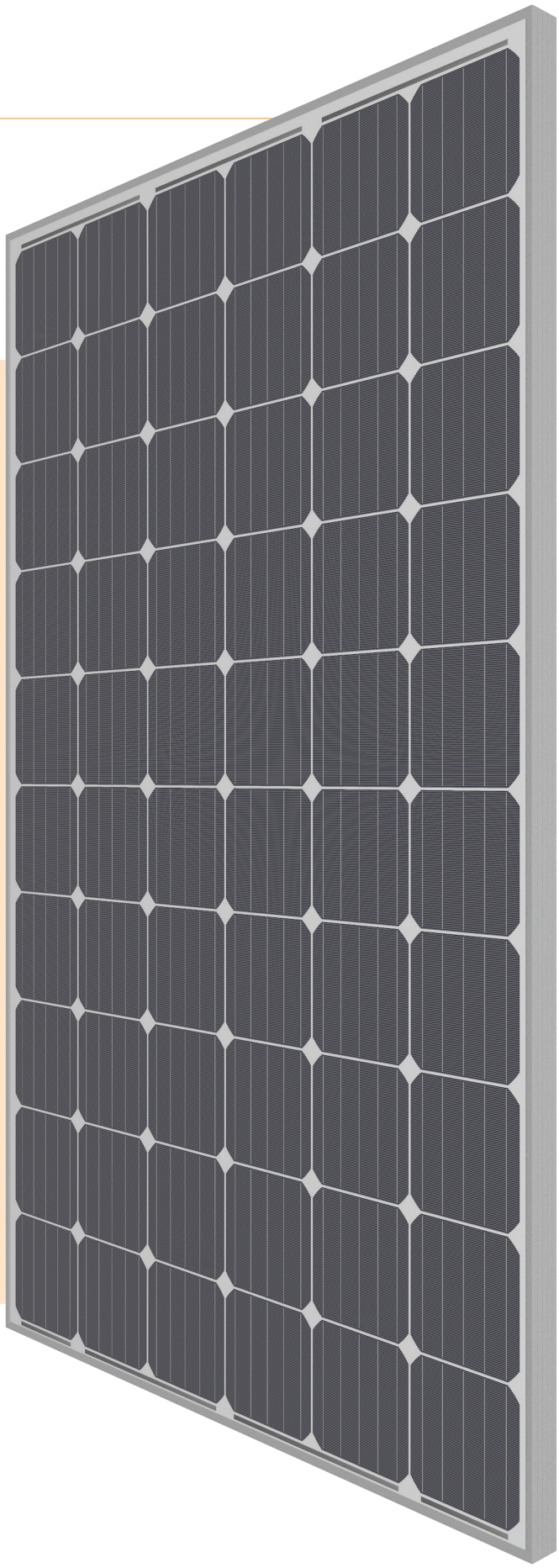
0322.0852 High performance module

M290-60-w U40

Glass-film / monocrystalline / 290 Wp / white /
40 mm U-frame



5-busbar technology

High performance stability and maximum efficiency

Nano-finished solar glass with antireflective surface

Optimized low-light performance

Si

Based on 100 % silicon

Full traceability of all raw materials

Swiss development and warranty

It is owed to state-of-the-art spectral optimization that Megasol modules perform up to 15 % better than customary modules under cloudy conditions and during dusk or dawn. The monocrystalline Megasol module with 40 mm frame is Switzerland's best-selling solar module in 2016.

megasol
innovation in power

High performance module M290-60-w U40

Art. 0322.0852

Electrical data STC

Nominal power (Pmpp)	290 Wp
Nominal voltage (Umpp)	32.0 V
Nominal current (Impp)	9.07 A
Open circuit voltage (Uoc)	38.7 V
Short circuit current (Isc)	9.42 A
Cell efficiency	20.60 %
Module efficiency	17.86 %
Power sorting	-0/+5 %

STC (Standard Test Conditions): irradiance 1000 W/m², cell temperature 25 °C, AM 1.5
Measuring tolerances ±3 % (Pmpp); ±10 % (Umpp, Impp, Uoc, Isc)

