

# WRS-460-30 MH SF

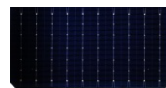
## TOPCon Technology

### POWER RANGE

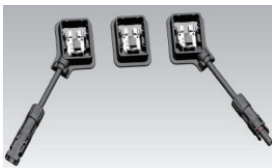
460 W – 475 W

### CELL SIZE

182 x 91 mm

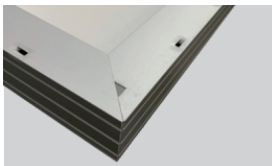


16BB



### JUNCTION BOX

Waterproof protection grade: IP67/IP68  
 Safety Level: Class II  
 Maximum System Voltage: 1500 V  
 Outstanding waterproof level  
 Effectively resist harsh environments



### FRAME

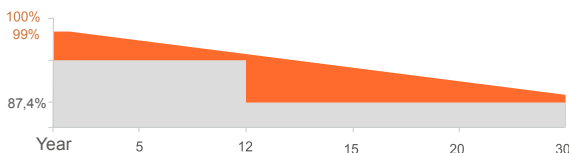
Strong mechanical load  
 Resistance up to 5400 Pa  
 Anodic oxidation layer resistant to chemical corrosion  
 Available in silver and black

## QUALIFICATIONS AND CERTIFICATES



IEC 61215 / IEC 61730

## WARRANTY



**20 YEARS** Guarantee on product material and workmanship

**30 YEARS** Linear Power output warranty



### SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



### Enhanced Mechanical Load

Certified to withstand: wind load (2400 PA) and snow load (5400 PA).

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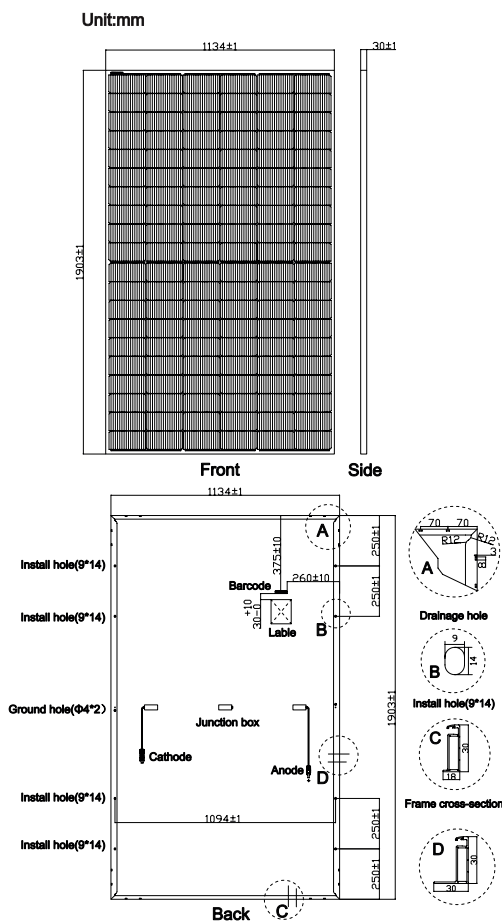
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## ELECTRICAL DATA (STC)

	WRS-460-30 MH SF	WRS-465-30 MH SF	WRS-470-30 MH SF	WRS-475-30 MH SF
Peak Power (Pmax)	460.00 W	465.00 W	470.00 W	475.00 W
Maximum Power Voltage (Vmp)	34.72 V	34.89 V	35.05 V	35.21 V
Maximum Power Current (Imp)	13.25 A	13.33 A	13.41 A	13.49 A
Open Circuit Voltage (VOC)	42.05 V ± 3%	42.22 V ± 3%	42.38 V ± 3%	42.54 V ± 3%
Short Circuit Current (ISC)	13.99 A ± 3%	14.07 A ± 3%	14.15 A ± 3%	14.23 A ± 3%
Module Efficiency (%)	21.32 %	21.55 %	21.78 %	22.01 %

\* STC: irradiance 1000 W/m<sup>2</sup>, AM 1.5, and cell temperature of 25 °C

## PV DRAWINGS



## TEMPERATURE & MAXIMUM RATING

Maximum System Voltage (V)	1500 V
Maximum Series Fuse Rating (A)	25 A
Power Tolerance	0 - +3 W
Pmax Temperature Coefficients (W/°C)	-0.300 W % /°C
VOC Temperature Coefficients (V/°C)	-0.250 V % /°C
ISC Temperature Coefficients (A/°C)	+0.046 A % /°C
NOCT Nominal Operating Cell Temperature (°C)	45 ± 2 °C
Operating and Storage Temperature (°C)	-40 - +85 °C

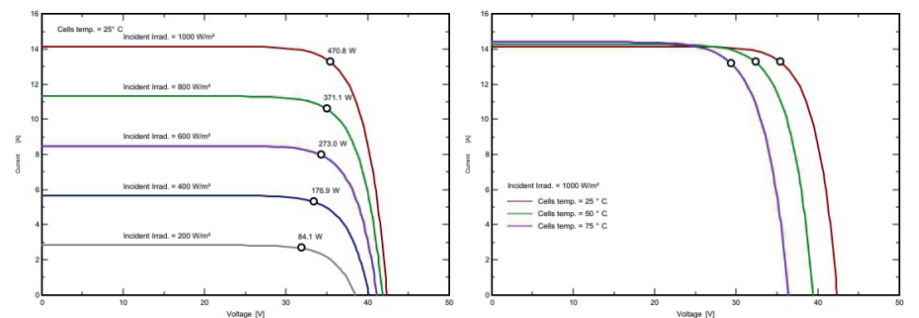
## MECHANICAL CHARACTERISTICS

Cell Type	182 x 91 N-Type Mono
No. of Cells	120 (12 x 9)
Dimension	1903 x 1134 x 30 mm
Weight	23.80 kg
Front Glass	3.2 mm high transmission, low iron, tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67/IP68 3 diodes
Output Cables	4 mm <sup>2</sup> cable 900 mm (including MC4 connector)
Maximum Wind Load / Snow Load	2400 Pa / 5400 Pa

## PACKING WAY

40" HQ Container	24 Packages / 888 pcs
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## IV CURVE (470 W)



## WARIS ENERGY SRL

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