


## VenuSun Plus 1/2 Cut N-Topcon 500-525W

MS(500-525)MB-60HR-BB  
Mono N-Type 182\*95.8mm 120 Cells



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**N-type Technology**  
 N-type solar technology gains slower power degradation and excellent low-light performance.
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**Safer Operation**  
 Minimal heat loss, lower operating temperature, reduced hot spot risk, enhanced electrical safety.
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**Extreme Environment**  
 High salt mist and ammonia resistance.
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**Mechanical Load Enhanced**  
 5400Pa front side max static test load 2400Pa rear side max static test load.
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**SMBB Technology**  
 Better light trapping and current collection to improve module power output and reliability.
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**Anti-PID Guarantee**  
 Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.

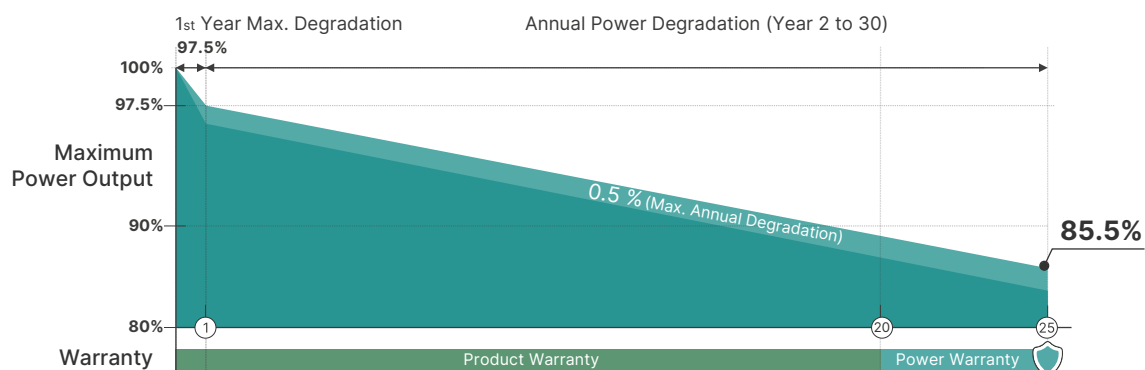


**23.22%**  
Maximum Efficiency

**0 ~ +5W**  
Positive Power Tolerance

**20 Years**  
Product Warranty

**25 Years**  
Power Warranty



## Electrical Data(STC / NOCT)

Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power Watts- $P_{MAX}$ (Wp)*	500	376	505	380	510	384	515	387	520	391	525	395
Power Tolerance- $P_{MAX}$ (W)	0 ~ +5											
Maximum Power Voltage- $V_{MPP}$ (V)	37.10	35.20	37.30	35.40	37.50	35.60	37.70	35.80	37.90	36.00	38.10	36.20
Maximum Power Current- $I_{MPP}$ (A)	13.48	10.67	13.54	10.72	13.60	10.77	13.66	10.81	13.72	10.86	13.78	10.91
Open Circuit Voltage- $V_{OC}$ (V)	43.70	41.50	43.90	41.70	44.10	41.90	44.30	42.10	44.50	42.30	44.70	42.50
Short Circuit Current- $I_{SC}$ (A)	14.48	11.69	14.54	11.74	14.60	11.79	14.66	11.84	14.72	11.88	14.78	11.93
Module Efficiency $\eta_m$ (%)	22.11	22.11	22.33	22.33	22.55	22.55	22.78	22.78	23.00	23.00	23.22	23.22

\* STC: Air Mass AM1.5, Irradiance at 1000W/m<sup>2</sup>, Cell Temperature 25°C / Measuring tolerance: ±3%.  
 \* NOCT: Air Mass AM1.5, Irradiance at 800W/m<sup>2</sup>, Cell Temperature 20°C / Measuring tolerance: ±3%.

## Mechanical Data

Solar Cells	N-type Monocrystalline 182 x 95.8mm
Cell Orientation	120cells (20 x 6)
Module Dimensions	1994mm x 1134mm x 30mm
Weight	23.50kg
Front Glass	3.2mm
Encapsulant material	POE / EVA
Protection Class	Class II
Frame	Black anodized aluminum alloy
J-Box	IP 68 rated (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> Portrait: N 1500mm / P 1500mm Length Can be Customized
Connector	MC4 compatible

\* Please refer to regional datasheet for specific connector.

