



M5^{plus}

- ⌘ Solar Swiss solar modules deliver extraordinarily high yields through careful processing and accurate matched components .
- ⌘ Tiered performance classes allow individual planning and design of photovoltaic systems.
- ⌘ The proven concave chamber construction gives the framework additional stability and provides for an easy assembly.
- ⌘ Modern manufacturing techniques and a certified quality management guarantee optimum product quality.
- ⌘ The Solar Swiss **plus** series is characterized by performance optimized materials. Due to positive sorting, the actual performance lies above the nominal output performance.

General Features

Performance Classes	170 Wp, 175 Wp, 180 Wp, 185 Wp, 190 Wp
Module Dimensions	1.585 x 805 x 35 mm
Frame	Aluminium (anodized)
Qualifications	Product certification according to IEC 61215 Ed.2 Protection class II or IEC 61730 EU Conformity
Warranty*	5 years product warranty
Performance Guarantee*	12 years on 90 % of the performance 25 years on 80 % of the performance

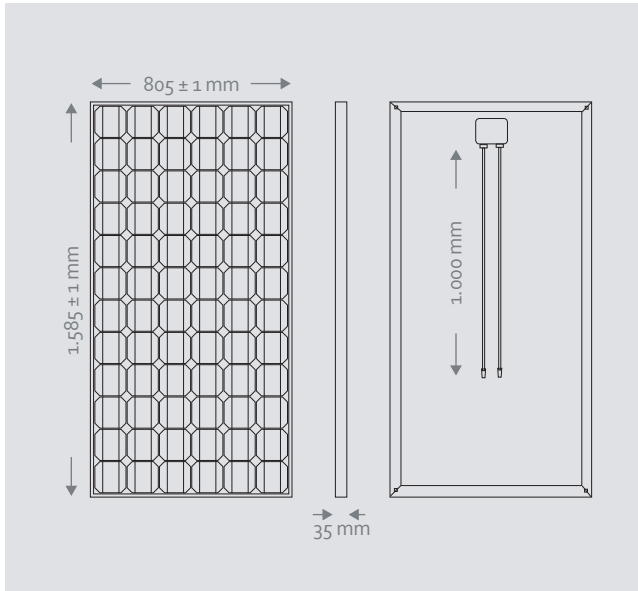


Technical subject to alterations

** In accordance with our respective applicable guarantee conditions*

Technical Data

Dimensions



General Data

Module Technology	Glas-Foil-Laminate; Aluminium Frame
Cover Material	High transparent solar glass (tempered) 4 mm
Back Material	Tedlar-Polyester-Tedlar- Laminate, white
Type of Cells	72 monocrystalline solar cells
Cell Dimensions	125 mm x 125 mm
Connection Box	Tyco with 3 Bypass Diodes
Cables	2 x 1.000 mm / 4 mm ² , Tyco Solarlok plug connectors
Max. System Voltage	1.000 V
Weight	16,2 kg
IP Protection Level	IP 65
Mechanical Ratings	Load of 5.400 Pa approved

Electrical Data (STC)

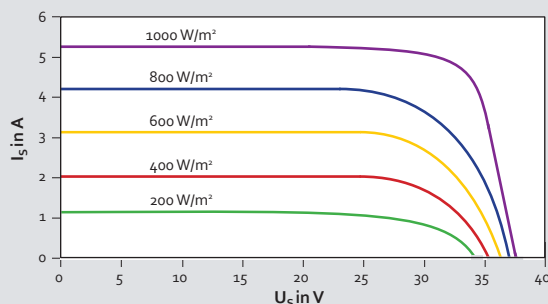
STC: Standard Test Conditions: Radiation strength 1.000 W/m²,
spectral distribution AM 1.5, temperature 25 ± 2 °C, in accordance with EN 60904-3

Module Indication	SSM-170M	SSM-175M	SSM-180M	SSM-185M	SSM-190M
Nominal Power P_{max}	170 Wp	175 Wp	180 Wp	185 Wp	190 Wp
Nominal Voltage U_{mpp}	35,25 V	35,5 V	36,0 V	36,05 V	37,0 V
Nominal Current I_{mpp}	4,82 A	4,93 A	5,0 A	5,14 A	5,15 A
Open Circuit Voltage U_t	44,3 V	44,5 V	44,9 V	45,0 V	45,0 V
Short Circuit Current I_{sc}	5,36 A	5,40 A	5,52 A	5,53 A	5,5 A
Modul Efficiency	13,3 %	13,7 %	14,1 %	14,5 %	14,9 %

Measuring tolerances P_{max} ± 3 %

Characteristic Line

Voltage characteristic line with different
irradiations Performance class 190 Wp



Thermal Features

Operating Temperature Range	-40 ... +85 °C
Ambiente Temperature Range	-40 ... +45 °C
Temperature Coefficient of P_N	-0,48 %/K
Temperature Coefficient of U_{OC}	-0,34 %/K
Temperature Coefficient of I_{sc}	+0,028 %/K
NOCT	44 °C