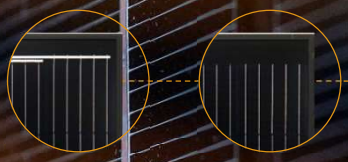
SONNENSTROM FABRIK



Optional: Black

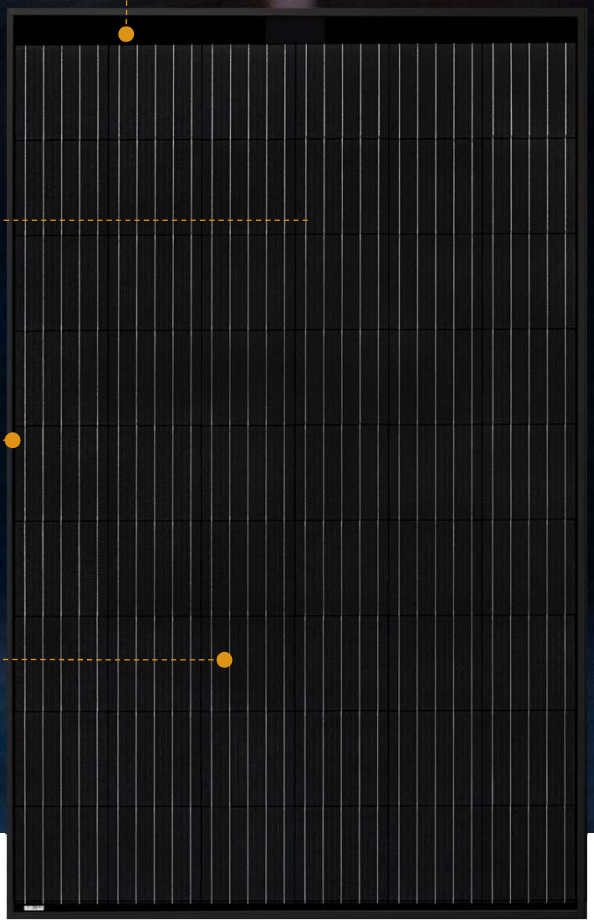
Optional: Full Black

Optional: junction box 1500 Volt

Optional: Heavy snow load frame

Optional: 30yrs guarantee

Optional: Total-Care Insurance



EXCELLENT GLASS/GLASS M54

black | full black

MONOCRYSTALLINE 285–295 WP

GLAS
GLAS

Long lifetime even under extreme conditions

2 x 2 mm strong, hardened and scratch resistant solar glass

Protection of cells against microcracks through double glass composite

Maximum test load 8.100 Pa. [2]

Original MC4 plugs and fire resistant cables

Stability optimized for increased requirements due to slipping snow loads (optional)

Extended hail impact tests to 30 mm

Optimized for performance

PID-free monocrystalline high performance solar cells

Antireflective coated solar glass

Low-light optimized

Positively classified -0/+4.99 Wp

Industry-leading NMOT values

Highest quality standards

Manufactured according to
DIN EN ISO 9001:2015
DIN EN ISO 14001:2015
DIN EN ISO 45001:2018

PV-module type approval according to
IEC 61215:2016 [3]

PV-module safety qualification according to
IEC 61730:2016 [3]

Resistant to ammonia accoring to
IEC 62716:2013

Guaranteed performance [1]

30 years of linear performance guarantee

20 years product guarantee, optional extension to 30 years

Total Care for the entire system (optional)

[1] For detailed information please consult the CS Wismar GmbH warranty conditions
[2] See backside for detailed test loads
[3] Subject to recertification

EXCELLENT GLASS/GLASS 285 | 290 | 295 M54

black | full black

Performance STC

Under standard Test Conditions STC:
1000 W/m²; spectrum AM 1.5;
Cell temperature 25°C
Measurement tolerance STC:
Pmpp ±3%; Isc ±10%; Uoc ±10%

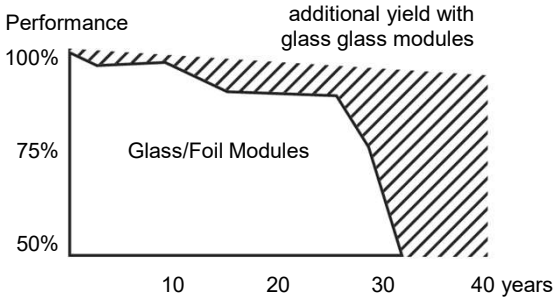
Nominal Power Pmpp (Wp)	285	290	295
Open Circuit Voltage Uoc (V)	36,32	36,37	36,42
Voltage Umpp (V)	30,07	30,31	30,54
Short Circuit Current Isc (A)	10,06	10,17	10,28
Current Impp (A)	9,48	9,57	9,66
Efficiency η (%)	18,4	18,7	19,0

