



**CHUBB
INSURANCE**



SYP190S-M~SYP205S-M

MONOCRYSTALLINE MODULE 72x5"

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

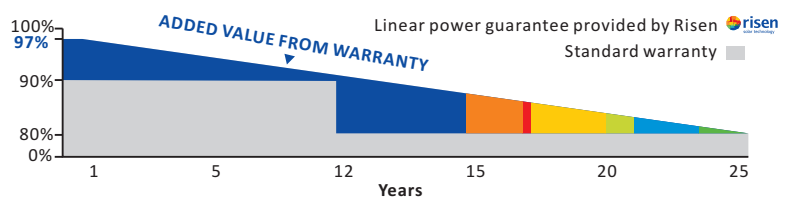
■ Commercial

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 80% of power peak during the subsequent 13 years.



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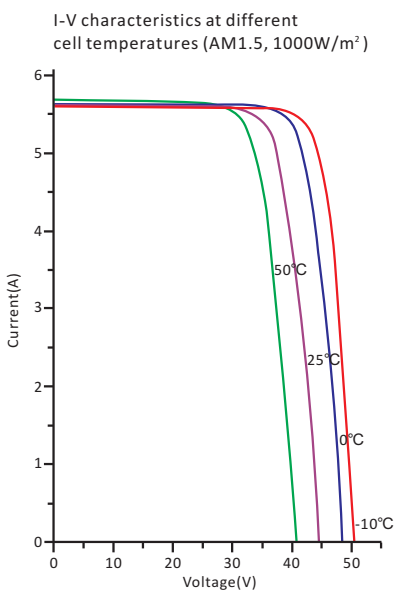
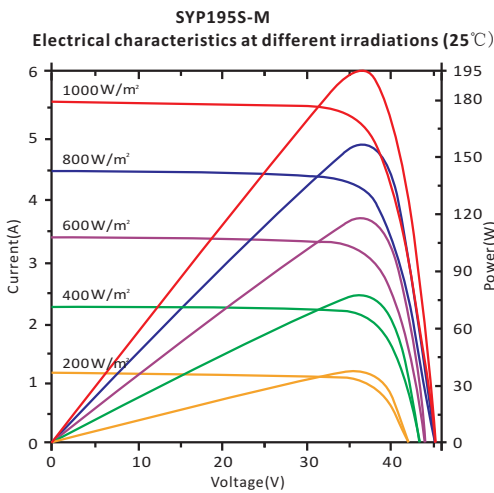
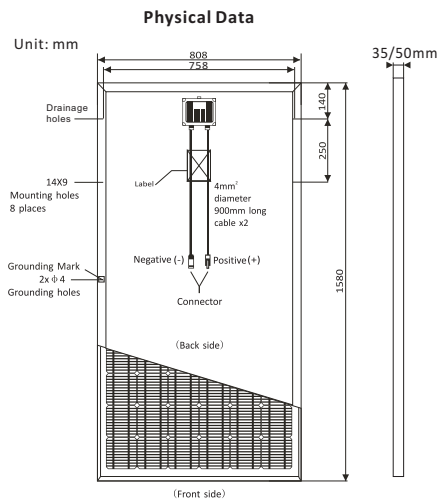
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Electrical Characteristics at STC

Type		SYP190S-M	SYP195S-M	SYP200S-M	SYP205S-M
Maximum Power	P _{max} (W)	190W	195W	200W	205W
Tolerance Value for Power	%	0~+3%	0~+3%	0~+3%	0~+3%
Maximum Power Voltage	V _{mpp} (V)	36.60	36.80	37.00	37.20
Maximum Power Current	I _{mpp} (A)	5.20	5.30	5.40	5.52
Open Circuit Voltage	V _{oc} (V)	45.10	45.30	45.50	45.60
Short Circuit Current	I _{sc} (A)	5.60	5.60	5.86	5.93
Module Efficiency	η	>14.88%	>15.27%	>15.66%	>16.05%

Performance at STC: Irradiance of 1000W/m², Module temperature 77±3.6^oT (25±2^oC)
AM 1.5 Power measurement tolerance: ±3%

Electrical Characteristics at NOCT

Type		SYP190S-M	SYP195S-M	SYP200S-M	SYP205S-M
Maximum Power	P _{max} (W)	138.03	142.15	146.88	150.00
Maximum Power Voltage	V _{mpp} (V)	32.92	33.22	33.41	33.50
Maximum Power Current	I _{mpp} (A)	4.19	4.28	4.37	4.48
Open Circuit Voltage	V _{oc} (V)	40.63	40.72	40.81	42.60
Short Circuit Current	I _{sc} (A)	4.39	4.58	4.66	4.77

Performance at NOCT: Irradiance 800W/m², Ambient temperature 20^oC, Wind speed 1m/s
Power measurement tolerance: ±3%

Temperature Coefficients(Tc)

NOCT(Nominal Operating Cell temperature)	45±2 ^o C
Temperature Coefficient of VOC(β)	-0.32%/ ^o C
Temperature Coefficient of ISC(α)	+0.02%/ ^o C
Temperature Coefficient of Pmax	-0.40%/ ^o C

Permissible Operating Conditions

Maximum System Voltage	1000 V
Operating Temperature Range	-40 ^o C ~ +85 ^o 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	Monocrystalline cell,5"(6x12)
Junction Box	IP67,combined with 3 by-pass diodes
Front Glass Thickness	4.0mm
Connecting Cable/Connector	MC4 compatible connector/4mm ² diameter, 900mm length
Frame Dimension	1580x808x35/50mm
Weight	15KG/16.5KG

Packing Features

Frame Height	35mm	50mm
Qty/Pallet (PCS)	29	22
Qty/40GP container (PCS)	812	616