Electrical data at partial load 800 W/m²

Nominal power (Pmpp)	219 Wp
Nominal voltage (Umpp)	29.6 V
Nominal current (Impp)	7.39 A
Open circuit voltage (Uoc)	36.3 V
Short circuit current (Isc)	7.33 A

Measuring tolerances ±5 % (Pmpp); ±10 % (Umpp, Impp)

Thermal properties

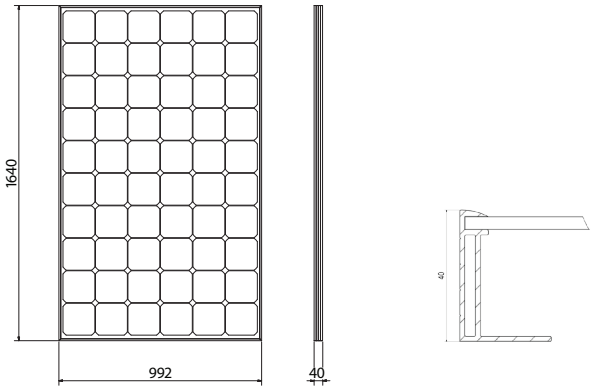
Nominal operating cell temperature (NOCT)	45 ±2 °C
Temperature coefficient Uoc	-0.26 %/°C
Temperature coefficient Isc	+0.031 %/°C
Temperature coefficient Pmpp	-0.37 %/°C

Operating conditions

Temperature range	-40 ... +85 °C
Max. system voltage	1000 V
Max. reverse current	20 A
Max. string fuse	16 A
Max. wind and snow loads *	5'400 N/m²
Hail resistance	ø30 mm at 23 m/s Hail protection class 3
Application class (acc. to IEC/EN 61730)	A
Fire protection	Top layer is made of heat-resistant glass. The component is considered to be non-combustible material as defined by the Cantonal Fire Insurances.
Protection class	II
Salt spray test	IEC/EN 61701 I+II
Ammonium corrosion test	IEC/EN 62716

* The maximum loads also depend on the substructure as well as the installation situation. If the requirements are higher than IEC/EN 61215, a project-specific dimensioning of the mounting system is necessary.

Technical drawing

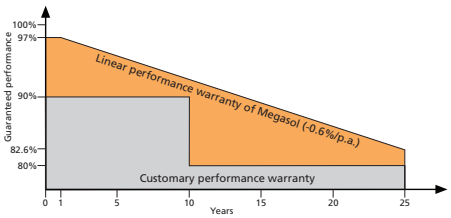


General data

Laminate structure	Glass-foil
Cell type	Monocrystalline, 5 busbars
Cell size	156 x 156 mm
Number of cells (matrix)	60 (6x 10)
Colour between cells	White
Frame	U-frame 40 mm Aluminium, anodized natural
Front side	3.2 mm solar glass High-transmission, tempered/toughened, nano-finished/antireflective surface
Encapsulation material	EVA with lowest yellowness index
Back side	Three-layer build-up (Polyester / PET / Tedlar) with lowest water vapour permeability
Junction box	3 bypass diodes, IP67
Cable cross section	4 mm²
Connectors	MC4 compatible, IP67
Dimensions (L x W x H) ±3.0 mm	1640 x 992 x 40 mm
Modular dimensions (L x W)	Depending on the installation situation
Weight	18.5 kg

Quality and warranty

Quality characteristics	PID-free (no potential induced degradation) Yield-optimized low-light performance Full traceability of all raw materials
Product warranty	10 years
Linear performance warranty	25 years



Relative efficiency level in relation to the minimal output (%). At least 97 % of the minimum output during the first year. Afterwards, max. 0.6 % degradation per annum. At least 91.6 % of the minimum output after 10 years. At least 82.6 % of the minimum output after 25 years. All data within the measuring tolerances. Warranties according to the respective latest Megasol Warranty Conditions which can be found on www.megasol.ch/warranty.

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Megasol partner

Note: The instructions in the installation manual must be strictly complied with. Further information about approved utilization of products can be found in the installation manual or can be requested from the technical service.