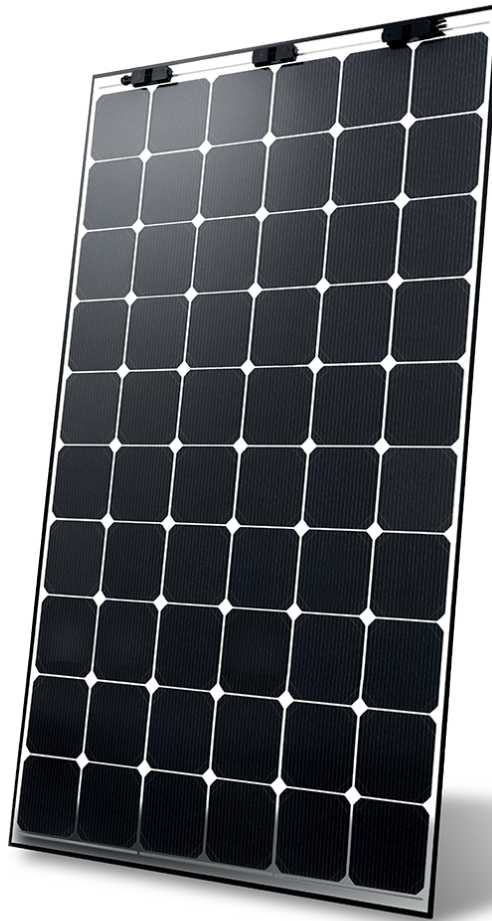


BIFACIAL HJT  
Double Glass Module  
305/310/315 W



# SW PREMIUM BIFACIAL



## PID & LID free

- HJT Heterojunction cells technology, based on n-type silicon, is immune to this effect.



## Advanced HJT Technology

- Superior efficiency HJT cells **23 - 24 %**
- Lowest levelized cost of electricity



## Highest guarantee

- Only **0.3%** of annual degradation.
- **15-years** product warranty.
- **35 years** of linear performance guarantee. At least **88.25 %** output after **35 years**
- Extremely long lifespan through the use of glass on the front and rear sides of the module.



## SMARTWIRE Connection Technology ( SWCT )

- Very high outdoor performance of HJT/SWCT modules
- **Increased fire protection** due to SmartWire density connection
- Innovative and patented Foil-Wire Electrode Concept (Dense matrix) proven hotspot guarantee
- **Highest energy yield** due to excellent temperature coefficient **-0.279 %/C**



## Nature Friendly

- **PB and FREONS LEAD-FREE**
- Solar cells connected with **SWCT** can achieve a reduction up to **80% of silver consumption** in cell production



## BIFACIAL Technology

- Thanks to reflections from the ground, a gain in solar irradiation from the rear side of bifacial PV module of **15-30%**
- **92,7 %** Bifaciality

# SW PREMIUM BIFACIAL 305/310/315

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN(REFERENCE TO 305W FRONT)

<b>305W</b>			5%	10%	15%	20%	25%	30%
Maximum Power	Pmax	305 [W]	320	336	351	366	381	397
Maximum Power Point Voltage	Vmpp	36,6 [V]	36,6	36,6	36,6	36,7	36,7	36,7
Maximum Power Point Current	Impp	8,34 [A]	8,76	9,17	9,59	10,01	10,43	10,84
Open Circuit Voltage	Voc	43,8 [V]	43,8	43,8	43,8	43,9	43,9	43,9
Short Circuit Current	Isc	8,87 [A]	9,31	9,76	10,20	10,64	11,09	11,53
Module Efficiency		18,4 %	19,3	20,2	21,2	22,1	23,0	23,9
Power tolerance [%]			+3/-0					

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN(REFERENCE TO 310W FRONT)

<b>310W</b>			5%	10%	15%	20%	25%	30%
Maximum Power	Pmax	310 [W]	326	341	357	372	388	403
Maximum Power Point Voltage	Vmpp	36,8 [V]	36,8	36,8	36,8	36,9	36,9	36,9
Maximum Power Point Current	Impp	8,42 [A]	8,84	9,26	9,68	10,10	10,53	10,95
Open Circuit Voltage	Voc	44,0 [V]	44,0	44,0	44,0	44,1	44,1	44,1
Short Circuit Current	Isc	8,95 [A]	9,40	9,85	10,29	10,74	11,19	11,64
Module Efficiency		18,7 %	19,6	20,6	21,5	22,4	23,4	24,3
Power tolerance [%]			+3/-0					

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN(REFERENCE TO 315W FRONT)

