

0322.1134 Swiss Premium

# M397-60-t BF GG NICER

Bifacial glass-glass module / monocrystalline /  
translucent / NICER roof-integrated system



Made in Deitingen (Switzerland)



Meets highest aesthetic requirements



Withstands highest static loads



Safety glass for overhead glazing and facades



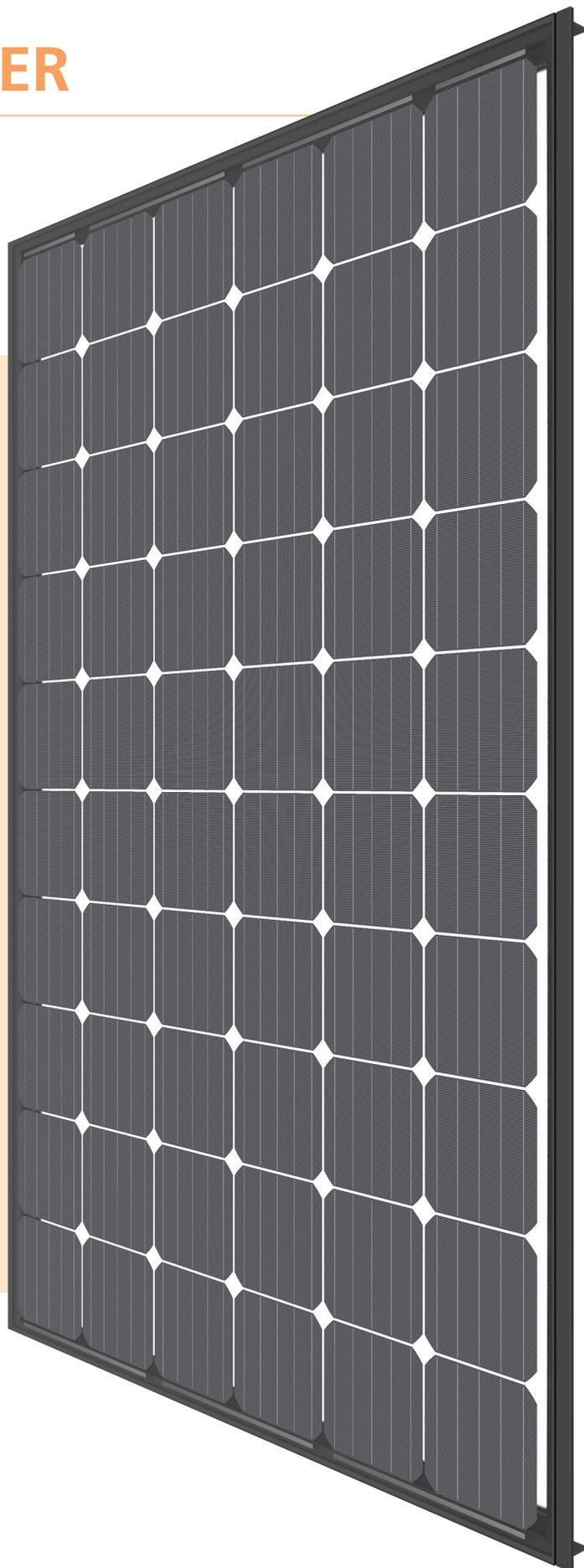
Lifespan of over 50 years due to glass-glass technology



Full traceability of all raw materials



Albedo effect: up to 35 % additional yield



## Bifacial gain

Low reflecting surface	<i>e.g. grass, brick</i>	5 - 15 %
Well reflecting surface	<i>e.g. sand, bright gravel or paint</i>	15 - 25 %
Highly reflecting surface	<i>e.g. ice, snow</i>	25 - 35 %

