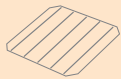


0322.0854 High performance module

M285-60-b U40b

Glass-film / monocrystalline / 285 Wp / Full Black /
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

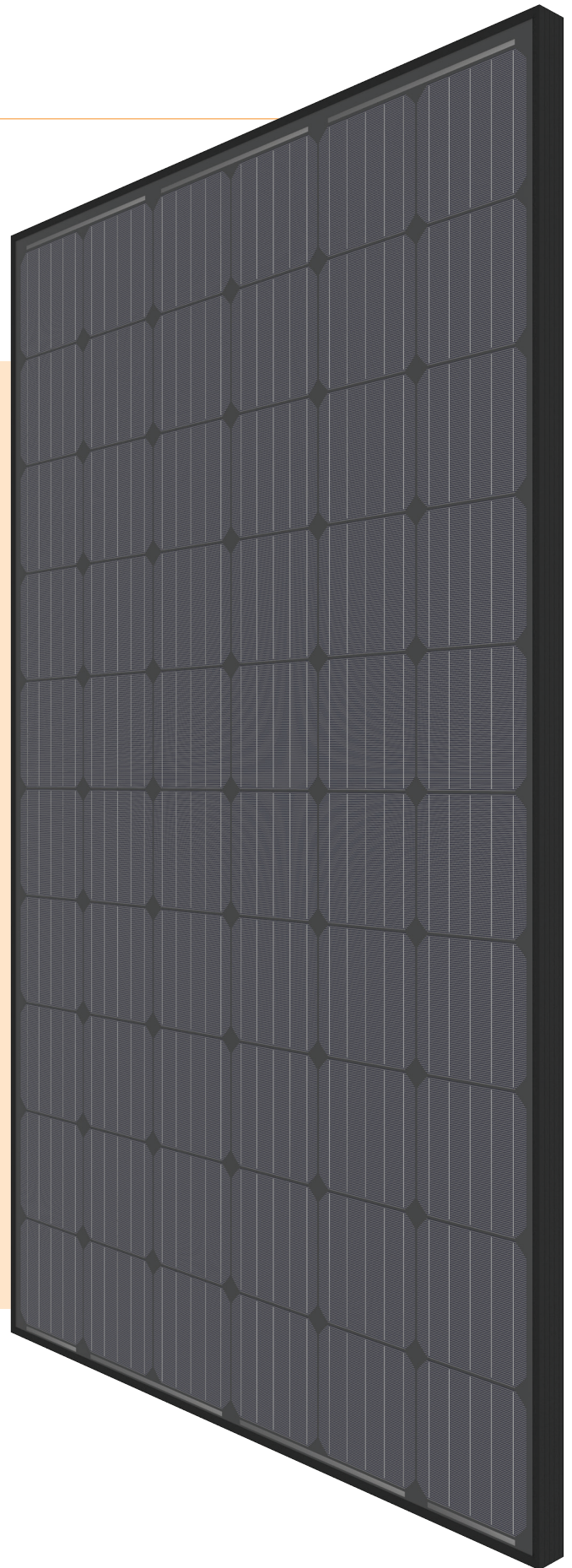
Based on 100 % silicon



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 black solar cells combined with the same-colour Tedlar® film appear as one homogenous surface.

Electrical data STC

Nominal power (Pmpp)	285 Wp
Nominal voltage (Umpp)	31.8 V
Nominal current (Impp)	8.97 A
Open circuit voltage (Uoc)	38.6 V
Short circuit current (Isc)	9.33 A
Cell efficiency	20.40 %
Module efficiency	17.55 %
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)	215 Wp
Nominal voltage (Umpp)	29.4 V
Nominal current (Impp)	7.31 A
Open circuit voltage (Uoc)	36.2 V
Short circuit current (Isc)	7.26 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

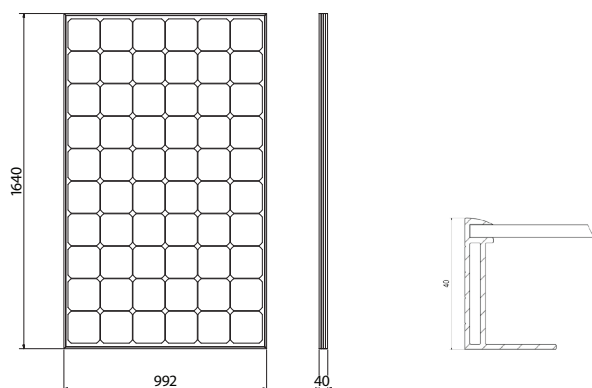
Operating conditions

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/m ²
Hail resistance	ø30 mm at 23 m/s Hail protection class 3
Application class (acc. to IEC/EN61730)	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



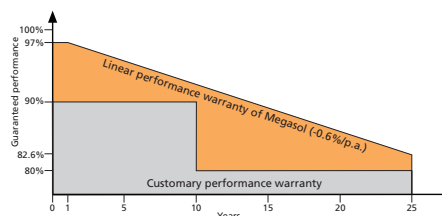
Note: The instructions in the installation manual must be strictly complied with. Further information about approved utilization of products can be found in the installation manual or can be requested from the technical service.

General data

Laminate structure	Glass-foil
Cell type	Monocrystalline, 5 busbars
Cell size	156x156 mm
Number of cells (matrix)	60 (6x 10)
Colour between cells	Black
Frame	U-frame 40 mm Aluminium, anodized black
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, IP 67
Cable cross section	4 mm ²
Connectors	MC4 compatible, IP67
Dimensions (LxWxH) ±3.0 mm	1640x992x40 mm
Modular dimensions (LxW)	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

Subject to errors and technical modifications. Data sheet in accordance with DIN EN 50380. © Megasol Energy Ltd | Version: 09/2017