

# PENTA Premium

## Monocrystalline solar module

### ASM6610M (BL) Series

- ▶ With innovative 5-busbar PERC cell
- ▶ Improved reliability
- ▶ Increased efficiency through reduced series resistance
- ▶ Homogenous dark appearance to meet highest optical standards

290 295 300 305 EN

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

	290 Wp	295 Wp	300 Wp	305 Wp
STC <sup>2</sup> rated output (P <sub>mpp</sub> )*	290 Wp	295 Wp	300 Wp	305 Wp
Standard sorted output	-0/+3%			
Warranted power output STC (P <sub>nominal</sub> )	290 Wp	295 Wp	300 Wp	305 Wp
Rated voltage (V <sub>mpp</sub> ) at STC	30.89 V	31.13 V	31.38 V	31.62 V
Rated current (I <sub>mpp</sub> ) at STC	9.47 A	9.56 A	9.64 A	9.72 A
Open circuit voltage (V <sub>oc</sub> ) at STC	39.55 V	39.62 V	39.69 V	39.76 V
Short circuit current (I <sub>sc</sub> ) at STC	9.56 A	9.63 A	9.69 A	9.76 A
Module efficiency	17.73%	18.03%	18.34%	18.65%
Rated output (P <sub>mpp</sub> ) at NOCT <sup>3</sup>	214.6 Wp	218.2 Wp	221.9 Wp	225.5 Wp
Rated voltage (V <sub>mpp</sub> ) at NOCT	28.36 V	28.59 V	28.81 V	29.04 V
Rated current (I <sub>mpp</sub> ) at NOCT	7.57 A	7.63 A	7.70 A	7.77 A
Open circuit voltage (V <sub>oc</sub> ) at NOCT	36.49 V	36.56 V	36.62 V	36.68 V
Short circuit current (I <sub>sc</sub> ) at NOCT	7.69 A	7.75 A	7.80 A	7.86 A

Temperature coefficient (P <sub>mpp</sub> )	- 0.416% / K	Maximum system voltage	1000 V <sub>dc</sub>
Temperature coefficient (I <sub>sc</sub> )	+0.037% / K	Number of diodes	3
Temperature coefficient (V <sub>oc</sub> )	- 0.299% / K	Reverse current loadability (I <sub>R</sub> )	20 A
Normal operating cell temperature (NOCT)	48°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 ISO 9001/14001/50001 certified facility



## RELATED PARAMETERS

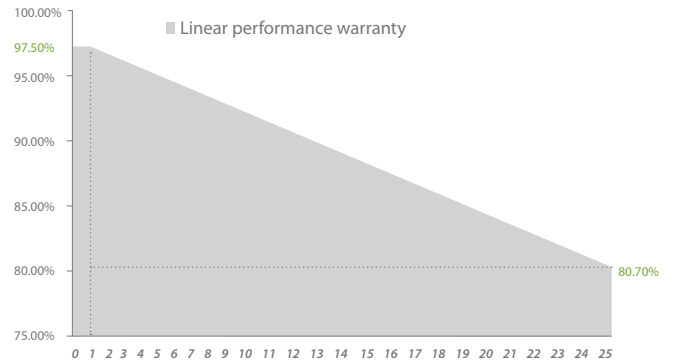
Cell type	Monocrystalline PERC cell, 5-busbar technology
Number of cells / cell arrangement	60 / 6 x 10
Cells dimension	157 x 157 mm <sup>2</sup>

## 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	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 <sup>2</sup>
Maximum load capacity <sup>6</sup>	6000 Pa
Fire class (IEC 61730)	C
Connector type	MC4 original

## 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
		<p>Frame without mounting wholes</p>	

<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