



# 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 0.7% per year thereafter, ending with 8018% in the 25th year.

CSUN

■ Standard warranty

CSUN's **NEW** linear performance warranty







# **CSUN 310-60M**

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Module Fire Performance:Type 1 (UL 1703) Fire Resistance Rating:Class C (IEC 61730)

CSUN310-60M CSUN305-60M CSUN300-60M CSUN295-60M

19.09% Module efficiency

 $310\,\,\mathrm{W}$  Highest power output

10 years Material & workmanship warranty

25 years Linear power output warranty

Highest efficiency – perfect for rooftop projects



Positit tolerance offer



Tighter distribution and current sorting reduces power loss



Passed salt mist & ammonia corrosion, blowing sand and hail testing



Certificated to withstand wind and snow



Excellent performance under weak light condition



Good temperature coefficient for better output in high temperature regions

- China Sunergy Co., Ltd. designs, manufactures and delivers high efficiency 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.



All information and data are subject to change without notice and are provided without liability.



# **Electrical Characteristics at Standard Test Conditions (STC)**

Module <b>Type</b>	CSUN 310-60M	CSUN 305-60M	CSUN 300-60M	CSUN 295-60M
Maximum Power - Pmpp (W)	310	305	300	295
Positive Power Tolerance	0~3%	0~3%	0~3%	0~3%
Open Circuit Voltage - Voc (V)	40.1	39.9	39.8	39.6
Short Circuit Current - Isc (A)	9.82	9.72	9.60	9.54
Maximum Power Voltage - Vmpp (V)	32.6	32.4	32.2	32.0
Maximum Power Current - Impp (A)	9.51	9.42	9.31	9.22
Module Efficiency	19.09%	18.78%	18.48%	18.17%

Electrical data relates to standard test conditions (STC): irradiance  $1000W/m^2$ ; AM 1.5; cell temperature  $25^{\circ}$ C measuring uncertainty of power is within  $\pm 3\%$ . Certified in accordance with IEC61215, IEC61730-1/2 and UL 1703.

### **Electrical Characteristics at Nominal Operating Cell Temperature (NOCT)**

Module <b>Type</b>	CSUN 310-60M	CSUN 305-60M	CSUN 300-60M	CSUN 295-60M
Maximum Power - Pmpp (W)	232	229	225	220
Maximum Power Voltage - Vmpp (V)	31.3	31.1	30.9	30.6
Maximum Power Current - Impp (A)	7.42	7.38	7.28	7.22
Open Circuit Voltage - Voc (V)	37.6	37.4	37.3	37.0
Short Circuit Current - Isc (A)	7.89	7.84	7.74	7.69

Electrical data relates to nominal operating cell temperature (NOCT): irradiance 800 W/m²; wind speed 1 m/s; cell temperature 45°C ambient temperature 20°C measuring uncertainty of power is within ±3%

#### **Temperature Characteristics**

Voltage Temperature Coefficient	-0.307%/K
Current Temperature Coefficient	+0.039%/K
Power Temperature Coefficient	-0.423%/K

#### **Maximum Ratings**

Maximum System Voltage (V)	1000
Series Fuse Rating (A)	20
Reverse Current Overload (A)	27

#### **Mechanical Characteristics**

Dimensions	1640 × 990 × 35mm
Weight	18.3 kg
Frame	Anodized aluminum profile
Front Glass	Toughened low iron glass, 3.2 mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Sheet	Composite film
Cells	$6 \times 10$ monocrystalline solar cells (4BB or 5BB 156.75 $\times$ 156.75 mm)
Junction Box	Rated current ≥13 A, IP ≥ 67, TUV & UL
Cable	Length 900 mm, 1 × 4 mm <sup>2</sup>
Connector	Compatiable with MC4

#### **Packaging**

Container 20'	360 pcs.
Container 40'	840 pcs.
Container 40'HC	910 pcs.

# **System Design**

Temp. Range	-40°C to + 85°C
Hail	Max. diameter of 25mm with impact speed of 23m/s
Max. Capacity	Snow 5400 Pa, wind 2400 Pa
Application Class	A
Safety Class	

#### Dimensions IV-Curves

