



## IBC ECOLINE - A BOOST IN YOUR OUTPUT

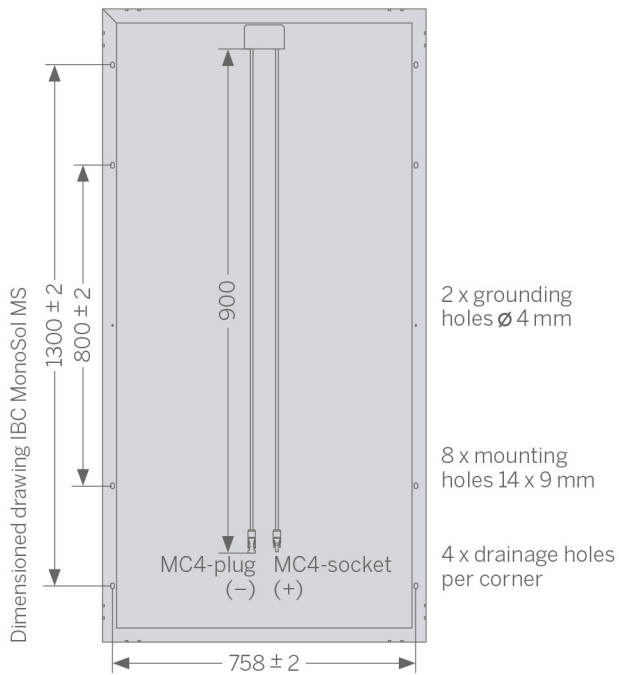
### IBC MonoSol 190MS, 195MS

#### MONOCRYSTALLINE SOLAR MODULES

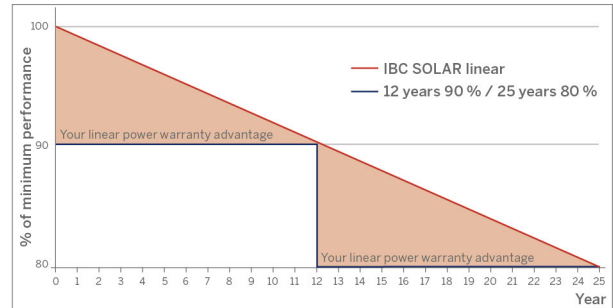
From single-family homes to open-space installations - the IBC MonoSol MS monocrystalline solar module is powerful and efficient. The modules are marked according to suitable power class. This makes it easier to sort the modules in order to optimize power, thus reducing installation time. We back up the durability of our IBC solar modules with our linear power warranty and our quality promise. You receive a certified solar module with tested quality. When you rely on IBC MonoSol MS modules, you receive high output even after 25 years.

#### HIGHLIGHTS

- Suitable for grid-connected systems
- 25 years linear power warranty\*  
linear power decrease of no more than 0,8% per year,  
80% / 25 years
- 10-year product warranty\*
- Power tolerance -0 / +5 W
- Tested according IEC 61215 for snow loads up to 5400 Pa (ca. 550 kg/m<sup>2</sup>)
- IEC 61730, Application Class A for system voltages up to 1000 V
- IEC 61215 tested and certified
- Produced in ISO 9001- and 14001-certified factories
- Quality tested by IBC SOLAR in own laboratory with climate chambers and flasher with integrated electroluminescence measurement



Your linear power warranty advantage



## TECHNICAL DATA

| IBC MonoSol   | 190 MS     | 195 MS     |
|---|------------|------------|
| STC Power Pmax (Wp)   | 190        | 195        |
| STC Nominal Voltage Umpp (V)                                  | 36,6       | 36,8       |
| STC Nominal Current Impp (A)                                  | 5,19       | 5,30       |
| STC Open circuit voltage Uoc (V)                              | 45,2       | 45,4       |
| STC Short circuit current Isc (A)                             | 5,56       | 5,67       |
| 800 W/m <sup>2</sup> NOCT AM1.5 Power Pmax (Wp)               | 135,2      | 139,1      |
| 800 W/m <sup>2</sup> NOCT AM1.5 Nominal Voltage Umpp (V)      | 33,4       | 33,8       |
| 800 W/m <sup>2</sup> NOCT AM1.5 Open Circuit Voltage Uoc (V)  | 41,5       | 41,8       |
| 800 W/m <sup>2</sup> NOCT AM1.5 Short Circuit Current Isc (A) | 4,42       | 4,51       |
| Rel. efficiency reduction @ 200W/m <sup>2</sup> (%)           | 3,0        | 3,0        |
| Tempcoeff Isc (%/°C)  | +0,05      | +0,05      |
| Tempcoeff Uoc (mV/°C)   | -158       | -159       |
| Tempcoeff Pmpp (%/°C)   | -0,47      | -0,47      |
| Module Efficiency (%)   | 14,9       | 15,3       |
| NOCT °C   | 48         | 48         |
| Max. System Voltage (V)                                       | 1000       | 1000       |
| Current value String fuse (A)                                 | 10         | 10         |
| Fuse protection from parallel strings                         | 4          | 4          |
| Length (mm)   | 1580       | 1580       |
| Width (mm)  | 808        | 808        |
| Height (mm)   | 45         | 45         |
| Weight (kg)   | 15,5       | 15,5       |
| Articlenumber   | 2002800004 | 2002800005 |

Your IBC SOLAR partner:

01.10.2011

\* Product and power warranty in accordance with the version of the full warranty conditions received from your specialized IBC SOLAR partner at the time of installation. This warranty is valid only when the relevant product is installed in accordance with the applicable installation instructions. Electrical values under standard test conditions: 1000W/m<sup>2</sup>; 25°C, AM1.5. 800 W/m<sup>2</sup>, NOCT. Specifications according EN60904-3 (STC). All datas according DIN EN 50380. Subject to modifications that represent process.