

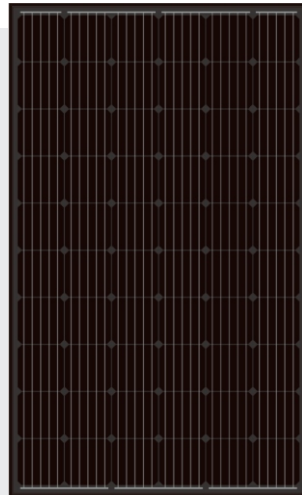
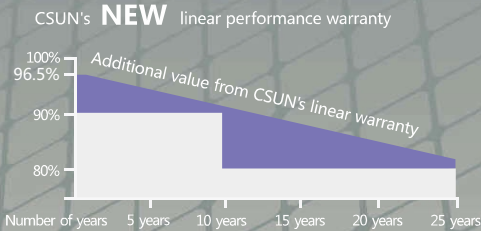
MONO



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



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

10 years
Material & Workmanship warranty

25 years
Linear power output warranty



PID-free



World class mono efficiency



Tighter product 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 world.

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) | 40.2 | 39.9 | 39.8 | 39.1 | 38.9 |
| Short Circuit Current - Isc (A) | 9.8 | 9.72 | 9.6 | 9.44 | 9.36 |
| Maximum Power Voltage - Vmpp (V) | 32.6 | 32.4 | 32.2 | 31.8 | 31.7 |
| Maximum Power Current - Imp (A) | 9.51 | 9.42 | 9.31 | 9.27 | 9.14 |
| 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 Pmp: 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 - Imp (A) | 7.47 | 7.38 | 7.28 | 7.22 | 7.14 |

Normal Operating Cell Temperature(NOCT) : irradiance 800W/m²; wind speed 1 m/s ; cell temperature 45°C; ambient temperature 20°C.

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

Temperature Characteristics

| NOTC | 45°C (±2°C) | Maximum System Voltage [V] | 1000 |
|---------------------------------|---------------|----------------------------|------|
| Voltage Temperature Coefficient | -0.29%/K | Series Fuse Rating [A] | 20 |
| Current Temperature Coefficient | +0.05%/K | | |
| Power Temperature Coefficient | -0.39%/K | | |

Maximum Ratings

Material Characteristics

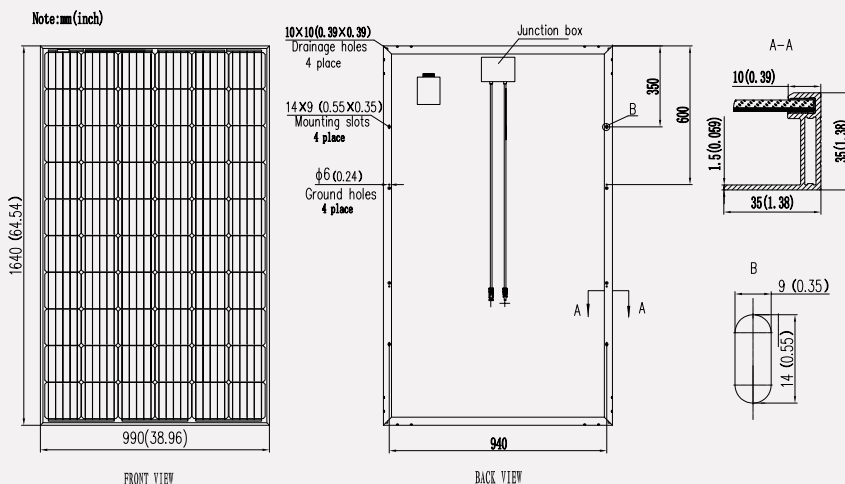
| | |
|--------------------|--|
| Dimensions | 1640×990×35mm (L×W×H) |
| Weight | 18.3kg |
| Frame | Black anodized aluminum profile |
| Front Glass | White toughened safety glass, 3.2 mm |
| Cell Encapsulation | EVA (Ethylene-Vinyl-Acetate) |
| Back Sheet | Composite film |
| Cells | 6×10 pieces monocrystalline solar cells series strings (156.75mm×156.75mm) |
| Junction Box | Rated current≥13A, IP≥67, TUV&UL |
| Cable&Connector | Length 900 mm, 1×4 mm ² , compatible with MC4 |

Packaging

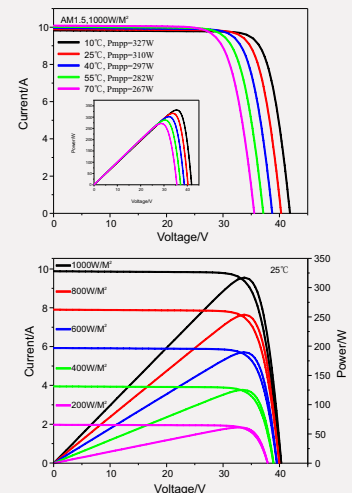
| | | | |
|-------------------|-----------------|----------------------|--|
| Dimensions(L×W×H) | 1680×1110×112mm | Temperature Range | -40 °C to + 85 °C |
| Container20' | 360 | Withstanding Hail | Maximum diameter of 25 mm with impact speed of 23 ms-1 |
| Container40' | 840 | Maximum Surface Load | 5,400 Pa |
| Container40'HC | 896 | Application class | class A |
| | | Safety class | class II |

System Design

Dimensions



IV-Curves



Excellent performance under weak light condition.