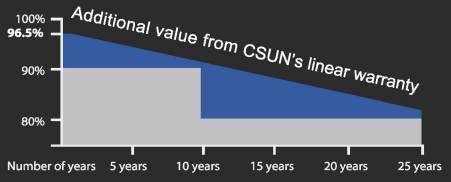
Mars Series
Half cell Modules

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 80.18% in the 25th year.

CSUN Standard warranty

CSUN 's NEW linear performance warranty



CSUN 410-108M

High efficiency PERC tech for esthetic applications

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

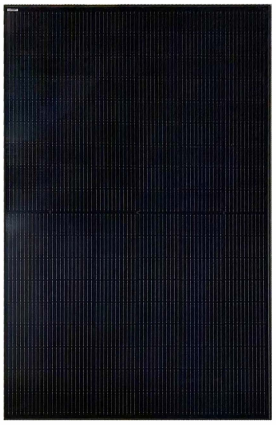
CSUN390-108M	CSUN395-108M
CSUN400-108M	CSUN405-108M
CSUN410-108M	CSUN415-108M

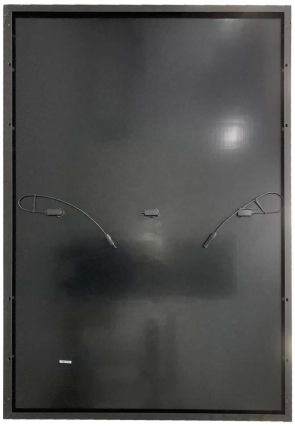
21.30%
Module efficiency

415W
Highest power output

12 Year
Material & workmanship warranty

25 Year
Linear power output warranty





- Industry leading conversion efficiency
- Certificated to withstand wind (2400 Pa) and snow load (7200 Pa)
- 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

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

Electrical Characteristics at Standard Test Conditions (STC)

Module Type	CSUN390-108M	CSUN395-108M	CSUN400-108M	CSUN405-108M	CSUN410-108M	CSUN415-108M
Maximum Power - Pmpp (W)	390	395	400	405	410	415
Positive Power Tolerance	±3%	±3%	±3%	±3%	±3%	±3%
Open Circuit Voltage - Voc (V)	36.85	36.98	37.07	37.23	37.32	37.45
Short Circuit Current - Isc (A)	13.61	13.70	13.79	13.87	13.95	14.02
Maximum Power Voltage - Vmpp (V)	30.64	30.84	31.01	31.21	31.54	31.61
Maximum Power Current - Impp (A)	12.73	12.81	12.90	12.98	13.0	13.13
Module Efficiency	20.0%	20.2%	20.5%	20.8%	21.0%	21.3%

Electrical data relates to standard test conditions (STC) : irradiance 1000W/m² ; AM 1.5 ; cell temperature 25°C measuring uncertainty of power is within ±3%. Certified in accordance with IEC61215, IEC61730-1/2 and UL 1703.

Electrical Characteristics at Nominal Operating Cell Temperature (NOCT)

Module Type	CSUN390-108M	CSUN395-108M	CSUN400-108M	CSUN405-108M	CSUN410-108M	CSUN415-108M
Maximum Power - Pmpp (W)	294	298	302	306	310	314
Open Circuit Voltage - Voc(V)	34.62	34.75	34.88	35.12	35.23	35.37
Short Circuit Voltage - Isc(A)	10.89	10.96	11.03	11.10	11.16	11.22
Maximum Power Voltage - Vmpp(V)	28.87	29.08	29.26	29.47	29.72	29.89
Maximum Power Current - Impp(A)	10.18	10.25	10.32	10.38	10.43	10.50

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	-0.28%/℃
Current Temperature Coefficient	+0.05%/℃
Power Temperature Coefficient	-0.36%/℃

Maximum Ratings

Maximum System Voltage (V)	1500
Series Fuse Rating (A)	15
Reverse Current Overload (A)	20

Mechanical Characteristics

Dimensions	1724x1134x30mm - frame thickness upon request
Weight	20.5kg
Frame	Anodized aluminum profile – black frame upon request
Front Glass	Toughened low iron glass,3.2 mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Sheet	Composite film – black back sheet upon request
Cells	54x2 pieces
Junction Box	IP68, TUV & UL
Cable	4 mm²
Connector	MC 4/ compatible with MC 4

Packaging

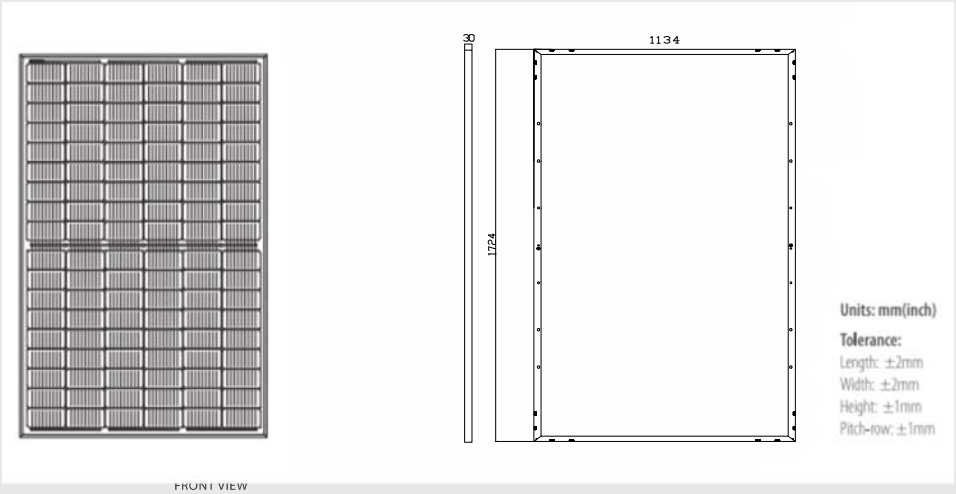
Container 20'	300 pcs.
Container 40'	--- pcs.
Container 40'HC	936 pcs.

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 7200Pa
Application Class	A
Safety Class	II

Dimensions

Note: mm (inch)



FRONT VIEW

IV-Curves