

# solid

## IBEX

HIGH TECHNOLOGY  
SOLAR MODULES

### IBEX-144MHC COSMOS-BLACK

435/440/445/450/455

9BB HALF-CELL MONO PV MODULE

#### IBEX HIGH EFFICIENCY MONOCRYSTALLINE SOLAR MODULES WITH HALF CELL TECHNOLOGY

0+5

Positive power tolerance (0+5W) guaranteed



High performance under low light.  
Works at cloudy, rainy days



The monolithic perc cell structure technology (low resistance characteristics) is adopted ( the maximum conversion efficiency of modules is up to 20.45%)



EXTREME WEATHER RATING. High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



Reduced resistance between cells Less micro cracks, higher output power



SUPER STRONG FRAME. The overflow tank is waterproof with double layers. Aluminum frame enhances the mechanical load strength by 10%;

# IBEX 144MHC-COSMOS-BLACK 435-455

## MONOCRYSTALLINE SOLAR MODULE

### ELECTRICAL DATA AT STC

Rated power P <sub>mp</sub> [Wp]	435	440	445	450	455
P <sub>mp</sub> range to	0/+5W	0/+5W	0/+5W	0/+5W	0/+5W
Rated current I <sub>mp</sub> [A]	10.66A	10.73A	10.80A	10.87A	10.94A
Rated voltage V <sub>mp</sub> [V]	40.81V	41.01V	41.2V	41.4V	41.6V
Short-circuit current I <sub>sc</sub> [A]	11.14A	11.21A	11.29A	11.36A	11.43A
Open-circuit voltage U <sub>oc</sub> [V]	49.2V	49.4V	49.7V	50.0V	50.3V
Efficiency at STC up to	19.55%	19.78%	20.00%	20.22%	20.45%
Application Class	Class A	Class A	Class A	Class A	Class A

Specification as per STC (Standard test conditions): irradiance 1000 W/m<sup>2</sup> | module temperature 25°C | Air Mass = 1.5

### ELECTRICAL DATA AT NOCT

Power at P <sub>mp</sub> [Wp]	327	330.7	334.5	338.3	342
Rated current I <sub>mp</sub> [A]	8.55	8.60	8.65	8.7	8.75
Rated voltage V <sub>mp</sub> [V]	38.30	38.50	38.70	38.90	39.10
Short-circuit I <sub>sc</sub> [A]	9	9.06	9.12	9.18	9.24
Open-circuit voltage U <sub>oc</sub> [V]	45.9	46.1	46.3	46.6	46.9

NOCT (nominal operating cell temperature): irradiance 800 W/m<sup>2</sup> | Wind speed 1 m/sec | Ambient temperature | 20°C cell operating temperature 45 +/-2°C | Air Mass = 1.5

### LIMITING VALUES

Max. system voltage [V]	1500V DC (IEC)
Max. return current [I]	20A
Operating Temperature	- 40 to +85°C
Max. tested pressure load [Pa] <sup>2</sup>	5400
Max. tested tensile load [Pa] <sup>2</sup>	2400

### TEMPERATURE COEFFICIENT

I <sub>sc</sub>	V <sub>oc</sub>	P <sub>max</sub>
0.05% /°C	-0.28% /°C	-0.36% /°C

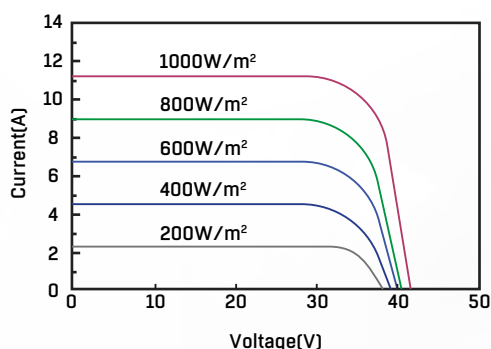
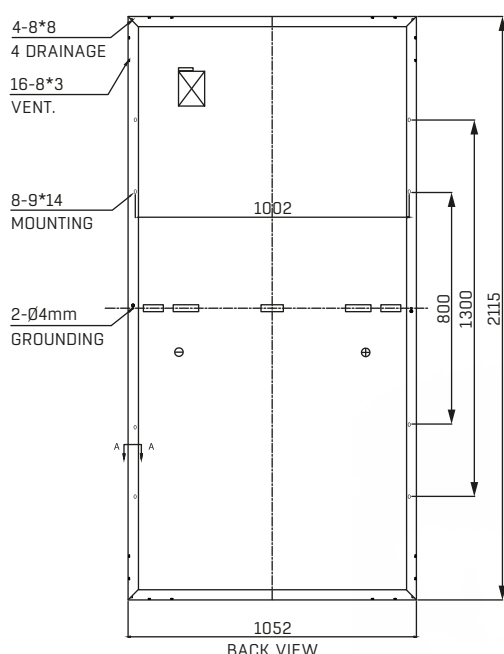
### SPECIFICATIONS

Number of cells	144 (6 x 24)   166x83 mm
Dimensions	2115 x 1052 x 40 mm
Weight	24 kg
Front-side glass	3.2 mm tempered Low Iron Glass
Frame	Stable, anodised aluminium frame, black
Junction box	Split Junction Box (IP68)
Cable	4 mm <sup>2</sup> , +300mm,-300mm Cust.Length
Diodes	3 Diodes
Plug-in connection	MC4 Compatible
Hail test (max. hailstrom)	Ø45mm   23 m/s   83 km/h

### PACKING CONFIGURATION

Container	40 HQ	Pieces Per Pallet	26
Pallets Per container	22	Pieces per Container	572

The specifications and average values can vary slightly. Relevant is the corresponding data of the individual measurement. Specifications are subject to change without notice. Measurement tolerance depending on equipment: rated power +/- 3%, other values +/- 10%. All information given in this data sheet corresponds to DIN EN 50380. A potential light-induced degradation of the power after commissioning is not considered here. Further information in the installation manuals. 1 The specific warranty conditions are given under [www.swissenergy-solar.ch](http://www.swissenergy-solar.ch) | 2 Horizontal mounted | 3 Tolerance L/W = +/- 3 mm. H +/-2mm, the dimensions given in the order confirmation will be decisive | 4 Location and dimensions of holes on request



### WARRANTY

**20 YEARS**  
PRODUCT WARRANTY

**30 YEARS**  
POWER WARRANTY

**swiss solar**