

**SOLIC**

**IBEX**

HIGH TECHNOLOGY SOLAR MODULES

**IBEX-144MHC  
COSMOS**

440/445/450

**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 20.37%)



EXTREME WEATHER RATING. High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (3800 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%

- IEC61215(2016), IEC61730(2016)
- ISO9001:2015: Quality Management System
- ISO45001:2018 Occupational health and safety management systems



# IBEX 144MHC-COSMOS 440-450

## MONOCRYSTALLINE SOLAR MODULE

### ELECTRICAL DATA AT STC

Rated power P <sub>mpp</sub> [Wp]	440	445	450
P <sub>mpp</sub> range to	0/+5W	0/+5W	0/+5W
Rated current I <sub>mpp</sub> [A]	10.78A	10.88A	10.98A
Rated voltage V <sub>mpp</sub> [V]	40.80V	40.90V	41.00V
Short-circuit current I <sub>sc</sub> [A]	11.34A	11.45A	11.55A
Open-circuit voltage U <sub>oc</sub> [V]	49.60V	49.70V	49.80V
Efficiency at STC up to	19.92%	20.14%	20.37%
Application Class	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>mpp</sub> [Wp]	327.90	331.60	335.30
Rated current I <sub>mpp</sub> [A]	8.73	8.81	8.89
Rated voltage V <sub>mpp</sub> [V]	37.50	37.60	37.70
Short-circuit I <sub>sc</sub> [A]	9.16	9.24	9.32
Open-circuit voltage U <sub>oc</sub> [V]	45.10	45.20	45.30

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>	3800

### TEMPERATURE COEFFICIENT

I <sub>sc</sub>	V <sub>oc</sub>	P <sub>max</sub>
0.049% /°C	-0.33% /°C	-0.36% /°C

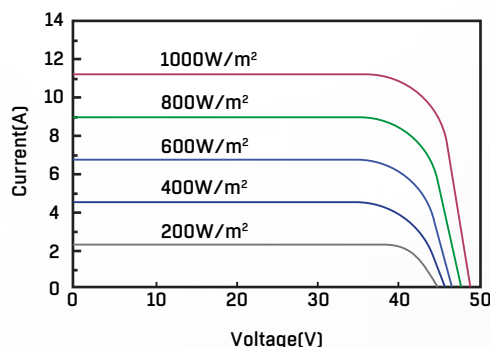
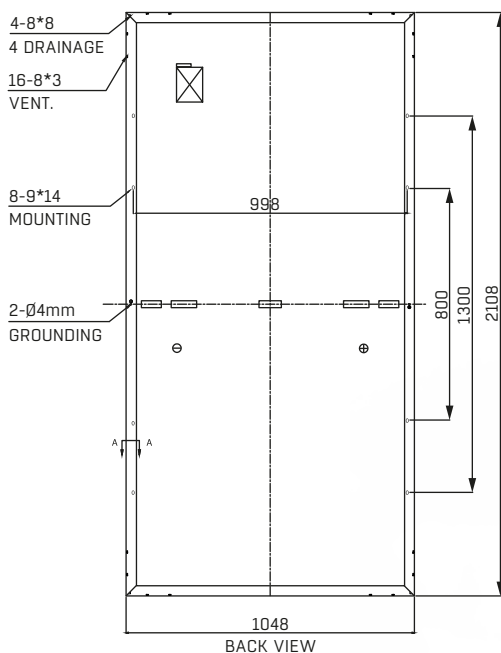
### SPECIFICATIONS

Number of cells	144 (6 x 24)   166x83 mm
Dimensions	2108 x 1048 x 35 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> , +400mm,-400mm 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	31
Pallets Per container	22	Pieces per Container	682

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**