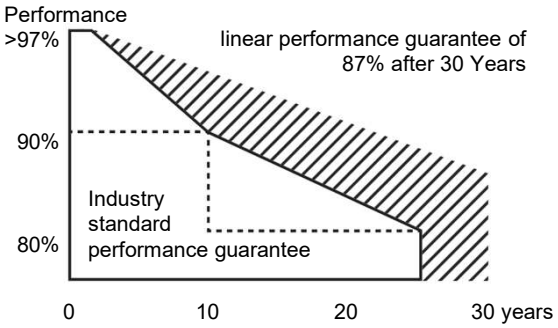
Reduction of module efficiency at reduction from 1000 W/m² to 200 W/m²: 3,3% ± 0,5% (relative)

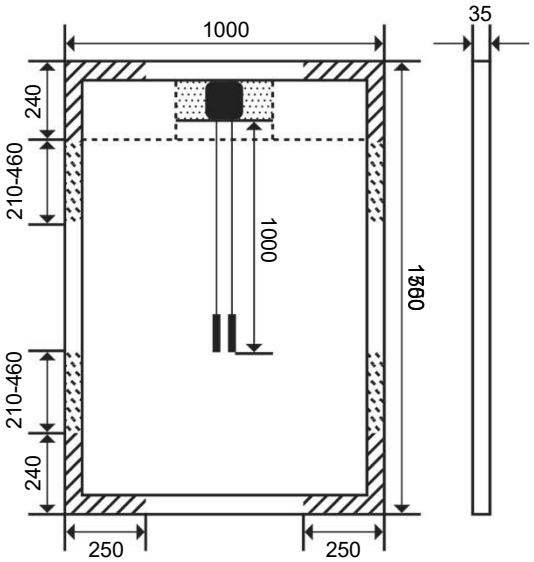
Performance NMOT

Nominal operating temperature of module
800 W/m², NMOT, AM 1.5

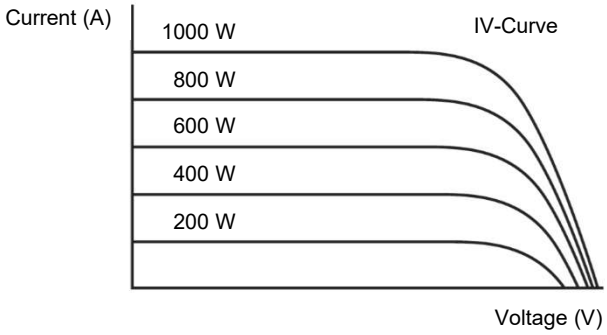
Nominal Power Pmpp (Wp)	222	226	230
Open Circuit Voltage Uoc (V)	33,97	34,01	34,06
Voltage Umpp (V)	29,37	29,58	29,77
Short Circuit Current Isc (A)	8,13	8,22	8,31
Current Impp (A)	7,57	7,64	7,71







measurements in mm



clamping area
approved up to 2.400 Pa (suction & pressure)
approved up to 2.400 Pa (suction)/
5.400 Pa (pressure)

no contact between junction box and mounting profile permitted in this area.

Other Technical Specification

Max. system voltage	1000 V
Weight	ca. 20.0 kg
Reverse Current Load IR	15 A
Junction box	IP 67 with 3 bypass diodes
Connectors	IP 67, MC4
Fire rating	class C
Operating temperature	-40°C …+85°C
Design load: snow	5.400 Pa *
Max test load	8.100 Pa
Design load: wind	2.400 Pa *
Max test load	3.600 Pa

* safety factor 1.5

Thermal Properties

TC Pmpp	-0.39 %/K
TC Uoc	-0.28 %/K
TC Isc	0.040 %/K
NMOT	45 +/- 2 °C

Material Used

No. of cells	54 cells
Type of cells	monocrystalline
Front	hardened solar glass
Frame	anodized aluminium
Frame height	35 mm