## Temperature Ratings

NOCT(Nominal Operating Cell Temperature)	45°C (±2°C)
Temperature Coefficient of $P_{MAX}$	-0.30% / °C
Temperature Coefficient of $V_{OC}$	-0.25% / °C
Temperature Coefficient of $I_{SC}$	0.046% / °C

\* Do not connect Fuse in Combiner Box with two or more strings in parallel connection.

## Application Environment

Operational Temperature	-40 ~ +85°C
Maximum System Voltage	1500 VDC
Max Series Fuse Rating	25A
Mechanical Performance	P 5400Pa / N 2400Pa

## Warranty

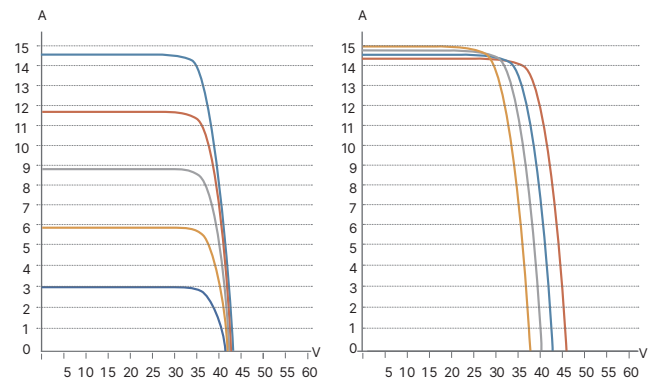
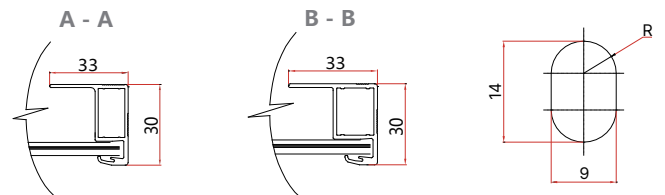
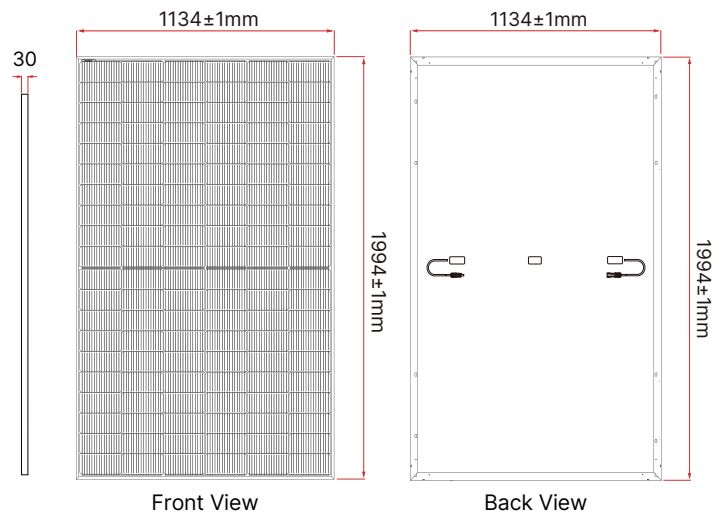
20 Years Product Warranty
25 Years Power Warranty
2.5% First Year Degradation
0.5% Annual Power Degradation

\* Please refer to product warranty for details.

## Packaging Configuration

Modules Per Pallet: 36 Pieces
Modules Per 40' Container: 792 Pieces (22 Pallets)

## Dimensions of pv module (mm)



■ 1000 W/m<sup>2</sup>  
 ■ 800 W/m<sup>2</sup>  
 ■ 600 W/m<sup>2</sup>  
 ■ 400 W/m<sup>2</sup>  
 ■ 200 W/m<sup>2</sup>

■ 5°C  
 ■ 25°C  
 ■ 45°C  
 ■ 65°C