

**EEEEASILY  
MORE.**

**Excellent. Efficient. Expert.**

The Value-Added Modules of the IBC SOLAR Line.  
**IBC MonoSol 445, 450, 455 OS9-HC**

First-class solar modules made of monocrystalline half-cut-cells



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



Positive power tolerance (-0/+5)



Increased mechanical stability (5400 Pa)



German warrantor



100% tested quality



Improved shadowing management  
thanks to half-cut-technology

**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!**



**Engineered in  
GERMANY**

The ideal solution for:



## TECHNICAL DATA

IBC MonoSol	445 OS9-HC	450 OS9-HC	455 OS9-HC
Article number	2005700057	2005700058	2005700059

Electrical data (STC):			
STC Power Pmax (Wp)	445	450	455
STC Nominal Voltage Umpp (V)	41.3	41.5	41.7
STC Nominal Current Impp (A)	10.78	10.85	10.92
STC Open Circuit Voltage Uoc (V)	49.1	49.3	49.5
STC Short Circuit Current Isc (A)	11.53	11.60	11.66
Module Efficiency (%)	20.47	20.70	20.93
Power Tolerance (Wp)	-0/+5	-0/+5	-0/+5

Electrical data (NOCT):			
800 W/m <sup>2</sup> NOCT AM 1.5 Power Pmax (Wp)	332.3	336.1	339.8
800 W/m <sup>2</sup> NOCT AM 1.5 Nominal Voltage Umpp (V)	38.5	38.6	38.8
800 W/m <sup>2</sup> NOCT AM 1.5 Open Circuit Voltage Uoc (V)	46.0	46.2	46.4
800 W/m <sup>2</sup> NOCT AM 1.5 Short Circuit Current Isc (A)	9.33	9.38	9.43
Relative Efficiency Reduction at 200 W/m <sup>2</sup> (%)	3.0	3.0	3.0

Temperature coefficient:			
NOCT (°C)	45	45	45
Tempcoeff Isc (%/°C)	+0.048	+0.048	+0.048
Tempcoeff Voc (mV/°C)	-132.57	-133.11	-133.65
Tempcoeff Pmpp (%/°C)	-0.35	-0.35	-0.35

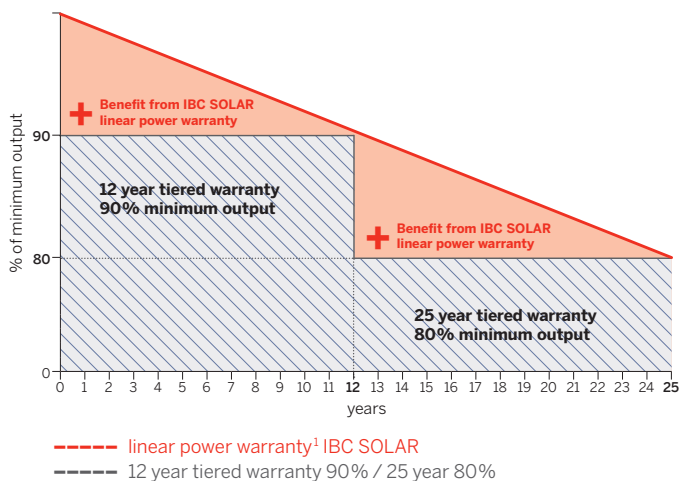
Operating conditions:	
Max. System Voltage (V)	1500
Application Class	A
Reverse Current Ir (A)	20
Current value string fuse (A)	20
Fuse protection from parallel strings	2

Mechanical properties:	
Dimensions (L x W x H in mm)	2094 x 1038 x 35
Weight (kg)	23.5
Max. Test load, Push/Pull (Pa)	5400/2400
Max. Design load <sup>2</sup> , Push/Pull (Pa)	3600/1600
Front sheet (mm)	3.2 (low-iron photovoltaic glass and anti-reflective coating)
Frame	anodized aluminium, sturdy hollow-chamber frame
Cells	12 x 12 mono-crystalline silicon cells
Connection type	EVO2

Warranties and certification:	
Product warranty	10 years <sup>1</sup>
Power warranty	25 years <sup>1</sup>
Certification	IEC 61215, IEC 61730-1/-2, ISO 9001, ISO 14001, OHSAS 18001

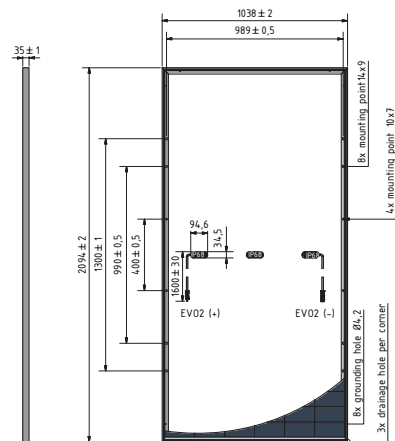
Packaging information:	
Number of modules per pallet	30
Number of pallets per 40' container	22
Dimensions incl. pallet (L x W x H in mm)	2410 x 1130 x 1180
Gross weight incl. double pallet (kg)	755
Stackability per pallet	2-fold

## 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: