megasol

innovation in power

Swiss Premium Solar Modules

High Alpine Model: Glass-Glass-Laminates with NICER

SWISS MADE

- Swiss Made in Langenthal
- Resists static loads up to 12000 N/m²
- Safety glass approved for overhead glazing & facades
- Snow and soiling cannot stick
- Useful life of more than 50 years
- Full traceability of all raw materials
- No tariff restrictions (for exports to USA & EU)

Best-in-Class Strategy

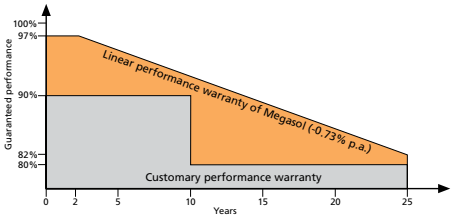
When it comes to purchasing materials, Megasol relies on the perfect combination of best components.
Cooperating with most advanced manufacturers of polysilicon and ingot allows for continuously reducing the energy amortization times of Megasol products.
Being exclusively based on silicon, our solar solutions are free from cadmium and other heavy metals. All raw materials are fully traceable throughout the products' entire life cycle.

Manufacturing Process

Holding more than 20 years of experience in developing and producing solar solutions, Megasol stands for perfection. Within the scope of our automated solar module production, we apply and record more than 130 quality control processes. Every single solar cell is subjected to three electroluminescence tests to check it for micro-cracks. It's the efficient interaction of all sub-processes that facilitates the unique quality and useful life term of Megasol products.

Swiss Warranty

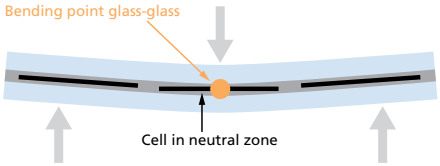
Megasol (Switzerland) vouches for its products' high quality with a 25 year linear performance warranty and a 10 year product warranty.



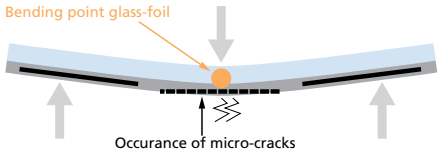
In-roof solution for high alpine environments

The trend-setting Megasol glass-glass-modules' front and backside consist of two identical glass panels. This laminated safety glass has been approved for overhead glazing and can thus be integrated with facades. By deploying PVB encapsulating material, Swiss Premium solar modules feature an extremely long useful life of more than 50 years. The glass industry has long found PVB most suitable for producing laminated safety glass – as verified by long-term tests, its yellowness index is 30 to 50% below the one featured by EVA. Their classy appearance makes Swiss Premium solar modules meet even high architectural requirements perfectly. Available are black, white, translucent or coloured models.

The modules are being equipped with tried-and-tested CleanFrame frames. They reach new record load capacities of 12000 N/m² and are thus suited for high alpine environments.



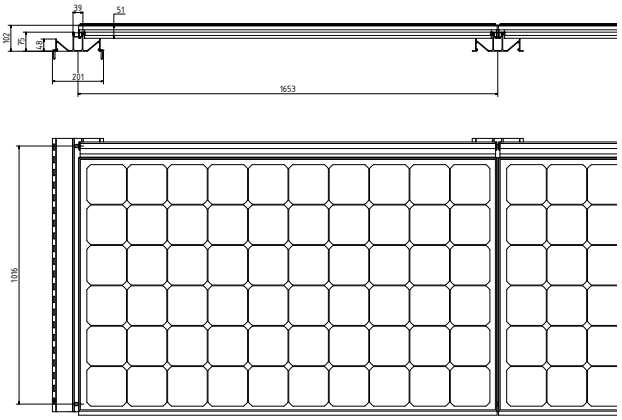
With symmetrically structured glass-glass-modules, the solar cells are located in a neutral zone. Even under heavy static load they are thus mounted stress-free.



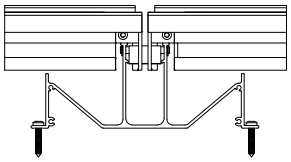
With common, asymmetrically structured glass-foil-modules, the solar cells are exposed to extreme forces. Under heavy loads, micro-cracks can thus occur.

NICER is composed of only two main components: the solar modules and the vertical support rails. The latter also serve as water channels and make NICER the most leak-proof in-roof system available on the market. NICER does not require any roofing but can be installed on the roof's substructure directly (roof underlay is recommended). All solar modules can be replaced individually. This system can already be used for inclinations of 3 degrees. NICER's design prevents the accumulation of soiling and snow. High yields are thus guaranteed even for slight inclinations. The performance is additionally increased by ideal back ventilation.

