

## X-HALF CUT N-TYPE serie TOPCon

**470/480<sub>Wp</sub>**  
Power

**TOPCon** Cells

**Class 1**  
Fire reaction

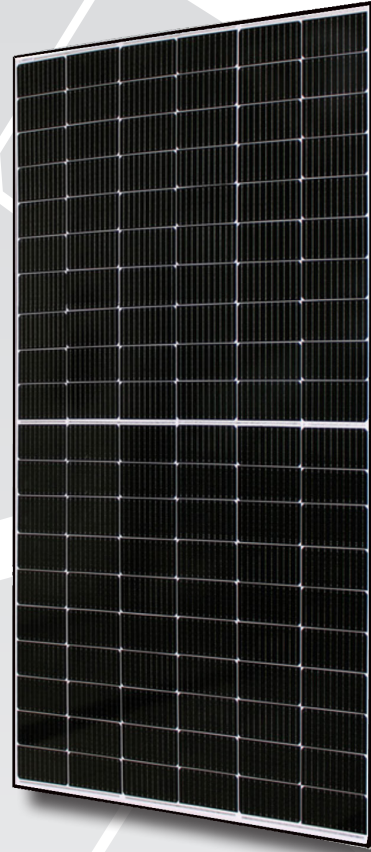
**5400 PA**  
Mechanical Load

**182x91<sub>mm</sub>**  
Cell Size

**22.18%**  
Module Efficiency

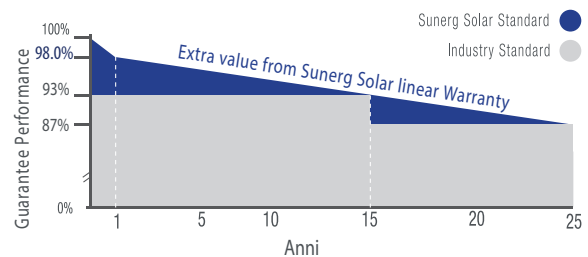
**15 years**  
product warranty

**25 years**  
linear warranty



X-HALF CUT N-Type serie TOPCON+ involves the introduction of a thin oxide layer between the metal contacts and the silicon wafer, which brings significant improvements in cell conversion efficiency and power generation performance.

### LINEAR WARRANTY



- look warranty terms -

### CONFORM TO

| UNI9177 | PV CYCLE | CE |

UNI EN ISO 9001:2008  
UNI EN ISO 14001:2004

UNI EN BS OHSAS 18001:2007

| Quality management system

| Standards for environmental management system

| International standards for occupational health and safety

### ELECTRICAL DATA (STC)

		XMHCTP470BW+H	XMHCTP475BW+H	XMHCTP480BW+H
Open circuit Voltage	(Voc)	42.42 V	42.63 V	42.86 V
Voltage a Pmax.	(Vmp)	34.81 V	34.97 V	35.13 V
Short-circuit current	(Isc)	14.23 A	14.31 A	14.39 A
Current at Pmax.	(Imp)	13.51 A	13.59 A	13.67 A
Nominal Peak Power (Pmax)		470 Wp	475 Wp	480 Wp
Cell Efficiency		24.70%	24.90%	25.20%
Module Efficiency		21.71%	21.94%	22.18%
Power output tolerance			-0/+5 W	
Maximum voltage			1500 V	
Maximum series fuse rating			25 A	
Limiting reverse current			20 A	
Operating Temperature			- 40°C to 85°C	

\* STC (Standard test conditions)

Tolerance electric measurement and Power Output ±3%

Irradiance 1000 w/m<sup>2</sup>, temperature 25°C, AM= 1.5

### ELECTRICAL CHARACTERISTICS AT NOMINAL MODULE OPERATING TEMPERATURE (NMOT)

Peak Power	(Pmax)	355.9 W	359.7 W	363.4 W
Open Circuit Voltage	(Voc)	40.30 V	40.50 V	40.70 V
Short Circuit Current	(Isc)	11.50 A	11.56 A	11.63 A
MPP Voltage	(Vmp)	33.10 V	33.20 V	33.40 V
MPP Current	(Imp)	10.75 A	10.83 A	10.88 A

\* NMOT (Nominal Module Operating Temperature)

Irradiance 800 w/m<sup>2</sup>, temperature 20°C, wind speed 1 m/s

### TEMPERATURE COEFFICIENT

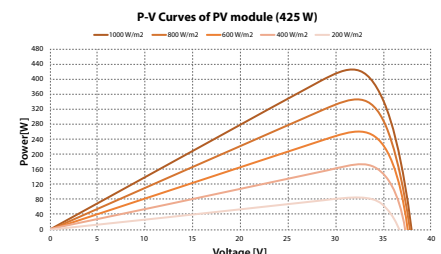
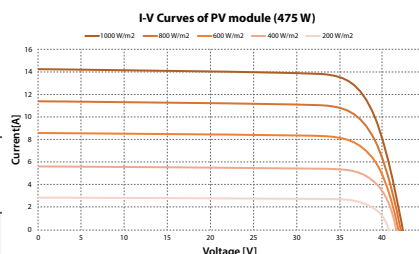
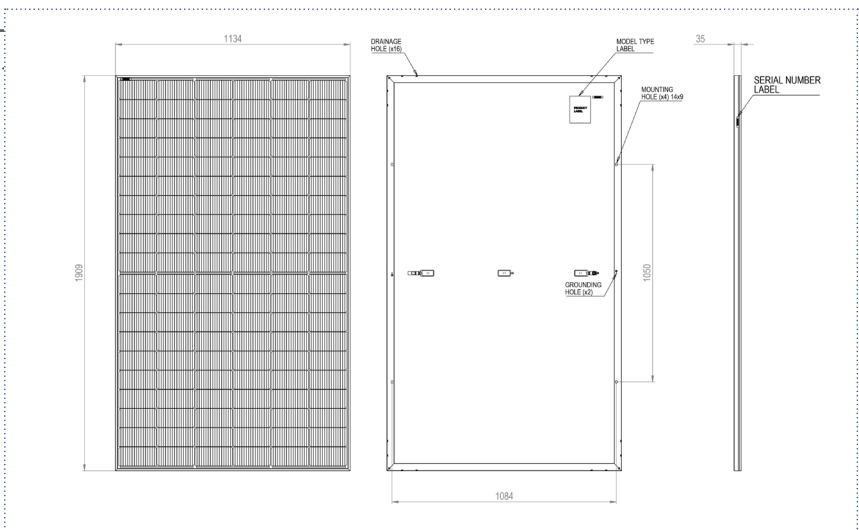
Pmax Temperature Coefficient	<b>-0.316%/ °C</b>
Voc Temperature Coefficient	<b>-0.249%/ °C</b>
Isc Temperature Coefficient	<b>0.045% / °C</b>

### MECHANICAL DATA

Maximum Load	<b>5400 Pa</b>
Dimensions (mm)	<b>1909 x 1134 x 35</b>
Weight (Kg)	<b>22.3</b>
Solar cells type	<b>N type Mono</b>
No. solar cells	<b>120 (6x20)</b>
Dim. solar cells	<b>182x91mm +/-1mm</b>

### GENERAL INFORMATION

Front Glass	<b>3,2 mm, Tempered solar glass</b>
Frame	<b>Anodized aluminum alloy, with twin-wall profile and drainage holes</b>
Junction Box	<b>IP68 Rated with 3 Bypass diodes</b>
Output Cable	<b>4.0mm<sup>2</sup>, 1100mm length, MC4 compatible connectors</b>



### PACKING CONFIGURATION

Module per Pallet	31 pcs.
Modules per container 40'HQ	806 pcs.

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