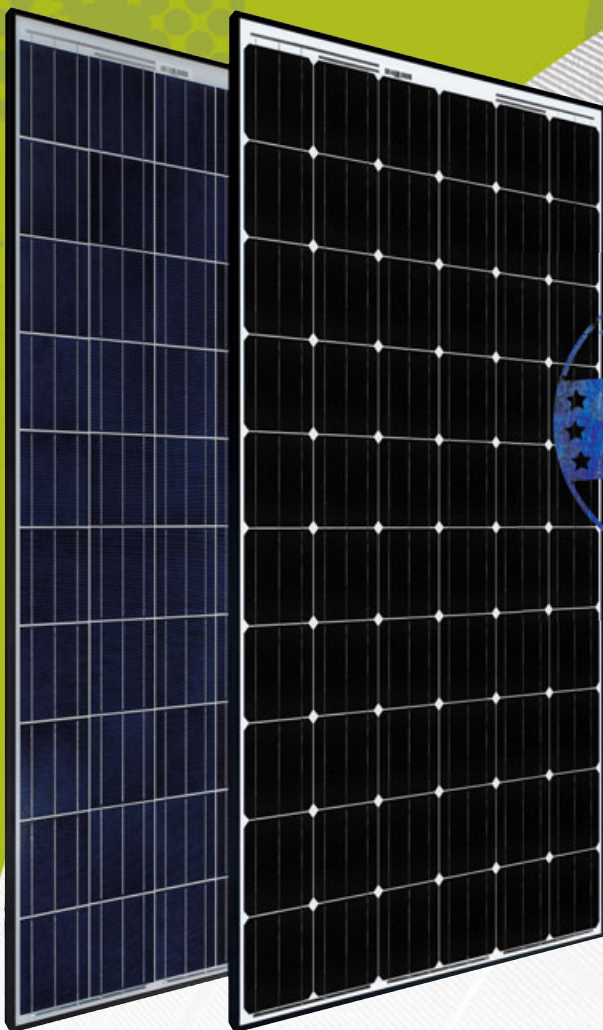




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Greener than Green

EcoPlus

The EcoPlus module is the „ecological“ 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 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

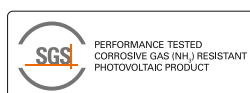
Innotech Solar's innovative use of cell processing technology allows to offer high quality modules at an attractive price. Furthermore ITS modules guarantee an excellent yield through positive sorting (-0/+10 Wp).

Environment

ITS follows its philosophy "greener than green" in each step of the production process. We are motivated to achieve the best CO₂ balance. According to calculations by the independent institute SmartGreenScans, ITS has about a 50 % smaller carbon footprint than conventional PV module producers.

Highlights

- European module production in Sweden
- PID-free
- Higher yield because of antireflection glass
- Durable due to effective hotspot-prevention processes
- Cost advantage as a result of cell optimization
- Up to 10 Wp more module performance because of positive sorting
- Lowest carbon footprint



EcoPlus – Mono

STC*

Pn	Wp	240	250	260
Vmpp	V	29.7	30.1	30.8
Impp	A	8.25	8.44	8.60
Voc	V	37.0	37.2	37.6
Isc	A	8.90	9.05	9.19
IR****	A	20	20	20
η	%	14.6 – 15.2	15.2 – 15.8	15.8 – 16.4

NOCT**

Pn	W	176	182	189
Vmpp	V	26.7	27.2	27.8
Voc	V	29.3	29.8	30.3
Isc	A	7.13	7.25	7.40

Temperature Coefficients

Pn	-0.43 %/K
Voc	-0.32 %/K
Isc	0.04 %/K

EcoPlus – Poly

STC*

Pn	Wp	240	250	260
Vmpp	V	30.2	31.0	31.2
Impp	A	8.11	8.22	8.49
Voc	V	37.1	37.6	37.8
Isc	A	8.66	8.79	8.98
IR****	A	20	20	20
η	%	14.6 – 15.2	15.2 – 15.8	15.8 – 16.4

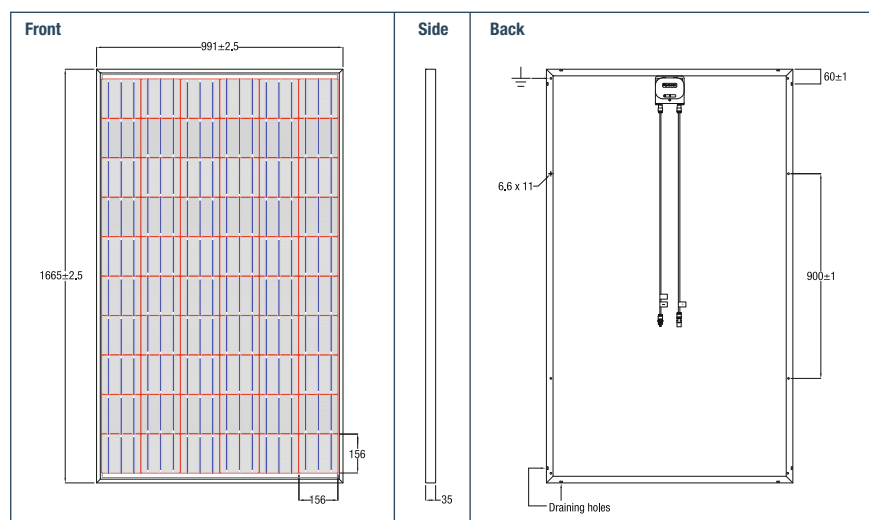
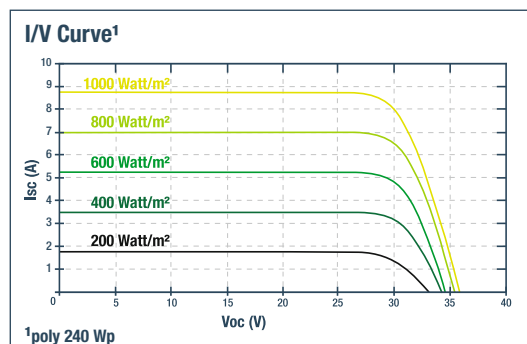
NOCT**

Pn	W	176	182	186
Vmpp	V	27.3	27.8	28.3
Voc	V	33.9	34.2	34.5
Isc	A	6.90	7.00	7.10

Temperature Coefficients

Pn	-0.38 %/K
Voc	-0.32 %/K
Isc	0.077 %/K

NOCT**	47.5°C
Module efficiency reduction at 200 W/m²***	-0.6 (± 0.3)% abs.
Max. System Voltage	1000 V
IP protection level	IP 65
Module Design	Glass-foil (white)
Frame	Al black
Glass	Solar glass with anti-reflection surface treatment, 3.2 mm
No. and Type of Solar Cells	60 crystalline solar cells, 156 x 156 mm, 180 μm ± 30 μm
Cables	Junction box with MC4 (pluggable) connectors, cable: 2 x 1 m / 4 mm²
Bypass-Diodes	3 pcs.
Dimensions (l x w x h)	1665 x 991 x 35 mm
Weight	19 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 8000 Pa approved
Certification	IEC 61215 : 2005 IEC 61730-1/-2 : 2004 IEC 61701 : 1995 (salt mist resistant) MCS DLG Focus Test (ammonia resistant) UL 1703 : 2002 R5.12 CEC/CSI listing UNI 9177 Class 1
Positive sorting	-0 Wp / +10 Wp
Pallet dimensions	1720 x 1045 x 180 mm
Product warranty	12 years
Performance warranty	25 years linear performance warranty 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 ± 3%, of reference module ± 2%, all other electric parameters ± 10%

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