

# EEEASILY MORE.

Excellent. Efficient. Expert.

The Value-Added Modules of the IBC SOLAR Line.

## IBC MonoSol 320, 325 ZL-MB Black

First-class solar modules made of monocrystalline silicon (PERC cell concept)



25 year power and  
10 year product warranty<sup>1</sup>



Positive power tolerance ( $-0/+5$  Wp)



Increased mechanical stability (6000 Pa)



German warrantor



100% tested quality



Maximum transparent ARC glass

### IBC SOLAR – your partner for energy solutions

IBC SOLAR AG has had a successful presence in the photovoltaic market for **more than 35 years** and is one of the leading international energy companies providing high-performance system solutions in every size and for every application with intelligent photovoltaic systems. The **economic strength and financial independence** is confirmed by globally recognised rating agencies.

Smart Systems for Solar Power thanks to perfectly matched components. **More than 1,000 highly qualified partners** around the world, as well as **more than 4,200 megawatts of installed power**, which supply around 2 million people with solar power, underline the high level of expertise of IBC SOLAR.

IBC SOLAR – leading PV system integrator from Germany since 1982!



Management System  
ISO 9001:2015  
ISO 14001:2015  
OHSAS 18001:2007  
www.tuv.com  
ID: 9105069440



IEC 61215  
IEC 61730  
Regular Production Surveillance  
www.tuv.com  
ID: 1419068773



**Engineered in GERMANY** The ideal solution for:



## TECHNICAL DATA

| IBC MonoSol    | 320 ZL-MB Black          | 325 ZL-MB Black |
|----------------|--------------------------|-----------------|
| Article number | 2004100063<br>2004100064 | 2004100062      |

| Electrical data (STC):            |       |       |
|-----------------------------------|-------|-------|
| STC Power Pmax (Wp)               | 320   | 325   |
| STC Nominal Voltage Umpp (V)      | 32.61 | 32.78 |
| STC Nominal Current Imp (A)       | 9.83  | 9.92  |
| STC Open Circuit Voltage Uoc (V)  | 39.89 | 40.08 |
| STC Short Circuit Current Isc (A) | 10.35 | 10.44 |
| Module Efficiency (%)             | 18.46 | 18.75 |
| Power Tolerance (Wp)              | -0/+5 | -0/+5 |

| Electrical data (NOCT):   |       |       |
|---|-------|-------|
| 800 W/m <sup>2</sup> NOCT AM 1.5<br>Power Pmax (Wp)               | 231   | 235   |
| 800 W/m <sup>2</sup> NOCT AM 1.5<br>Nominal Voltage Umpp (V)      | 29.04 | 29.24 |
| 800 W/m <sup>2</sup> NOCT AM 1.5<br>Open Circuit Voltage Uoc (V)  | 36.41 | 36.58 |
| 800 W/m <sup>2</sup> NOCT AM 1.5<br>Short Circuit Current Isc (A) | 8.44  | 8.51  |
| Relative Efficiency Reduction<br>at 200 W/m <sup>2</sup> (%)      | 2.5   | 2.5   |

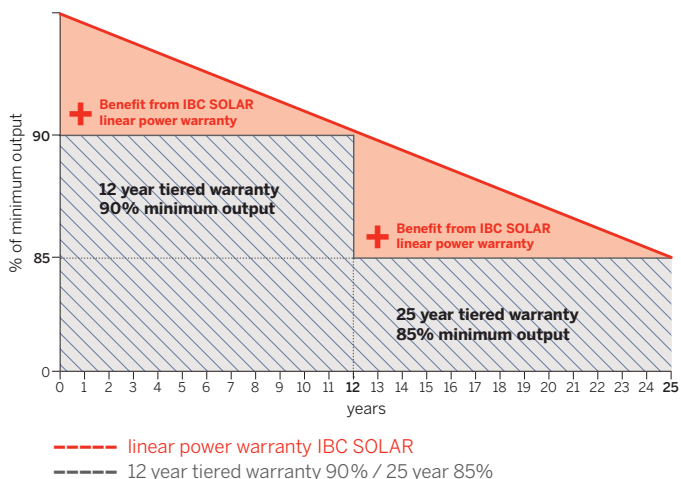
| Temperature coefficient: |        |        |
|--------------------------|--------|--------|
| NOCT (°C)                | 44     | 44     |
| Tempcoeff Isc (%/°C)     | +0.07  | +0.07  |
| Tempcoeff Voc (mV/°C)    | -121.2 | -121.2 |
| Tempcoeff Pmpp (%/°C)    | -0.38  | -0.38  |

| Operating conditions:                 |      |
|---------------------------------------|------|
| Max. System Voltage (V)               | 1000 |
| Application Class                     | A    |
| Reverse Current Ir (A)                | 20   |
| Current value string fuse (A)         | 15   |
| Fuse protection from parallel strings | 4    |

| Mechanical properties:                         |   |
|--|---|
| Dimensions (L × W × H in mm)                   | 1696 × 1022 × 40  |
| Weight (kg)                                    | 19.6  |
| Max. Test load, Push/Pull (Pa)                 | 6000/5400   |
| Max. Design load <sup>2</sup> , Push/Pull (Pa) | 4000/3600   |
| Front sheet (mm)                               | 3.2 (low-iron photovoltaic glass and anti-reflective coating) |
| Frame  | anodized aluminium, sturdy hollow-chamber frame               |
| Cells  | 6 × 10 monocrystalline silicon cells                          |
| Connection type                                | MC4 (IP65)  |

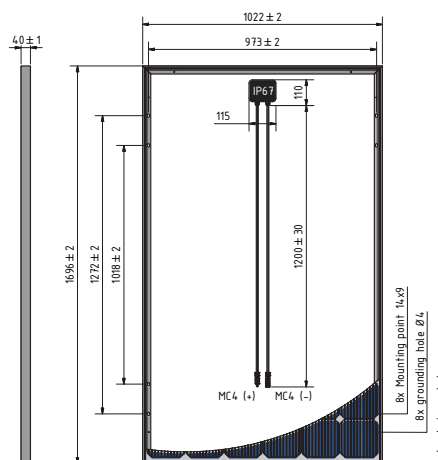
| Warranties and certification: |  |
|-------------------------------|--|
| Product warranty              | 10 years <sup>1</sup>                                  |
| Power warranty                | 25 years, linear                                       |
| Certification                 | IEC 61215, IEC 61730, ISO 9001, ISO 14001, OHSAS 18001 |

## 25 year linear power warranty by IBC SOLAR



<sup>1)</sup> The warranty presupposes installation in accordance with the valid installation instructions.  
Standard test conditions: 1000 W/m<sup>2</sup> irradiation with a spectral distribution of AM 1.5 and a cell temperature of 25 °C. 800 W/m<sup>2</sup>, NOCT. Information according to EN 60904-3 (STC).  
All values according to DIN EN 50380. The precise conditions and content can be taken from the respectively valid version of the product and power warranty, which you obtain from your IBC Premium Partner. Subject to errors and modifications.

<sup>2)</sup> Loads according to IEC 61215-2:2016, max. design load



Presented by: