IBC SOLAR

Have sun!

On modules & mounting systems

15 years combination warranty

Product datasheet

IBC MonoSol 415 - 430 ES10-HC-N BF

High-quality double-glazed solar modules made of monocrystalline half-cut cells.

Extended performance warranty

Guaranteed higher long-term electricity profits owed to TOPCon technology.

Higher low light output

Even in low light conditions, for example at dusk and on cloudy days, increased power production is ensured.

Bifacial power generation

Up to 25% higher yield caused by double-sided active module, which absorbs sunlight with the front and the back.

Better cell protection

The front and back glass layer protects the cells from damaging and environmental impacts.

You also benefit from:

- a positive power tolerance (-0/+5W)
- increased mechanical stability (5400 Pa)
- a German guarantor
- 100% proved quality
- a 30-year performance warranty
- a 25-year product warranty

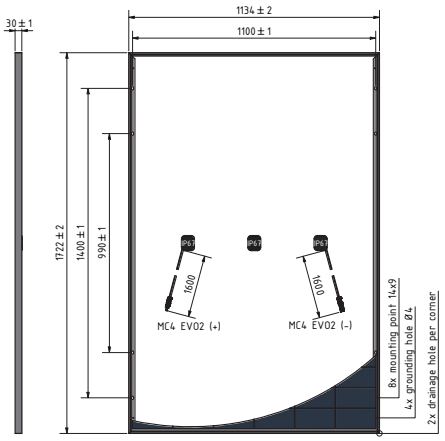
Online shop:
Find our products and further information here.

ENGINEERED IN GERMANY

IBC SOLAR AG • Am Hochgericht 10, 96231 Bad Staffelstein, Germany • +49 (0)9573-92 240 • info@ibc-solar.com • www.ibc-solar.com

IBC SOLAR

Have sun!



IBC MonoSol	415 ES10-HC-N BF	420 ES10-HC-N BF	425 ES10-HC-N BF	430 ES10-HC-N BF
Article number	2006200007	2006200008	2006200011	2006200012

Electrical data (STC)[3]				
STC Power Pmax (Wp)	415	420	425	430
STC Nominal Voltage Umpp (V)	31.7	31.9	32.1	32.3
STC Nominal Current Impp (A)	13.10	13.17	13.24	13.32
STC Open Circuit Voltage Uoc (V)	37.7	37.9	38.1	38.3
STC Short Circuit Current Isc (A)	13.91	13.98	14.05	14.12
Module Efficiency (%)	21.25	21.51	21.76	22.02
Power Tolerance (W)	-0/+5	-0/+5	-0/+5	-0/+5

Electrical data (NMOT)				
NMOT (°C)	42	42	42	42
800 W/m² NMOT AM 1.5 Power Pmax (Wp)	315	318	322	326
800 W/m² NMOT AM 1.5 Nominal Voltage Umpp (V)	29.8	30.0	30.2	30.3
800 W/m² NMOT AM 1.5 Open Circuit Voltage Uoc (V)	36.0	36.2	36.4	36.6
800 W/m² NMOT AM 1.5 Short Circuit Current Isc (A)	11.22	11.27	11.33	11.38
Relative Efficiency Reduction at 200 W/m² (%)	≤ 5	≤ 5	≤ 5	≤ 5

Temperature coefficient (linear)				
Tempcoeff Isc (%/°C)	0.046	0.046	0.046	0.046
Tempcoeff Uoc (mV/°C)	-98.02	-98.75	-99.06	-99.58
Tempcoeff Pmpp (%/°C)	-0.33	-0.33	-0.33	-0.33

Operating conditions	
Max. System Voltage (V)	1500
Application Class	A
Reverse Current Ir (A)	25
Fuse protection from parallel strings	3
Protection class	II (DIN EN 61140)
Fire protection	Class C (IEC 61730-ANSI/UL790)

Mechanical properties	
Dimensions (L × W × H in mm)	1722 × 1134 × 30
Weight (kg)	24,5
Max. Test load, Push/Pull (Pa)	5400/2400
Max. Design load[2], Push/Pull (Pa)	3600/1600
Front sheet (mm)	2.0 (low-iron photovoltaic glass and anti-reflective coating)
Frame	anodized aluminium, sturdy hollow-chamber frame
Cells	12 × 9 mono-crystalline silicon cells
Connection type	Stäubli MC4-Evo 2A

Warranties and certification	
Product warranty	25 years[1]
Performance warranty	30 years[1]
Annual degradation	year 1 1,0% year 2-30 0,4%
Certification	IEC 61215, IEC 61730-1/-2, ISO 9001, ISO 14001, OHSAS 18001

Packaging information	
Number of modules per pallet	36
Number of pallets per 40‘ container	26
Dimensions incl. pallet (L × W × H in mm)	1764 x 1140 x 1254
Gross weight incl. double pallet (kg)	918
Stackability per pallet	2-fold

1) The linear power and product warranty are only valid for installations within Europe and Japan. The warranty requires installation according to the valid installation instructions. Standard test conditions: 1000 W/m² irradiation with a spectral distribution of AM 1.5 and a cell temperature of 25°C. 800 W/m², NOCT. Information according to EN 60904-3 (STC). All values according to DIN EN 50380. Errors and changes reserved.
The precise conditions and content can be taken from the respectively valid version of the product and power warranty, which you can obtain from your IBC Premium Partner.

2) Loads according to IEC 61215-2:2016, max. design load

3) Measurement tolerances +/- 3 % at STC: 1000 W/m², 25 +/- 2 °C, AM 1.5

Your Premium Partner

IBC SOLAR AG • Am Hochgericht 10, 96231 Bad Staffelstein, Germany • +49 (0)9573-92 240 • info@ibc-solar.com • www.ibc-solar.com

9001500128 • As of: 2024-01-17