MONO

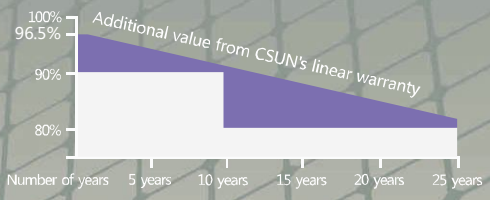
PowerGuard
SPECIALTY INSURANCE SERVICES

Powerguard Insurance Global Coverage

The power output shall not be less than 96.5%of the minimum power output stated in the product data sheet in the first year of the product' s life cycle. The loss of power output shall not exceed 0.68% per year thereafter, ending with 80.18% in the 25th year.

CSUN Standard Warranty

CSUN's **NEW** linear performance warranty



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CSUN
energy for today

CSUN310-60M-BB

High efficiency PERC technology for esthetic applications

CSUN310-60M-BB CSUN305-60M-BB
CSUN300-60M-BB CSUN295-60M-BB
CSUN290-60M-BB

19.09%
Module efficiency

310W
Highest power output

10years
Material & Workmanship warranty

25years
Linear power output warranty

- PID-free
- World class mono efficiency
- Tighter porduct performance distribution and current sorting reduces the mismatch power loss in system operation
- Positive tolerance offer
- Good temperature coefficient enables higher output in high temperature regions
- Excellent performance under low light conditions
- Certified for salt/ammonia corrosion resistance
- Load certificates: wind to 2400Pa and snow to 5400Pa

- China Sunergy Co., Ltd. designs, manufactures and delivers high efficient solar cells and modules to the world from its production centers based in China, Turkey, South Korea and Vietnam.
- Founded in 2004, China Sunergy is well known for its advanced solar cell technology reliable product quality and excellent customer service.
- As one of leading PV enterprises, China Sunergy has delivered more than 4.0GW of solar products to residential, commercial, utility and off-grid projects all around the word.

- Note:
  All specifications, warranties, certifications about module of "CSUN" series also apply to that of "SST".

  All information and data are subject to change without notice.

Right 2017

Electrical characteristics at Standard Test Conditions(STC)

Module Type	CSUN310-60M-BB	CSUN305-60M-BB	CSUN300-60M-BB	CSUN295-60M-BB	CSUN290-60M-BB
Maximum Power - Pmax (W)	310	305	300	295	290
Open Circuit Voltage - Voc (V)	40.0	39.9	39.8	39.6	39.5
Short Circuit Current - Isc (A)	9.81	9.72	9.6	9.54	9.47
Maximum Power Voltage - Vmpp (V)	32.6	32.4	32.2	32	31.9
Maximum Power Current - Impp (A)	9.52	9.42	9.31	9.22	9.1
Module Efficiency	19.09	18.78%	18.48%	18.17%	17.86%

Standard Test Conditions (STC): irradiance 1,000 W/m²; AM 1,5; module temperature 25°C. Tolerance of Pmpp: 0~+3%.

Measuring uncertainty of power: ±3%. Certified in accordance with IEC 61215, IEC 61730-1/2 and UL 1703.

Electrical Characteristics at Normal Operating Cell Temperature(NOCT)

Module Type	CSUN310-60M-BB	CSUN305-60M-BB	CSUN300-60M-BB	CSUN295-60M-BB	CSUN290-60M-BB
Maximum Power - Pmax (W)	233	229	225	220	216
Open Circuit Voltage - Voc (V)	37.5	37.4	37.3	37	36.9
Short Circuit Current - Isc (A)	7.95	7.84	7.74	7.69	7.64
Maximum Power Voltage - Vmpp (V)	31.3	31.1	30.9	30.6	30.3
Maximum Power Current - Impp (A)	7.47	7.38	7.28	7.22	7.14

Normal Operating Cell Temperature((NOCT) : irradiance 800W/m^2; wind speed 1 m/s ; cell temperature 45℃; ambient temperature 20℃.

Measuring uncertainty of power: ±3%. Certified in accordance with IEC 61215, IEC 61730-1/2 and UL 1703.

Temperature Characteristics

NOTC	45℃ (±2℃)
Voltage Temperature Coefficient	-0.29%/K
Current Temperature Coefficient	+0.05%/K
Power Temperature Coefficient	-0.39%/K

Maximum Ratings

Maximum System Voltage [V]	1000
Series Fuse Rating [A]	20

Material Characteristics

Dimensions	1640×990×35mm (L×W×H)
Weight	18.3kg
Frame	Anodized aluminum profile
Front Glass	White toughened safety glass, 3.2 mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Sheet	Composite film
Cells	6×10 pieces monocrystalline solar cells series strings (156mm×156mm)
Junction Box	Rated current≧13A, IP≧67, TUV&UL
Cable&Connector	Length 900 mm, 1×4 mm^2, compatible with MC4

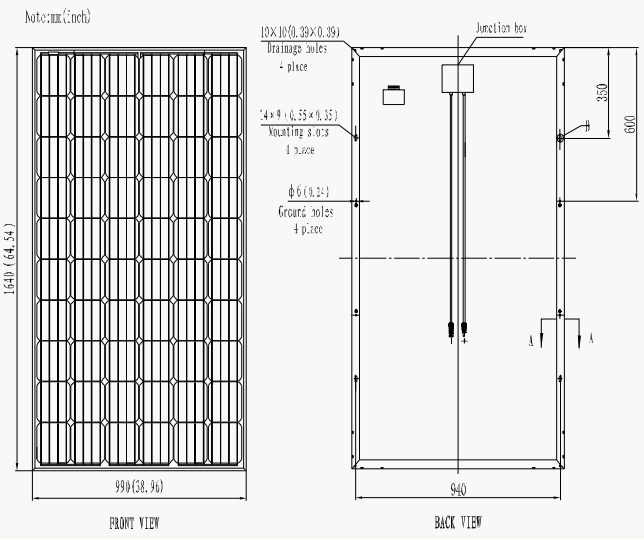
Packaging

Dimensions(L×W×H)	1690×1120×112mm
Container20'	360
Container40'	840
Container40'HC	910

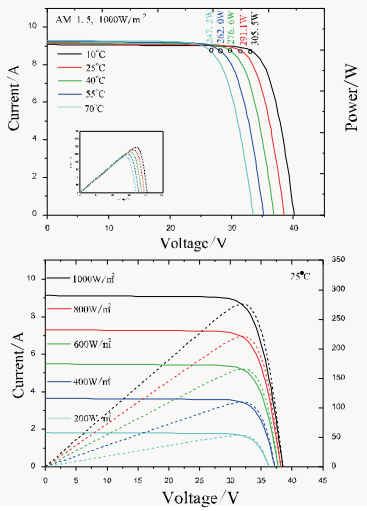
System Design

Temperature Range	-40 °C to + 85 °C
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m·s^{-1}
Maximum Surface Load	5,400 Pa
Application class	class A
Safety class	class Ⅱ

Dimensions



IV-Curves



Excellent performance under weak light condition.