<b>315W</b>			5%	10%	15%	20%	25%	30%
Maximum Power	Pmax	315 [W]	331	347	362	378	394	410
Maximum Power Point Voltage	Vmpp	37,0 [V]	37,0	37,0	37,0	37,0	37,1	37,1
Maximum Power Point Current	Impp	8,52 [A]	8,95	9,37	9,80	10,22	11,65	11,08
Open Circuit Voltage	Voc	44,1 [V]	44,1	44,1	44,1	44,2	44,2	44,2
Short Circuit Current	Isc	8,98 [A]	9,43	9,88	10,33	10,78	11,23	11,67
Module Efficiency		19,0 %	20,0	20,9	21,9	22,8	23,8	24,7
Power tolerance [%]			+3/-0					

**VALUE OF ADDITIONAL ENERGY (BGE) OF ENERGY FROM THE REAR SIDE OF THE MODULE \* BGE (Bifacial Gain Energy)(%)** An indicator expressing additional energy generated by the rear side of the module related to energy generated from the front part of the module.

**WARNING: Hanplast Solar rated power (BIFACIAL) is measured under standard test conditions (STC). STC does not take into account the power generated from the back of the modules. Therefore, HJT glass / double-sided glass modules will produce more power than their results in STC, up to 30%, depending on the system design and albedo. It is necessary to take into account additional power when choosing the installation components and read the assembly instructions.**

## MECHANICAL SPECIFICATION

Dimensions [mm]	1664x996x6mm
Glass Thickness	2x 2.5 mm tempered solar glass with ARC surface
Weight approx.	23.5 kg
Module structure	glass / POE / cells / POE / glass edges sealing by butyl
Cell type	HJT (Heterojunction) Type N 156.75 x156.75 mm, Monocrystalline
Cell connection	SmartWire Connection Technology ( SWCT )
Cells amount	60

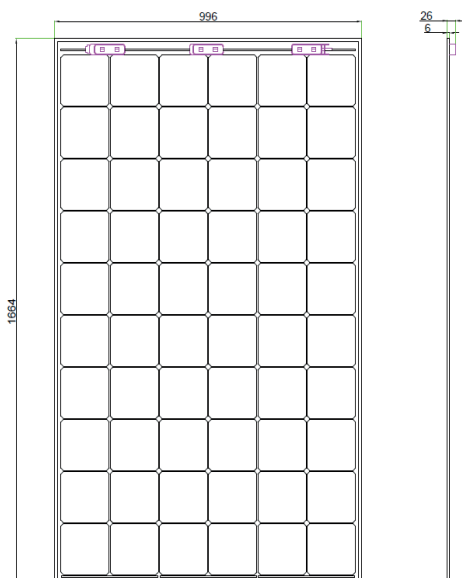
## ELECTRICAL SPECIFICATION

The electrical characteristics are within +/- 3% of the indicated values Pmax, Voc, Isc under Standard Test Conditions (1000 W/m<sup>2</sup>, 25 °C, AM 1.5 according to EN 60904-3)

(Electrical) junction box	3x Tyco PV EDGE with 3 bypass diodes , IP 67
Maximum System Voltage	1500 V
Maximum series configuration	30
Reverse current overload	20A

## TEMPERATURE COEFFICIENT

α (Isc)	+0.029 %/C
β (Voc)	-0.224 %/C
γ (Pmpp)	-0.279 %/C
NOCT (°C)	45 °C



## SAFETY

Module Fire Performance: \_\_\_\_\_ Type 4  
Use Class \_\_\_\_\_ A

The fire rating of this module is valid only when mounted in the manner specified in the mechanical mounting instructions.

## LOAD

Max. positiv Design Load (downward) : \_\_\_\_\_ 1600 Pa  
Max. negativ Design Load (upward) : \_\_\_\_\_ 1600 Pa  
with safety factor 1,5 \_\_\_\_\_ (Test Load: 2400 Pa)

## LOGISTICS

### Packing

Modules per box \_\_\_\_\_ 50  
Boxes per truck \_\_\_\_\_ 14

### Stacking Factor:

Static \_\_\_\_\_ 1+1  
Dynamic \_\_\_\_\_ 1+0

**\*IMPORTANT: PLEASE READ THE SAFETY INSTRUCTION BEFORE OPENING BOX CRATEPAK-0 HD WITH GLASS-ON-GLASS MODULES INSIDE.**

Performance based on Standard Test Conditions (STC): 1000 W/m<sup>2</sup>, 25 °C, AM 1.5