System Voltage	1000 V
Operating Temperature Range	-40°C ~ +85°C
Maximum Surface Load Capacity	Test up to 5400Pa according to IEC61215 (Advanced test)
Resistance Against Hail	Maximum diameter of 1in.(25mm) impact speed of 51.5mph(23m/s)

### Mechanical specifications

Cells	Polycrystalline cell with 3-busbars,6"(6x12)
Junction Box	IP67,combined with 3 by-pass diodes
Front Glass Thickness	4.0mm
Connecting Cable/Connector	MC4 compatible connector/4mm $\phi$ diameter, 900mm length
Frame Dimension	1956x992x40mm
Weight	23KG

### Packing Features

Frame Height	40mm
Qty/Pallet (PCS)	28
Qty/40HC container (PCS)	672