PowerMax®

High energy yield

The energy yield of PowerMax® in terms of kWh generated per installed kWp is one of the highest among all photovoltaic technologies.

Excellent efficiency

The CIS technology has the maximum efficiency of all thin-film technologies and maximizes the installed power generation capacity (kWp) per square meter.

Best quality

Our solar modules are manufactured in Germany by using the latest generation of fully integrated process equipment certified according to all relevant industry standards.

Sophisticated design

The uniform black appearance with its pinstripe look is pure aesthetics. PowerMax® is one of the most elegant solar modules on the market.

For extreme loads and all weather conditions

The module is designed for high snow load zones. Due to their spectral sensitivity, PowerMax® modules generate electricity during sunrise and sunset, cloudy skies and fog.

Easy installation

The aesthetic fastening is done via hidden mounting clamps. The module size and the form factor minimize the installation costs.

Continuous performance even under shading situation

The special cell design and the integrated bypass diode ensure that the PV system still works even if one of the modules is shaded.

High environmental sustainability

In addition to the resource-saving production, all PowerMax® modules are free of lead and cadmium.

SOLAR MODULES FOR ROOFTOP SYSTEMS AND SOLAR PARKS

ENGLISH

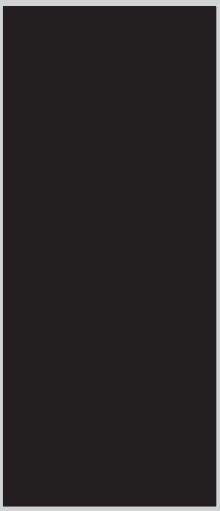
AVANCIS CNBM

PowerMax®

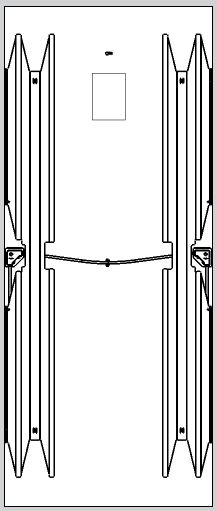
Valid for product version 4.6

MECHANICAL SPECIFICATION

PowerMax®	Value
Dimensions	1587 x 664 mm²
Thickness	38 mm
Weight	17 kg
Cell type	CIGS
Frame	none
Front cover	3.2 mm single-pane safety glass
Design load (safety factor 1.5)	upward 1600 Pa | downward 3400 Pa
Junction box protection class	IP67
Dimensions of junction boxes	60 × 60 × 11.5 mm³
Cable lengths (⊖ plug | ⊕ socket)	200 | 320 mm
Cable cross section	2.5 mm² minimal bending radius: 6x outer diameter
Connector type	H4
Fire rating	Class C (ANSI/UL 790:2004)



664 mm



Rear side of module for in-joint mounting

IEC 61215
IEC 61730
Regular Production Surveillance

TÜVRheinland CERTIFIED

www.tuv.com
ID 1111218736

- Design qualification and type approval: IEC 61215:2016
- Safety qualification: IEC 61730:2016
- Salt mist corrosion: IEC 61701

ELECTRICAL SPECIFICATION

Data measured under standard test conditions (STC):

PowerMax®	Power-Max® 145	Power-Max® 150	Power-Max® 155	Power-Max® 160
Nominal power P_{nom}*	145 W	150 W	155 W	160 W
Sorting	-0/+5 W			
Module efficiency	13.8 %	14.2 %	14.7 %	15.2 %
Aperture efficiency	15.2 %	15.7 %	16.2 %	16.7 %
Open circuit voltage V_{OC}*	89.4 V	89.8 V	90.1 V	90.5 V
Short circuit current I_{SC}*	2.43 A	2.44 A	2.45 A	2.46 A
Voltage at mpp V_{mpp}*	69.5 V	70.4 V	71.3 V	72.2 V
Current at mpp I_{mpp}*	2.08 A	2.13 A	2.17 A	2.21 A
Max. over-current protection I_R	4 A			
Max. system voltage V_{sys}	1000 V			

STC values are valid after pretreatment with light according to IEC 61215:1-4.

STC: Irradiance 1000 W/m², module temperature 25 °C, spectral light distribution according to atmospheric mass (AM) 1.5.

* Tolerance of manufacturing: -5 %/+10 %.

Temperature coefficients:

PowerMax®	Value
Temperature coefficient P_{nom}	-0.39 %/°C
Temperature coefficient V_{OC}	-230 mV/°C
Temperature coefficient I_{SC}	0 mA/°C

Data measured at low light intensity:

The relative reduction of the module efficiency at a light intensity of 200 W/m² is 6%, compared to 1000 W/m² at 25° C module temperature and spectrum AM 1.5. At 500 W/m², the relative increase of module efficiency is +1%.

As a result of ongoing research and product improvements, the specifications in this product data sheet are subject to changes without prior publication. This data sheet is not allowed to be used for deriving any rights, and AVANCIS does not accept any liability with regard to and resulting from the use of information contained herein. Installation equipment is not supplied with the product

Standard packaging:

Packaging information	
Size including pallet (LxWxH)	1650mm x 800mm x 1000mm
Approx. gross weight (full box)	375 kg
Modules per box	20
Maximum no. of stacked boxes	1 on 1 (batch of 2)
Max. truck loading	48 (3x8+3x8)
Max. 40 ft container load (24 t)	28 (1x14+1x14)

Variation of packaging size on individual request

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