

Greener than Green



Highlights

- European module production
- Higher yield because of antireflection glass
- Durable due to effective hotspot-prevention processes
- Cost advantage as a result of optimized cell processing
- Up to 10W more module performance because of positive sorting
- Lowest carbon footprint due to reducing up to 90% of energy use in production.

EcoPlus

The EcoPlus module is the premium product of Innotech Solar. The module is manufactured exclusively in Sweden. The process in which it is manufactured is one of a kind and places it into the top class. A special glass with an antireflection surface (Sunarc Technology) achieves a higher output power during scattered and low light conditions.

Durability

Innotech Solar uses only cell materials from leading premium cell manufacturers. To eliminate the possibility of hotspot formation thoroughly, strict ITS control-criteria mandate a thermo-picture of each cell before and after processing.

Price-performance ratio

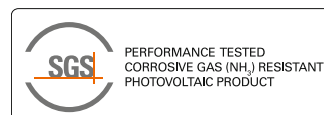
Innotech Solar's innovative use of cell processing technology allows to offer high quality modules at an attractive price. Furthermore ITS modules guarantee an excellent yield through positive sorting (-0/+10 Wp).

Environment

Innotech Solar taps resources by optimizing cells that are rejected by manufacturers due to electrical characteristics. Compared to common crystalline processes, modules with upgraded ITS cells reduce energy use in production by 90%. As a result, ITS customers can considerably decrease their carbon footprint.



The Certification Mark for Onsite Sustainable Energy Technologies



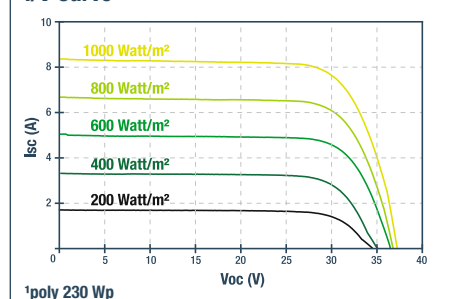
Pmax	Wp	210	220	230	240	250
Vmpp	V	28.6	29.1	29.6	30.2	31.0
Imp	A	7.53	7.73	7.95	8.11	8.22
Voc	V	36.2	36.4	36.7	37.1	37.6
Isc	A	8.19	8.31	8.50	8.66	8.79
IR****	A	20	20	20	20	20
η	%	12.7 – 13.3	13.3 – 13.9	13.9 – 14.5	14.6 – 15.2	15.2 – 15.8

NOCT**

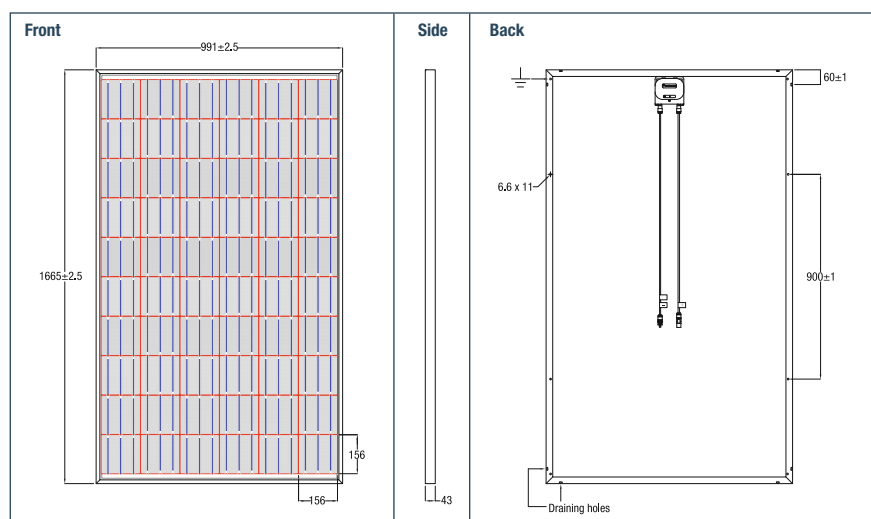
Pmax	Wp	158	164	170	176	182
Vmpp	V	25.8	26.3	26.8	27.3	27.8
Voc	V	32.8	33.2	33.6	33.9	34.2
Isc	A	6.60	6.70	6.80	6.90	7.00

Temperature Coefficients

Pn	-0.43 %/K
Voc	-0.33 %/K
Isc	0.05 %/K

I/V Curve¹

NOCT**	47.9°C (± 2°C)
Module efficiency reduction at 200 W/m ² ***	-0.6 (± 0.3)% abs.
Max. System Voltage	1000 V
IP protection level	IP 65
Module Technology	Glass-Foil-Laminate with anodized aluminium frame
Module Design	Cover material: Solar glass with anti-reflection surface treatment (Sunarc Technology), 3.2 mm; Encapsulation: EVA-Solar Cells-EVA; Back material
No. and Type of Solar Cells	60 crystalline solar cells, 156 x 156 mm, 180 μm ± 30 μm
Cables	Junction box with MC4 connectors, cable: 2 x 1 m / 4 mm ²
Bypass-Diodes	3 pcs.
Dimensions (l x w x h)	1665 x 991 x 43 mm
Weight	22 kg
Operating Temperature Range	-40 ... +80°C
Ambient Temperature Range	-40 ... +45°C
Mechanical ratings	Suction pressure of 2400 Pa approved (Wind speed 130 km/h with safety factor 3), load of 5400 Pa approved
Certification	IEC 61215 : 2005 IEC 61730 -1/-2 : 2004 IEC 61701 : 1995 (salt mist resistant) MCS DLG Focus Test (ammonia resistant)
Positive sorting	-0 Wp / +10 Wp
Packing dimensions	1720 x 1045 x 180 mm, 30 modules per pallet
Product warranty	5 year standard warranty, expandable to 10 years after registration
Performance warranty	90% of output power for 10 years and 80% for 25 years, according to the Warranty Conditions of Innotech Solar

* STC – Standard Test Conditions, measurement conditions: intensity irradiation 1000 W/m², spectral distribution AM 1.5, temperature 25 ± 2°C, according to standard EN 60904-3** NOCT – Normal Operation Cell Temperature, measurement conditions: irradiation intensity 800 W/m², AM 1.5, temperature 20°C, wind speed 1 m/s.*** Reduced efficiency with the decrease in the intensity of irradiation of 1000 W/m² and 200 W/m², temperature 25°C according EN 60904-1

**** Reverse current power rating: operation of the modules with an external power source is only permitted with a string fuse with a release current of < 2 x Isc @ STC*

Measuring tolerances of Pmax @ STC ± 5%, all other electric parameters ± 10%

This datasheet conforms to EN 50380. Innotech Solar reserves the right to change specifications without notice.