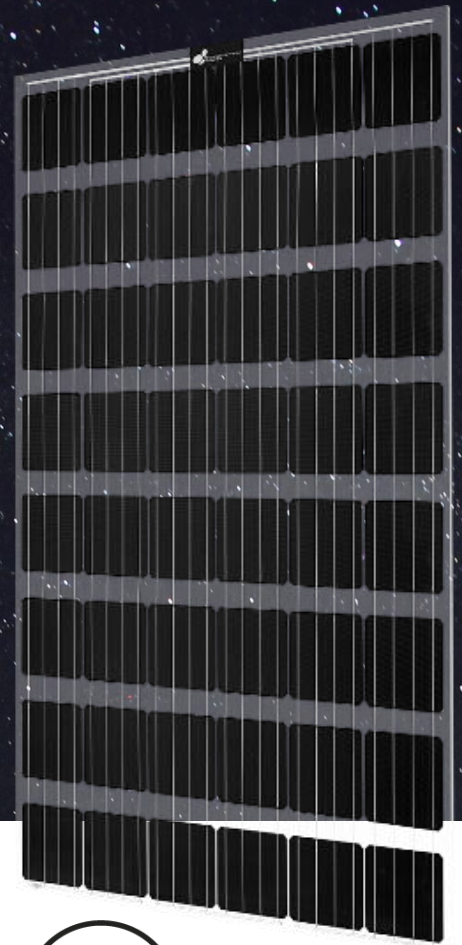
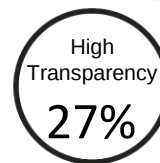




EXCELLENT GLASS/GLASS PERC48
brilliant frameless

PERC 230-245 WP



Transparency and Performance

The cell matrix is
optimized for light
transmission and
maximum performance

The optimized cell matrix
enables a light
transparency of 27%

Optimizes electricity
production whilst
preserving daylight
diffusion for agricultural
greenhouses and
buildings

Perfect architectural
integration and control of
natural light contribution
for verandas, pergolas,
awnings and carports

30 years linear
performance guarantee
20 years product
guarantee

Optional Total Care for
the entire system

EXCELLENT GLASS/GLASS 230 | 235 | 240 | 245 PERC48

brilliant frameless

Performance STC

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

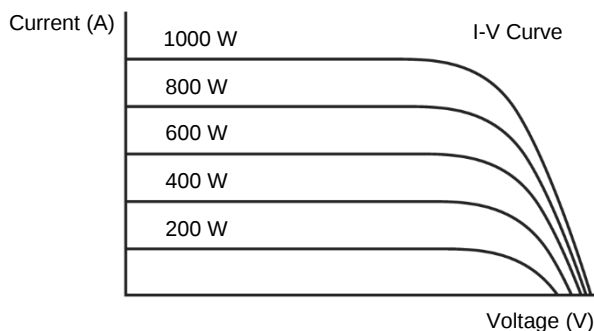
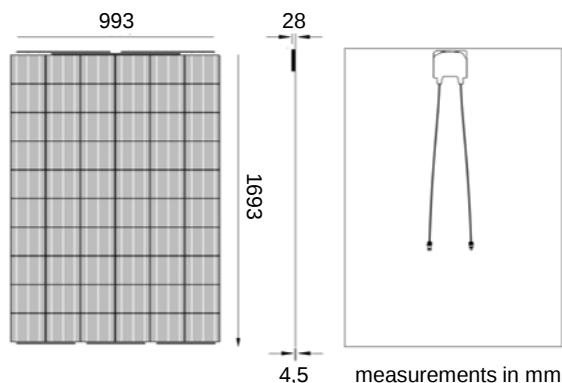
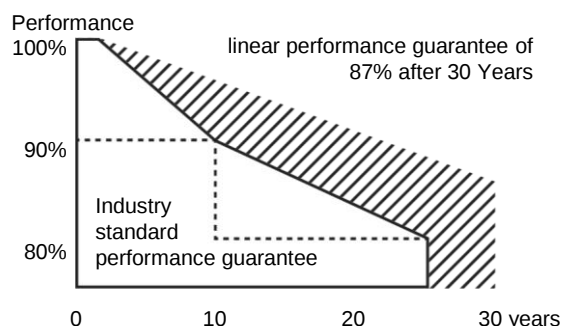
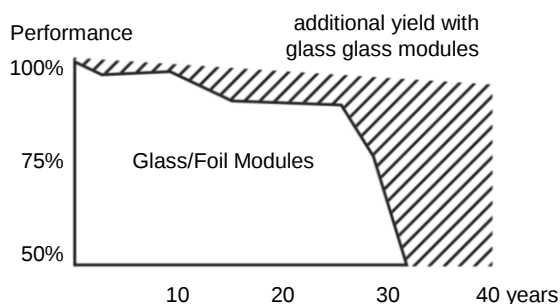
Nominal Power P _{mp} (Wp)	230	235	240	245
Open Circuit Voltage U _{oc} (V)	31,06	31,32	31,42	31,52
Voltage U _{mp} (V)	25,81	26,01	26,18	26,32
Short Circuit Current I _{sc} (A)	9,46	9,62	9,79	9,96
Current I _{mp} (A)	8,91	9,03	9,17	9,31
Efficiency η (%)	13,7	14,0	14,3	14,6

Reduction of module efficiency at reduction from 1000 W/m² to 200 W/m²: 3,7% ± 0,2% (relative)

Performance NMOT

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

Nominal Power P _{mp} (Wp)	178	182	186	189
Open Circuit Voltage U _{oc} (V)	29,05	29,29	29,38	29,49
Voltage U _{mp} (V)	25,00	25,21	25,36	25,49
Short Circuit Current I _{sc} (A)	7,64	7,77	7,91	8,05
Current I _{mp} (A)	7,11	7,21	7,32	7,43



Other Technical Specification

Max. system voltage	1000 V
Weight	20.0 ± 0.5 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	1.600 Pa *
Max test load	2.400 Pa
Design load: wind	1.600 Pa *
Max test load	2.400 Pa

* safety factor 1.5

Thermal Properties

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

Material Used

No. of cells	48 cells
Type of cells	mono perc
Front	hardened solar glass
Frame	n/a
Frame height	n/a

