

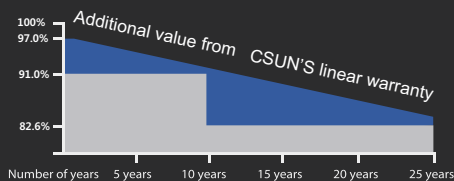
Mars Series Half cell Modules

The power output shall not be less than 97.0% of the minimum power output stated in the product datasheet in the first year of the product's life cycle.

The loss of power output shall not exceed 0.60% per year thereafter, ending with 82.60% in the 25th year.

■ CSUN ■ Standard warranty

CSUN's NEW linear performance warranty



CSUN 420-144M

High efficiency PERC tech for esthetic applications

Module Fire Performance: Type 1 (UL 1703)

Fire Resistance Rating: Class C (IEC 61730)

CSUN390-144M

CSUN395-144M

CSUN400-144M

CSUN405-144M

CSUN410-144M

CSUN415-144M

CSUN420-144M

20.87%

Module efficiency

420W

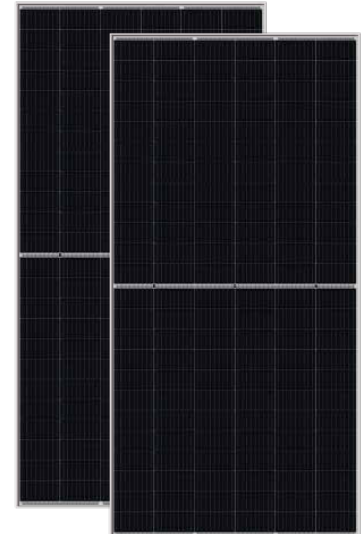
Highest power output

12 Year

Material & workmanship warranty

25 Year

Linear power output warranty



Industry leading conversion efficiency



Certified to withstand wind (2400Pa) and snow load (5400Pa)



Positive tolerance offer



Excellent performance under weak light condition



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



Good temperature coefficient enables better output in hot climates

Munich RE 
Munich Re providing Re in surance



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Electrical Characteristics at Standard Test Conditions (STC)

Module Type	CSUN390-144M	CSUN395-144M	CSUN400-144M	CSUN405-144M	CSUN410-144M	CSUN415-144M	CSUN420-144M
Maximum Power(Pmpp)[W]	390	395	400	405	410	415	420
Positive Power Tolerance[W]	0~5	0~5	0~5	0~5	0~5	0~5	0~5
Open Circuit Voltage(Voc)[V]	48.5	48.7	48.9	49.1	49.3	49.5	49.7
Short Circuit Current(Isc) [A]	10.12	10.19	10.26	10.33	10.40	10.47	10.54
Maximum Power Voltage(Vmpp)[V]	40.6	40.8	41.0	41.2	41.4	41.6	41.8
Maximum Power Current(Impp)[A]	9.61	9.68	9.76	9.83	9.91	9.98	10.05
Module Efficiency	19.38%	19.63%	19.88%	20.13%	20.38%	20.63%	20.87%

Electrical data relates to standard test conditions(STC): irradiance 1000W/m²; AM1.5; cell temperature 25°C measuring uncertainty of power is within ±3%. Certified in accordance with IEC61215,IEC61730-1/2 and UL1703.

Electrical Characteristics at Nominal Operating Cell Temperature(NOCT)

Module Type	CSUN390-144M	CSUN395-144M	CSUN400-144M	CSUN405-144M	CSUN410-144M	CSUN415-144M	CSUN420-144M
Maximum Power(Pmpp)[W]	289	293	296	300	304	308	311
Open Circuit Voltage(Voc)[V]	45.2	45.3	45.5	45.7	45.9	46.1	46.3
Short Circuit Current(Isc) [A]	8.19	8.24	8.30	8.36	8.41	8.47	8.53
Maximum Power Voltage(Vmpp)[V]	37.6	37.7	37.9	38.1	38.3	38.5	38.7
Maximum Power Current(Impp)[A]	7.70	7.75	7.82	7.87	7.94	7.99	8.05

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

Temperature Characteristics

Voltage Temperature Coefficient	-0.300%/°C
Current Temperature Coefficient	+0.066%/°C
Power Temperature Coefficient	-0.360%/°C

Maximum Ratings

Maximum System Voltage(V)	1000/1500
Series Fuse Rating(A)	20
Reverse Current Overload(A)	27

Mechanical Characteristics

Dimensions	2008×1002×35mm - frame thickness upon request
Weight	22.7kg
Frame	Anodized aluminum profile-black frame upon request
Front Glass	Toughened low iron glass,3.2mm
Cell Encapsulation	EVA(Ethylene-Vinyl-Acetate)
Back Sheet	Composite film-black back sheet upon request
Cell	144(6×24) monocrystalline solar semi-cells (158.75×79.375,9BB)
Junction Box	Rated current≥13A, IP≥65, TUV&UL
Cable	Length 300mm,1×4mm²
Connector	MC4/compatible with MC4

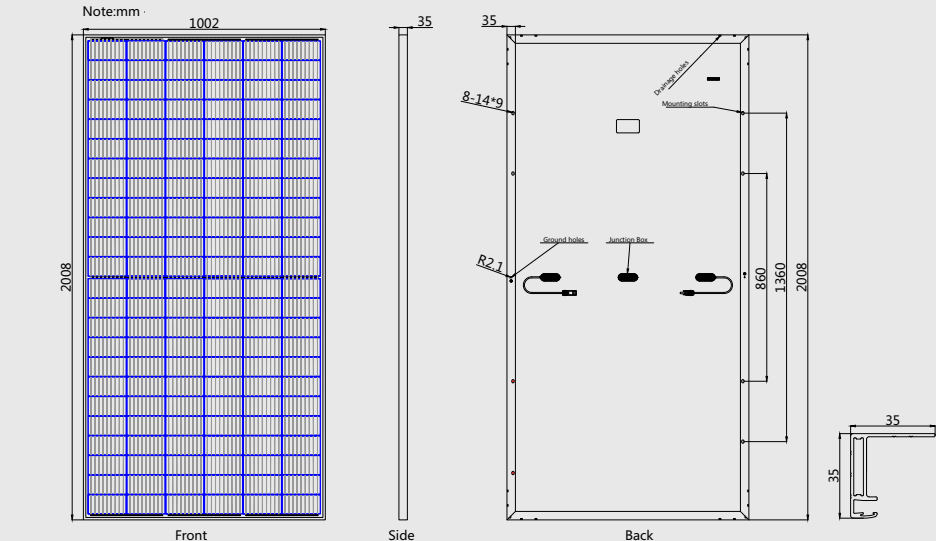
Packaging

Container 20'	310pcs.
Container 40'	682pcs.
Container 40' HC	737pcs.

System Design

Temp.Range	-40°F to +185°F(-40°C to +85°C)
Hail	Max. diameter of 0.98"(25mm)with impact speed of 51.2mph(23m/s)
Max.Capacity	Wind 2400Pa, snow 5400Pa-7200Pa upon request
Application Class	A
Safety Class	II

Dimensions



I-V Curves

