



Optional: Heavy snow load frame



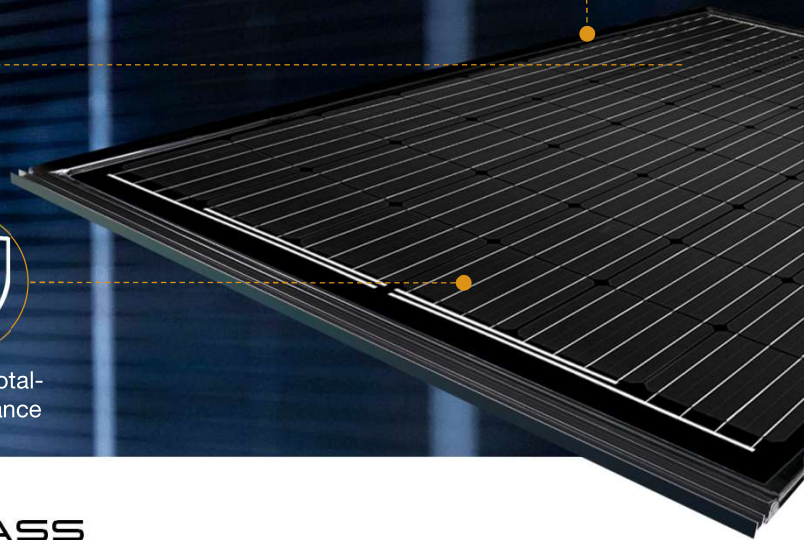
Optional: junction box 1500 Volt



Optional: 30yrs guarantee



Optional: Total-Care Insurance



INTEGRATION GLASS/GLASS M54

MONOCRYSTALLINE 285-295 WP

Schweizer



Long lifetime even under extreme conditions	Optimized for performance	Highest quality standards	Guaranteed performance ¹
Inroof system, BIPV-Typ EN 50583, Category A	PID-free monocrystalline high performance solar cells	Rigid roofing, P-BWU03-I-16.3.237	30 years of linear performance guarantee
2 x 2 mm strong, hardened and scratchresistant solar glass	Antireflective coated solar glass	Manufactured acc. to DIN EN ISO 9001:2015 DIN EN ISO 14001:2015 DIN EN ISO 45001:2018	20 years product guarantee, optional extension to 30 years
Protection of cells against microcracks through double glass composite	Low-light optimized	PV-module type approval acc. to IEC 61215:2016 ³	Total Care for the entire system (optional)
Easy to install, reliable operation	Positively classified -0/+4.99 Wp	PV-module safety qualification acc. to IEC 61730:2016 ³	
Rainproof like a tiled roof (SIA 232/1)	Industry-leading NMOT values	Fire class: rigid roof (Euro class E)	
Excellent mechanical load values, compressive load up to 5,400 Pa ²			
Hail class HW 3			

¹ For detailed information please consult the CS Wismar GmbH warranty conditions

² See backside for detailed test loads

³ Subject to recertification

INTEGRATION GLASS/GLASS 285 | 290 | 295 M54

Performance STC

Under standard Test Conditions STC:
1000 W/m²; spectrum AM 1.5;
Cell temperature 25°C
Measurement tolerance STC:
P_{mpp} ±3%; I_{sc} ±10%; U_{oc} ±10%

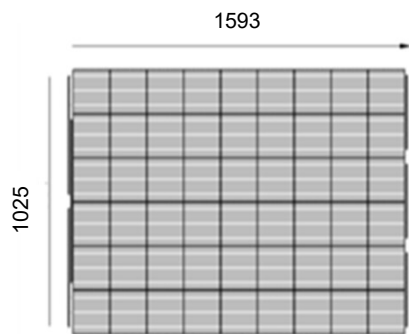
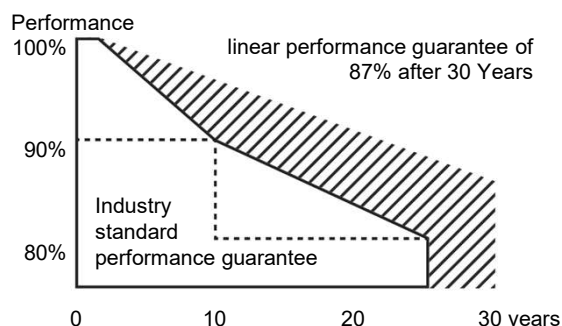
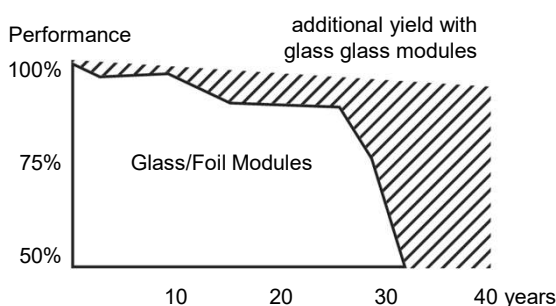
Nominal Power P _{mpp} (Wp)	285	290	295
Open Circuit Voltage U _{oc} (V)	36,32	36,37	36,42
Voltage U _{mpp} (V)	30,07	30,31	30,54
Short Circuit Current I _{sc} (A)	10,06	10,17	10,28
Current I _{mpp} (A)	9,48	9,57	9,66
Efficiency η (%)	16,0	16,2	16,5

Reduction of module efficiency at reduction from 1000 W/m² to 200 W/m²: 2,4% ± 0,3% (relative)

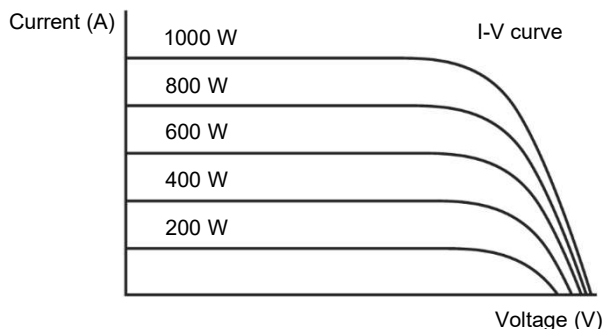
Performance NMOT

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

Nominal Power P _{mpp} (Wp)	222	226	230
Open Circuit Voltage U _{oc} (V)	33,97	34,01	34,06
Voltage U _{mpp} (V)	29,37	29,58	29,77
Short Circuit Current I _{sc} (A)	8,13	8,22	8,31
Current I _{mpp} (A)	7,57	7,64	7,71



measurements in mm



Other Technical Specification

Max. system voltage	1000 V
Weight	ca. 20.0 kg
Reverse Current Load I _R	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	3.600 Pa *
Max test load	5.400 Pa
Design load: wind	1.600 Pa *
Max test load	2.400 Pa
Outer dimensions	1593 x 1025 mm
Raster dimensions	1575 x 993 mm

* safety factor 1.5

Thermal Properties

TC P _{mpp}	-0.39 %/K
TC U _{oc}	-0.28 %/K
TC I _{sc}	0.040 %/K
NMOT	45 +/- 2 °C

Material Used

No. of cells	54 cells
Type of cells	monocrystalline
Front	hardened solar glass
Frame	Solrif frame
Frame height	16 mm
Module height	35 mm