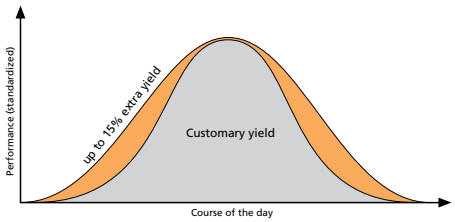
Technical drawing



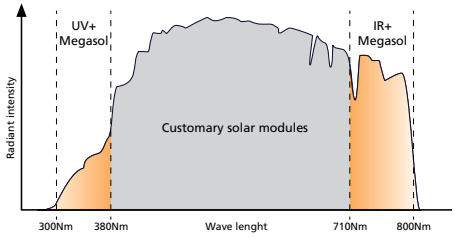
Frame profile NICER



Spectral Optimization



It is owed to state-of-the-art spectral optimization that Megasol modules perform up to 15 % better under cloudy conditions and in the twilight than customary modules do. Thanks to their unmet low-light performance they effectively gain very high annual yields.

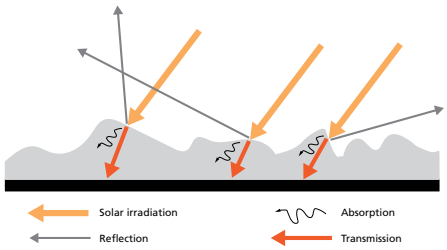


The encapsulating material's permeability for UV and IR rays has been optimized.

High-Transmission Glass

Megasol uses special front glass of highest light transmission properties that yields an acquired surplus of 2 to 3 %. The structured surface scatters the extremely low (technologically unavoidable) residual reflection (1.2 %). The solar surface is thus not perceived as blinding.

The self-cleaning properties achieved by nano-finishing reduce operating and service costs and thus additionally increase the yield.



Swiss Premium NICER Specifications

Models	P255-60-w GG NICER	M255-60-b GG NICER	M255-60-t GG NICER	M265-60-w GG NICER
Article no.	3338.0031	3338.0033	3338.0034	3338.0032
Cell spacing	white	black	translucent	white
Electrial data STC *				
Nominal power Pmpp	255 Wp	255 Wp	255 Wp	265 Wp
Nominal voltage Umpp	31.1 V	30.7 V	30.7 V	31.0 V
Nominal current Impp	8.20 A	8.32 A	8.32 A	8.57 A
Open circuit voltage Uoc	37.9 V	38.0 V	38.0 V	38.2 V
Short circuit current Isc	8.87 A	8.83 A	8.83 A	8.99 A
General data	* Standard Test Conditions: irradiance 1000 W/m², cell temperature 25 °C, AM 1.5			
Power tolerance	-0 % / +5 %			
Cell type	156 x 156 mm, poly	156 x 156 mm, monocrystalline, Ion implanter technology		
Cell matrix	6 strings with 10 cells (60 cells)			
Bypass diodes	6 pcs. (less power loss in case of partial shading)			
Cell efficiency level	17.80 %	18.91 %	18.91 %	19.53 %
Module efficiency level	15.71 %	15.71 %	15.71 %	16.32 %
Temperature coefficient	Uoc -0.26 %/°C, Isc +0.031 %/°C, Pmpp -0.37 %/°C			
Nominal operating cell temp. (NOCT)	45 °C (±2 °C)			
Operating temperature range	-40 to +85 °C			
Max. system voltage	1000 V			
Max. reverse current	20 A			
String fuse	Recommended: 12 A, Max. 16 A			
Dimensions	1648 x 1041 x 54 mm			
Grid dimensions	1653 x 1016 mm			
Weight	27 kg			

Mechanical data	
Laminate structure	Glass-glass
Frame	NICER, black anodized aluminium
Front glass	3.2 mm high-transmission solar glas, tempered/ toughened, nano-finished/antireflective surface
Encapsulation material	PVB (UV+/IR+) with lowest yellowness index
Back glass	3.2 mm solar glas, tempered/toughened
Junction box	IP 67, 4 mm² solar cable with MC4 compatible plugs
Certificates	
Wind suction	Up to 12000 N/m², IEC/EN 61215 2nd Ed.
Snow pressure	Up to 12000 N/m², IEC/EN 61215 2nd Ed.
Hail resistance	Up to a diameter of 40 mm at 23 m/s Hail resistance class 4 (Swiss hail protection register)
Operating safety	Class A, protection class II, IEC/EN 61730
Salt spray test	IEC/EN 61701 I+II
Ammonium corrosion test	IEC/EN 62716, for high demands in agriculture
Information on fire protection	Top layer is made of heat-resistant glass, component is considered to be non-combustible material
Megasol warranty	10 years product warranty, 25 years linear performance warranty
Megasol premium quality	Ion implanters and selective emitter cells No PID (potential induced degradation) Unmet low-light performance Full traceability of all raw materials

Hail resistance class 4

Megasol Energy Ltd

Over 500 specialized partners in Switzerland and 100 representatives in Europe, Asia and South America.

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Megasol Partner

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