

## **VIOLIN**



## **Crystalline PV Module ASM6610M(BL) Series**

- ► With innovational 4-busbar cells
- ► Reducing cell series resistance
- ► Increasing cell efficiency
- ► More power output

290

ΕN

ELECTRICAL SPECIFICATIONS <sup>1</sup>						
STC <sup>2</sup> rated output (P <sub>max</sub> )	270 Wp	275 Wp	280 Wp	285 Wp	290 Wp	295 Wp
Standard sorted output			-0/+	3%		
Warranted power output STC (Pnominal)	270 Wp	275 Wp	280 Wp	285 Wp	290Wp	295 Wp
Rated voltage (V <sub>mpp</sub> ) at STC	31.35 V	31.45 V	31.55 V	31.65 V	31.75 V	31.85 V
Rated current (I <sub>mpp</sub> ) at STC	8.75 A	8.86 A	8.98 A	9.09 A	9.21 A	9.32 A
Open circuit voltage (V∞) at STC	37.95 V	38.05 V	38.15 V	38.25 V	38.35 V	38.45 V
Short circuit current (Isc) at STC	9.18 A	9.28 A	9.38 A	9.48 A	9.58 A	9.68 A
Module efficiency	16.51%	16.81%	17.12%	17.42%	17.73%	18.03%
Rated output (P <sub>mpp</sub> ) at NOCT <sup>3</sup>	201.1 Wp	204.4 Wp	207.7 Wp	211.0 Wp	214.4 Wp	217.7 Wp
Rated voltage (V <sub>mpp</sub> ) at NOCT	28.64 V	28.73 V	28.82V	28.91 V	29.00 V	29.09 V
Rated current (I <sub>mpp</sub> ) at NOCT	7.02 A	7.11 A	7.21 A	7.30 A	7.39 A	7.48 A
Open circuit voltage (V <sub>oc</sub> ) at NOCT	34.83 V	34.93 V	35.02 V	35.11 V	35.20 V	35.29 V
Short circuit current (Isc) at NOCT	7.43A	7.51 A	7.59 A	7.67 A	7.75 A	7.83 A

Temperature coefficient (P <sub>mpp</sub> )	- 0.42 % / K
Temperature coefficient (Isc)	+0.059%/K
Temperature coefficient (Voc)	- 0.32 % / K
Normal operating cell temperature (NOCT)	48°C ±2°C

Maximum system voltage	1000 VDC
Number of diodes	3
Reverse current loadability (IR)	20 A
Maximum series fuse rating	15 A

















 $<sup>^1</sup>$  Measuring uncertainity Pmpp: +/–3 %; Tolerance for Voc, Isc, Vmpp and Impp: +/–10 %

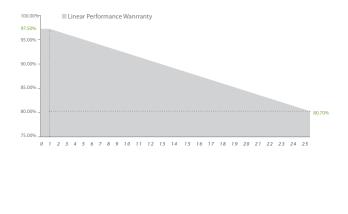
<sup>&</sup>lt;sup>2</sup> Standard test conditions that are defined as follows: 1.000 W/m<sup>2</sup> irradiation at a spectral density of AM 1.5 and a cell temperature of 25° C,

<sup>&</sup>lt;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 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, black anodized		
Module composition	Glass / EVA / Backsheet (black)		
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 mm²		
Maximum load capacity <sup>6</sup>	6000 Pa		
Fire class (IEC 61730)	С		
Connector type	MC4 pluggable		

QUALIFICATION AND LINEAR WARRANTIES			
Product standard	IEC 61215 Ed. 2, IEC 61730		
Extended product warranty 7	12 years		
Performance warranty 7	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	
989	40	989  • 0 5.2 • • • • • • • • • • • • • • • • • • •	13.9 mm	

© Astronergy Solarmodule GmbH Specifications and designs included in this datasheet are subject to change without notice. All rights reserved.

<sup>&</sup>lt;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