

**ITS** | INNOTECH  
SOLAR

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**Greener than Green**

## DesignBlack

The DesignBlack series meets the highest aesthetic standards. The module, with monocrystalline or alternatively dark polycrystalline cells, a black back sheet and black frame, turns any plant into an eye-catcher due to the homogeneous surface.

### Durability

The high quality modules of ITS are manufactured exclusively in Sweden and pass through strict inspections during production. ITS's module factory has many years of production experience. Performance and long-term tests are conducted by independent institutes and excellent results are achieved.

### Price-performance ratio

Benefit from even more module power with our positive sorting in 10 Wp-steps, meaning you pay for the 250 Wp-class, but get modules that are flashed between 250 Wp und 259.9 Wp. Because of the special anti-reflection glass, ITS modules achieve an even higher yield.

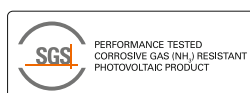
### Sustainability

In each of our production steps we follow our „greener than green“ philosophy! ITS factories are subject to strict environmental regulations and rely on renewable energy sources.

The location of the module factory in the center of the main European markets provides for short and environmentally-friendly transport routes.

## Highlights

- European module production in Sweden
- Superb design
- Elegant black back sheet
- Higher yield because of anti-reflection glass
- Up to 10 Wp more module performance due to positive sorting
- A very homogenous cell image



**DesignBlack – Mono  
STC\***

Pmax	Wp	240	250	260
Vmpp	V	29.7	30.1	30.8
Impp	A	8.25	8.44	8.60
Uoc	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\*\***

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

**Temperature Coefficients**

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

**DesignBlack – Poly  
STC\***

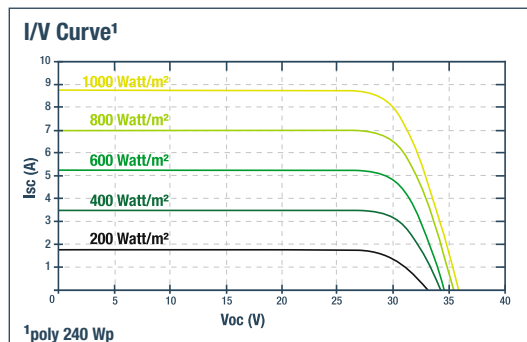
Pmax	Wp	240	250	260
Vmpp	V	30.2	31.0	31.2
Impp	A	8.11	8.22	8.49
Uoc	V	37.1	37.6	37.8
Isc	A	8.66	8.79	8.98
IR****	A	20	20	20
η	%	14.6 – 15.2	15.2 – 15.8	15.8 – 16.4

**NOCT\*\***

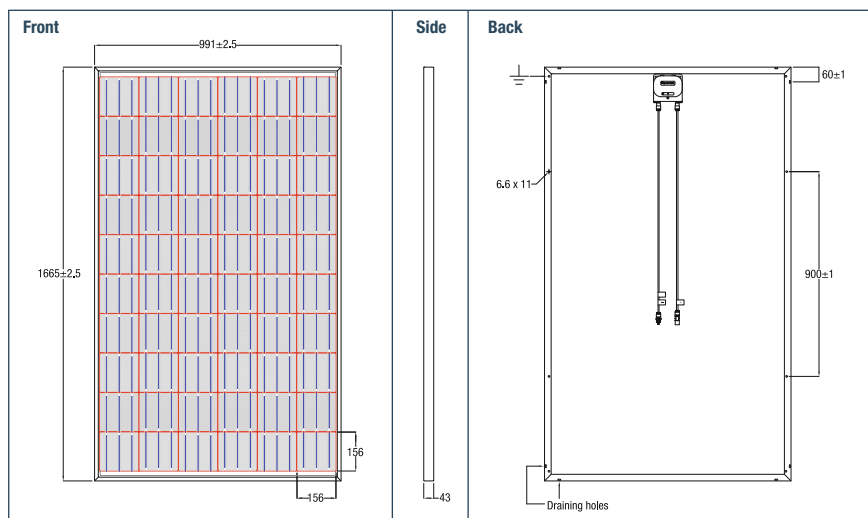
Pmax	W	176	182	186
Vmpp	V	27.3	27.8	28.3
Uoc	V	33.9	34.2	34.5
Isc	A	6.90	7.00	7.10

**Temperature Coefficients**

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



NOCT**	49.2°C
Module efficiency reduction at 200 W/m <sup>2</sup> ***	-0.6 (± 0.3)% abs.
Max. System Voltage	1000 V
IP protection level	IP 65
Module Design	Glass-foil (black)
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 mm <sup>2</sup>
Bypass-Diodes	3 pcs.
Dimensions (l x w x h)	1665 x 991 x 43 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 5400 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
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/m<sup>2</sup>, 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/m<sup>2</sup>, AM 1.5, temperature 20°C, wind speed 1 m/s.

\*\*\* Reduced efficiency with the decrease in the intensity of irradiation of 1000 W/m<sup>2</sup> and 200 W/m<sup>2</sup>, temperature 25°C according to 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.