**megaso**

innovation in power



Electrical data STC	With bifacial gain <sup>1</sup>				
		5 %	10 %	20 %	30 %
Nominal power (Pmpp)	305 Wp	320 Wp	335 Wp	366 Wp	397 Wp
Nominal voltage (Umpp)	32.6 V	32.6 V	32.6 V	32.6 V	32.7 V
Nominal current (Impp)	9.36 A	9.82 A	10.28 A	11.23 A	12.15 A
Open circuit voltage (Uoc)	39.0 V	39.0 V	39.0 V	39.1 V	39.2 V
Short circuit current (Isc)	9.72 A	10.20 A	10.67 A	11.66 A	12.62 A
Module efficiency <sup>2</sup>	18.77 %	19.7 %	20.6 %	22.5 %	24.4 %
Power sorting	-0/+5 %				

STC (Standard Test Conditions): irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C, AM 1.5  
 Measuring tolerances ±3 % (Pmpp); ±10 % (Umpp, Impp, Uoc, Isc)  
<sup>1</sup> Depends on mounting distance and albedo of the substrate <sup>2</sup> Incl. proportional power from the back side

Electrical data at partial load					
Nominal power (Pmpp)	231 Wp	242 Wp	253 Wp	277 Wp	300 Wp
Nominal voltage (Umpp)	30.2 V	30.2 V	30.2 V	30.2 V	30.3 V
Nominal current (Impp)	7.63 A	8.00 A	8.38 A	9.15 A	9.90 A
Open circuit voltage (Uoc)	36.6 V	36.6 V	36.6 V	36.7 V	36.8 V
Short circuit current (Isc)	7.57 A	7.94 A	8.31 A	9.08 A	9.83 A

800 W/m<sup>2</sup>, 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

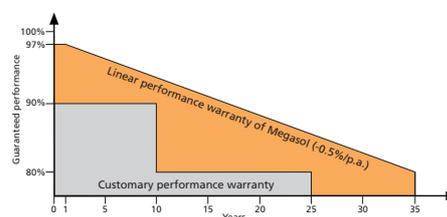
Operating conditions	
Temperature range	-40 ... +85 °C
Max. system voltage	1000 V optionally available for 1500 V
Max. reverse current	20 A
Max. string fuse	16 A
Max. snow loads <sup>3</sup>	Up to 12'000 N/m <sup>2</sup>
Hail resistance	ø40 mm at 23 m/s Hail protection class 4
Application class (acc. to IEC/EN61730)	A
Fire protection	Top and back layer are made of heat-resistant glass. The component is considered to be non-combustible material as defined by the Cantonal Fire Insurances.
Protection class	II
Standards	IEC/EN 61215, 61730
Salt spray test	IEC/EN 61701 I+II
Ammonium corrosion test	IEC/EN 62716

<sup>3</sup> Max. possible forces acting on the module. The maximum values in mounted condition 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-glass
Cell type	Mono PERC, bifacial, 5 busbars
Cell size	156x156 mm
Number of cells (matrix)	60 (6x 10)
Colour between cells	Translucent
Frame	NICER Aluminium, anodized black (RAL 9005)
Front side	3.2 mm solar glass High-transmission, tempered/toughened, nano-finished/antireflective surface
Encapsulation material	Special EVA (UV+/IR+) with lowest water vapour permeability
Back side	3.2 mm solar glass Tempered/toughened
Junction box	3 bypass diodes, IP 67
Cable cross section	4 mm <sup>2</sup>
Connectors	MC4 compatible, IP67
Dimensions (LxWxH) ±3.0 mm	1045x1648x60 mm
Modular dimensions (LxW)	1016x1653 mm
Weight	32.5 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	35 years



Relative efficiency level in relation to the minimal output (%). At least 97% of the minimum output during the first year. Afterwards, max. 0.5% degradation per annum. At least 92.5% of the minimum output after 10 years. At least 85% of the minimum output after 25 years. At least 80% of the minimum output after 35 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](http://www.megasol.ch/warranty).



E-mail: [info@megasol.ch](mailto:info@megasol.ch)  
 Hotline: +41 62 919 90 90  
[www.megasol.ch](http://www.megasol.ch)



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