

**IBEX**

HIGH TECHNOLOGY SOLAR MODULES

**IBEX-144MHC-DUO**

395/400/405/410/415/420

**9BB** HALF-CELL MONO PV MODULE

SWISS SOLAR

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 20.67%)



EXTREME WEATHER RATING. High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (2400 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-DUO 395-420

## MONOCRYSTALLINE SOLAR MODULE

### ELECTRICAL DATA AT STC

|   |         |         |         |         |         |         |
|---|---------|---------|---------|---------|---------|---------|
| Rated power P <sub>mpp</sub> [Wp]         | 395     | 400     | 405     | 410     | 415     | 420     |
| P <sub>mpp</sub> range to                 | 0/+5W   | 0/+5W   | 0/+5W   | 0/+5W   | 0/+5W   | 0/+5W   |
| Rated current I <sub>mp</sub> [A]         | 9.78A   | 9.85A   | 9.93A   | 10.00A  | 10.07A  | 10.15A  |
| Rated voltage V <sub>mpp</sub> [V]        | 40.4V   | 40.6V   | 40.8V   | 41.0V   | 41.2V   | 41.4V   |
| Short-circuit current I <sub>sc</sub> [A] | 10.24A  | 10.31A  | 10.40A  | 10.47A  | 10.56A  | 10.64A  |
| Open-circuit voltage U <sub>oc</sub> [V]  | 49.4V   | 49.7V   | 49.9V   | 50.2V   | 50.4V   | 50.7V   |
| Efficiency at STC up to                   | 19.44%  | 19.68%  | 19.93%  | 20.18%  | 20.42%  | 20.67%  |
| Application Class                         | Class A | 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>mpp</sub> [Wp]           | 296.9 | 300.7 | 304.4 | 308.2 | 311.9 | 315.7 |
| Rated current I <sub>mp</sub> [A]        | 7.86  | 7.91  | 7.98  | 8.03  | 8.10  | 8.17  |
| Rated voltage V <sub>mpp</sub> [V]       | 37.80 | 38.00 | 38.1  | 38.40 | 38.50 | 38.7  |
| Short-circuit I <sub>sc</sub> [A]        | 8.29  | 8.35  | 8.42  | 8.48  | 8.55  | 8.61  |
| Open-circuit voltage U <sub>oc</sub> [V] | 46.1  | 46.3  | 46.5  | 46.8  | 47    | 47.3  |

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       |

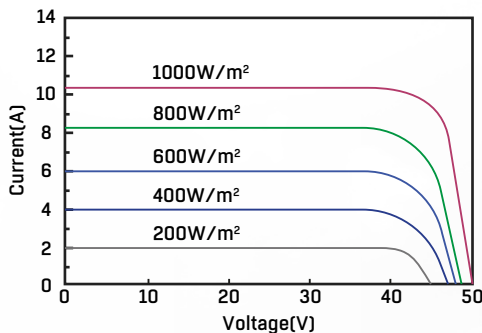
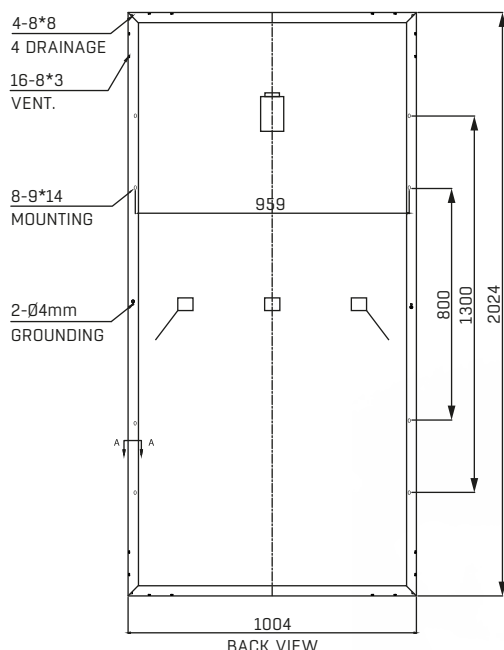
### SPECIFICATIONS

|                            |   |
|----------------------------|---|
| Number of cells            | 144 (6 x 24)   158.75 x 79.375 mm             |
| Dimensions                 | 2024 x 1004 x 40 mm                           |
| Weight                     | 23 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