



M15

- ⌘ 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 series is characterized by performance optimized materials.

General Features

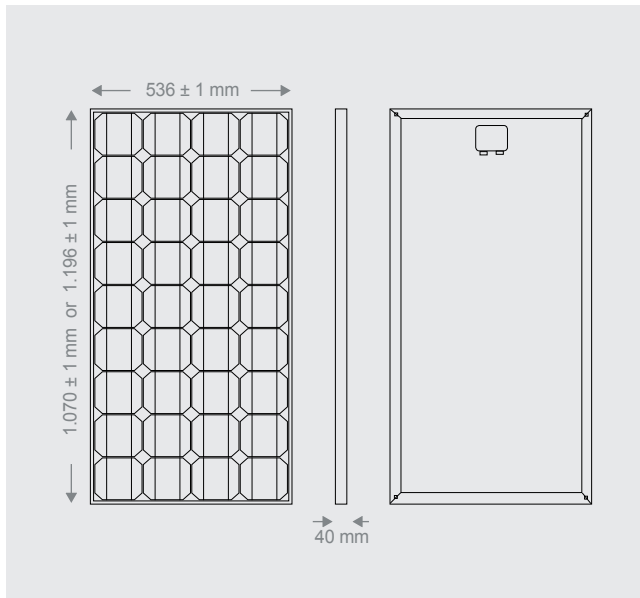
Performance Classes	90 Wp, 95 Wp		100 Wp, 105 Wp, 110 Wp
Measuring tolerances	± 3 %		
Module Dimensions	1.070 x 536 x 40 mm		1.196 x 536 x 40 mm
Frame	Aluminium white, black, powder coated		
Qualifications	Product certification according to IEC 61215 Ed.2 Protection class II or IEC 61730 CE Conformity		
Warranty*	2 years		
Performance Guarantee*	10 years on 90 % of the performance 20 years on 80 % of the performance		

Technical subject to alterations

**In accordance with our respective applicable guarantee*

Technical Data

Dimensions



General Data

Module Technology	Glas-Foil-Laminate; Aluminium Frame	
Cover Material	High transparent solar glass (tempered) 3,2 mm	
Back Material	modified Polyamid white, black	
Type of Cells	monokristalline Solarzellen	
Cell Dimensions	125 mm x 125 mm	
Connection Box	Spelsberg Box	
Bypass diode	2 pieces	
Max. System Voltage	715 V	
Weight	7,0 kg	7,5 kg
IP Protection Level	IP 65	
Mechanical Ratings	Load of 2.400 Pa approved	

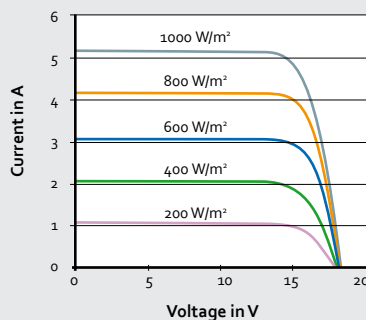
Electrical Data (STC)

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

Module Indication	KVM-90	KVM-95	KVM-100	KVM-105	KVM-110
Nominal Power P_{max}	90 Wp	95 Wp	100 Wp	105 Wp	110 Wp
Nominal Voltage U_{mpp}	16,82 V	17,36 V	18,70 V	19,19 V	19,54 V
Nominal Current I_{mpp}	5,35 A	5,47 A	5,35 A	5,47 A	5,63 A
Open Circuit Voltage U_{OC}	19,95 V	20,10 V	22,70 V	22,85 V	23,00 V
Short Circuit Current I_{SC}	5,69 A	5,85 A	5,69 A	5,85 A	6,02 A
Modul Efficiency	15,65 %	16,38 %	15,65 %	16,38 %	17,16 %

Characteristic Curve

Current and voltage characteristics at different radiation power class 95 Wp



Thermal Features

Operating Temperature Range	-40 ... +85 °C
Ambiente Temperature Range	-40 ... +45 °C
Temperature Coefficient of P_N	-0,37 %/K
Temperature Coefficient of U_{OC}	-0,24 %/K
Temperature Coefficient of I_{SC}	+0,033 %/K
NOCT	44 °C