



PENTA

Monocrystalline solar module

ASM6610M Series

- ▶ With innovative 5-busbar mono cell
- ▶ Improved reliability
- ▶ Increased efficiency through reduced series resistance
- ▶ High module efficiency for optimal roof utilisation

280 285 290 EN

ELECTRICAL SPECIFICATIONS ¹

	280 Wp	285 Wp	290 Wp
STC ² rated output (P _{mpp})*	280 Wp	285 Wp	290 Wp
Standard sorted output		-0/+3%	
Warranted power output STC (P _{nominal})	280 Wp	285 Wp	290 Wp
Rated voltage (V _{mpp}) at STC	31.25V	31.42 V	31.60 V
Rated current (I _{mpp}) at STC	9.04 A	9.15 A	9.26 A
Open circuit voltage (V _{oc}) at STC	38.26 V	38.44 V	38.63 V
Short circuit current (I _{sc}) at STC	9.55 A	9.66 A	9.77 A
Module efficiency	17.12%	17.42%	17.73%
Rated output (P _{mpp}) at NOCT ³	208.3 Wp	212.0 Wp	215.7 Wp
Rated voltage (V _{mpp}) at NOCT	28.74 V	28.90 V	29.06 V
Rated current (I _{mpp}) at NOCT	7.25A	7.33 A	7.42 A
Open circuit voltage (V _{oc}) at NOCT	35.36 V	35.53 V	35.70 V
Short circuit current (I _{sc}) at NOCT	7.72 A	7.81 A	7.90 A

Temperature coefficient (P _{mpp})	- 0.42 % / K	Maximum system voltage	1000 V _{dc}
Temperature coefficient (I _{sc})	+0.059 % / K	Number of diodes	3
Temperature coefficient (V _{oc})	- 0.32 % / K	Reverse current loadability (I _R)	20 A
Normal operating cell temperature (NOCT)	46 °C ±2 °C	Maximum series fuse rating	15 A

¹ Measuring uncertainty P_{mpp}: +/- 3 %; Tolerance for V_{oc}, I_{sc}, V_{mpp} and I_{mpp}: +/- 10 %

² Standard test conditions that are defined as follows:

1.000 W/m² irradiation at a spectral density of AM 1.5 and a cell temperature of 25 °C,

³ Nominal operating temperature of the cell at 800 W/m² irradiation, 20 °C ambient temperature, wind speed of 1 m/s

⁴ Manufactured in an ISO 9001/14001/50001 certified facility



RELATED PARAMETERS

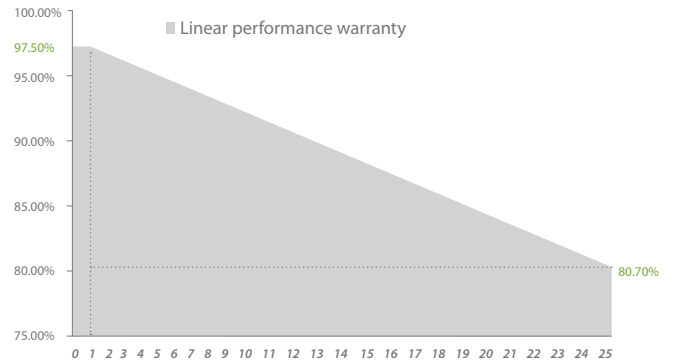
Cell type	Monocrystalline cell, 5-busbar technology
Number of cells / cell arrangement	60 / 6 x 10
Cells dimension	157 x 157 mm ²

MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H) ⁵	1654 x 989 x 40 mm
Frame technology	Aluminum, silver anodized
Module composition	Glass / EVA / Backsheet (white)
Weight	18.2 kg
Front glass thickness	3.2 mm
Junction box IP rating	IP 67
Cable length	1000 mm (incl. connector)
Cable core diameter	4 mm ²
Maximum load capacity ⁶	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 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
		<p>Frame without mounting wholes</p>	

⁵ Dimensional tolerance: +/-2 mm

⁶ In accordance with IEC 61215 Ed. 2

⁷ According to the current warranty conditions of Astronergy Solarmodule GmbH