



# VIOLIN™

## Crystalline PV Module ASM6610M Series

- ▶ With innovative 4-busbar mono cell
- ▶ Reduced series resistance
- ▶ Increased cell efficiency
- ▶ More power output

275    280    285    290

EN

### ELECTRICAL SPECIFICATIONS <sup>1</sup>

STC <sup>2</sup> rated output (P <sub>max</sub> )	275 Wp	280 Wp	285 Wp	290 Wp
Standard sorted output	-0/+3%			
Warranted power output STC (P <sub>nominal</sub> )	275Wp	280 Wp	285 Wp	290Wp
Rated voltage (V <sub>mpp</sub> ) at STC	31.45 V	31.55 V	31.65 V	31.75 V
Rated current (I <sub>mpp</sub> ) at STC	8.86 A	8.98 A	9.09 A	9.21 A
Open circuit voltage (V <sub>oc</sub> ) at STC	38.05 V	38.15 V	38.25 V	38.35 V
Short circuit current (I <sub>sc</sub> ) at STC	9.40 A	9.50 A	9.60 A	9.70 A
Module efficiency	16.81%	17.12%	17.42%	17.73%
Rated output (P <sub>mpp</sub> ) at NOCT <sup>3</sup>	205.6 Wp	208.9 Wp	212.2 Wp	215.6 Wp
Rated voltage (V <sub>mpp</sub> ) at NOCT	28.93 V	29.02 V	29.11 V	29.20 V
Rated current (I <sub>mpp</sub> ) at NOCT	7.11 A	7.20 A	7.29 A	7.38 A
Open circuit voltage (V <sub>oc</sub> ) at NOCT	35.17 V	35.26 V	35.35 V	35.44 V
Short circuit current (I <sub>sc</sub> ) at NOCT	7.60 A	7.68 A	7.76 A	7.84 A

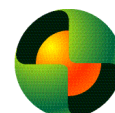
Temperature coefficient (P <sub>mpp</sub> )	- 0.442 % / K	Maximum system voltage	1000 V <sub>dc</sub>
Temperature coefficient (I <sub>sc</sub> )	+0.042 % / K	Number of diodes	3
Temperature coefficient (V <sub>oc</sub> )	- 0.329 % / K	Reverse current loadability (IR)	20 A
Normal operating cell temperature (NOCT)	46 °C ±2 °C	Maximum series fuse rating	15 A

<sup>1</sup> Measuring uncertainty P<sub>mpp</sub>: +/-3 %; Tolerance for V<sub>oc</sub>, I<sub>sc</sub>, V<sub>mpp</sub> and I<sub>mpp</sub>: +/-10 %

<sup>2</sup> Standard test conditions that are defined as follows:  
1.000 W/m<sup>2</sup> irradiation at a spectral density of AM 1.5 and a cell temperature of 25° C,

<sup>3</sup> Nominal operating temperature of the cell at 800 W/m<sup>2</sup> irradiation, 20°C ambient temperature, wind speed of 1 m/s

<sup>4</sup> Manufactured in an ISO9001/14001/50001 certified facility



## RELATED PARAMETERS

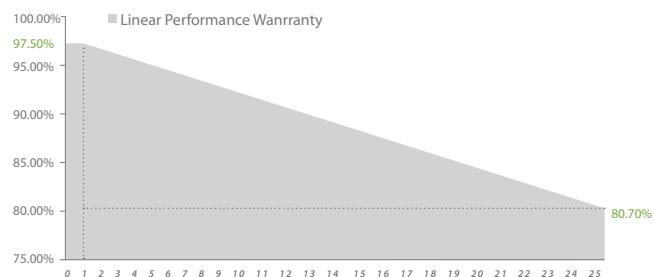
Cell type	Monocrystalline cell, 4-busbar technology
Number of cells / cell arrangement	60 / 6 x 10
Cells dimension	157 x 157 mm <sup>2</sup>

## MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H) <sup>5</sup>	1654 x 989 x 40 mm
Frame technology	Aluminum, silver anodized
Module composition	Glass / EVA / Backsheet (white)
Weight (module only)	18.2 kg
Front glass thickness	3.2 mm
Junction box IP rating	IP 67
Cable length	1000 mm
Cable diameter	4 mm <sup>2</sup>
Maximum load capacity <sup>6</sup>	6000 Pa
Fire class (IEC 61730)	C
Connector type	MC4 pluggable

## QUALIFICATION AND LINEAR WARRANTIES

Product standard	IEC 61215 Ed. 2, IEC 61730
Extended product warranty <sup>7</sup>	12 years
Performance warranty <sup>7</sup>	Linear performance warranty
Year 1	>97.5% of warranted output power
Year 25	>80.7% of warranted output power



## MODULE DIMENSION DETAILS

Front view	Side view	Rear view	Frame cross section

© No mounting holes on the frame.

<sup>5</sup> Dimensional tolerance: +/-2 mm

<sup>6</sup> In accordance with IEC 61215 Ed. 2

<sup>7</sup> According to the current warranty conditions of Astronergy Solarmodule GmbH

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