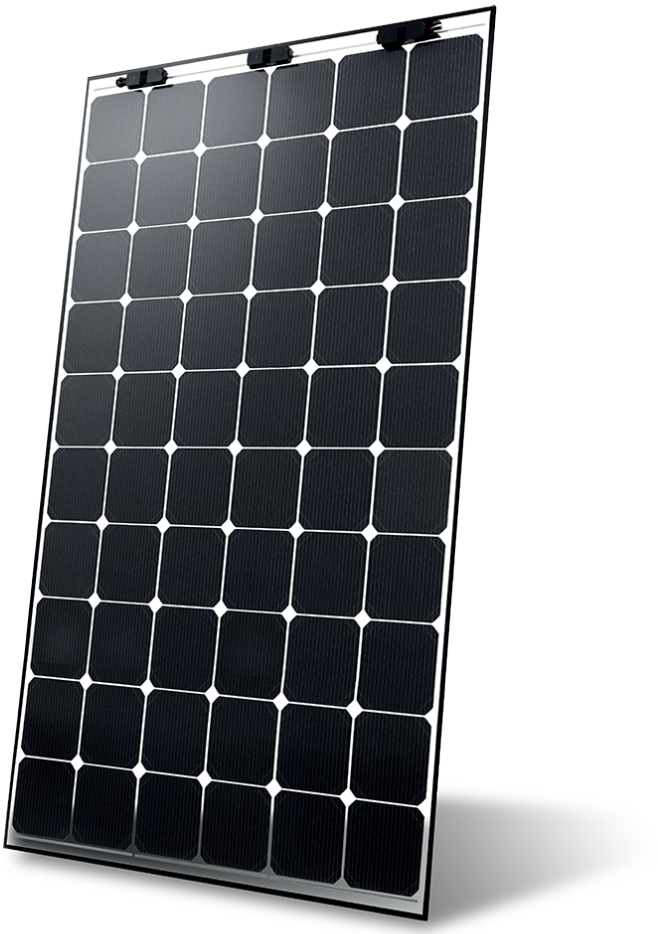
HANPLAST SOLAR

BIFACIAL /HJT /SWCT
305/310/315 W

201-41GG-XX (5mm)
201-42GG-XX (6mm)



IEC 61215
IEC 61730
Regular Production Surveillance

www.tuv.com
ID 1111210078

TÜVRheinland CERTIFIED

Quality / Environmental / Occupational Health and Safety Management
ISO 9001
ISO 14001
PN-N-/OHSAS 18001
www.dekra-seal.com

DEKRA certified

15 years product guarantee

35 years power guarantee

The most up to date datasheet is available at:
www.hanplast-solar.com

IN PARTNERSHIP WITH MEYER BURGER

HJT inside

Smart Wire inside

SW PREMIUM BIFACIAL (HJT)

Extremely Low LID & PID

- **HJT** Heterojunction cells technology based on N-type silicon is practically 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 guarante* 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.

* 98.45% first year. first year only (-0.3)%/y. 91.25% after 25 years .

SMARTWIRE Connection Technology (SWCT)

- Very high outdoor preformance 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 excelent temerature coefficient **-0.279 %/C**.

Nature Friendly

- **PB** and **FREONS LEAD-FREE**.
- Energy Efficient manufacturing process.
- Reduction in the use of silver.

BIFACIAL Technology

- Additional energy yield of bifacial PV module of **15-30%** due to absorption of reflected light by the rear side of module.
- **92.7** % Bifaciality factor.

SW PREMIUM BIFACIAL 305/310/315

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

305W				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%							

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

310W				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%							

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

315W (Only 6 mm panel)				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%							

Performance based on Standard Test Conditions (STC): 1000 W/m2, 25 °C, AM 1.5

VALUE OF ADDITIONAL 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 (+/-1mm)	1664x996x5mm (+/-1mm)
Glass Thickness	2 x 2.5 mm tempered solar matt glass with ARC surface	2 x 2.0 mm tempered solar tranparent glass with ARC surface
Weight approx.	23.5 kg	18.7 kg
Module structure	glass / POE/ cells / POE / glass edges sealing by butyl	
Cell type	Monocrystalline, type - N HJT (Heterojunction) 156.75 x 156.75 mm	
Cell connection	SmartWire Connection Technology (SWCT)	
Cells amount	60	

ELECTRICAL SPECIFICATION

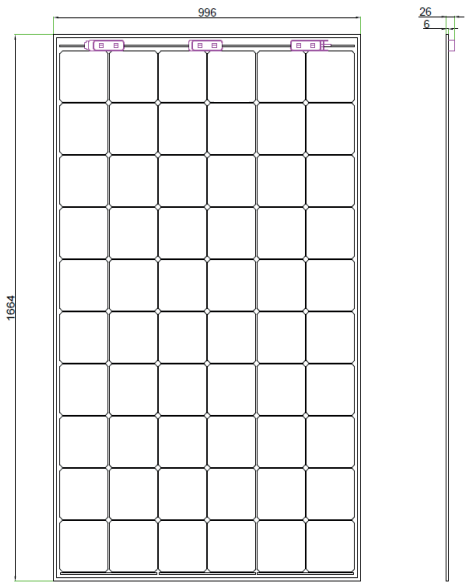
The electrical characteristics are within +/- 3% of the indicated values Pmax, Voc, and +/-5% for Isc, under Standard Test Conditions (1000 W/m2, 25 °C, AM 1.5 according to EN 60904-3).

(Electrical) junction box	3x Tyco PV EDGE with 3 bypass diodes , IP 67
Electrical connectors	integrated with junction boxes, compatible with Tyco TE PV4S connector leads
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

Each HJT glass-on-glass module has accurate information on its actual output power placed on the module label (P_{Act})



SAFETY

Application Class_____A

Module Fire Performance acc. UL 790_____C

LOAD

Max. positive design load (downward) : _____1600 Pa

Max. negative design load (upward) :_____1600 Pa

with safety factor 1,5_____(Test Load: 2400 Pa)

LOGISTICS

	Land Transport	Shipping
Dimensions	1785x1145x1184	1785x1165x1184
Modules per box	50	50
Static	1+0	1+1
Dynamic	1+0	1+1
Box weight kg	70	75

***important: please read the safety instruction before opening box cratepak-0 hd with glass-on-glass modules inside.**

***Custom, dedicated packing available**