



# SunBravo

## PM060MW4/PM060MB4/PM060MW5

Mono-Crystalline Photovoltaic Module



Power Range  
320 ~ 330 Wp



Multi-Busbar Design  
Enhanced module power output and reliability



Strong Wind Resistance  
Dynamic mechanical loading 4 times higher than the IEC requirement



PID-Resistance  
Certified high PID resistance passing 1000-hour tough environmental test



Superior Weak Light Performance  
Improved absorption of long wavelength light



Enhanced Salt Mist and Humidity Resistance  
12 times more salt-mist resistant and 40% more moisture exclusion



Ammonia Test  
Reliable in ammonia rich environment



# SunBravo PM060MW4/PM060MB4/PM060MW5 (320 ~ 330 W<sub>p</sub>)

## Electrical Data (STC)

Nominal Power P <sub>N</sub>	320W	325W	330W
Module Efficiency	18.5%	18.8%	19.1%
Nominal Voltage V <sub>mp</sub> (V)	32.6	32.8	33.0
Nominal Current I <sub>mp</sub> (A)	9.83	9.92	10.00
Open Circuit Voltage V <sub>oc</sub> (V)	39.9	40.1	40.3
Short Circuit Current I <sub>sc</sub> (A)	10.35	10.44	10.53
Maximum Tolerance of P <sub>N</sub>	0 / +3%		

\* Above data are the effective measurement at Standard Test Conditions (STC)  
 \* STC: irradiance 1000 W/m<sup>2</sup>, spectral distribution AM 1.5, temperature 25 ± 2 °C, in accordance with EN 60904-3

## Electrical Data (NOCT)

Nominal Power P <sub>N</sub>	231W	235W	238W
Nominal Voltage V <sub>mp</sub> (V)	29.0	29.2	29.4
Nominal Current I <sub>mp</sub> (A)	7.96	8.03	8.10
Open Circuit Voltage V <sub>oc</sub> (V)	36.4	36.6	36.8
Short Circuit Current I <sub>sc</sub> (A)	8.44	8.51	8.59

\* Above data are the effective measurement at Normal Operation Cell Temperature (NOCT)  
 \* NOCT: irradiance 800 W/m<sup>2</sup>, AM 1.5, air temperature 20 °C, wind speed 1 m/s

## Temperature Coefficient

NOCT	46 ± 2 °C
Typ. Temperature Coefficient of P <sub>N</sub>	-0.40% / K
Typ. Temperature Coefficient of V <sub>oc</sub>	-0.30% / K
Temperature Coefficient of I <sub>sc</sub>	0.07% / K

## Mechanical Characteristics

Dimensions (L x W x H)	1696 x 1022 x 40 mm (66.77 x 40.23 x 1.57 in)*
Weight	19.6 kg (43.22 lbs)
Front Glass	High transparent solar glass (tempered), 3.2 mm (0.13 in)
Cell	60 monocrystalline solar cells
Back Sheet	Composite film
Frame	Anodized aluminum frame
Junction Box	IP-68 rated with 3 bypass diodes
Connector Type	1000V: MC4 KST4; KBT4-1 x 4 mm <sup>2</sup> (0.04 x 0.16 in <sup>2</sup> ) 1500V: MC4 KST4-EVO2 / XY; KBT4-EVO2 / XY -1 x 4 mm <sup>2</sup> (0.04 x 0.16 in <sup>2</sup> )

\* Module Dimension (L x W) Tolerance: ± 2 mm (0.079 in)

## Operating Conditions

Operating Temperature	-40 ~ +85 °C
Ambient Temperature Range	-40 ~ +45 °C
Max. System Voltage	PM060MW4 / PM060MB4 (1000 V) PM060MW5 (1500 V)
Serial Fuse Rating	15 A
Front / Rear Load	6000 Pa / 5400 Pa
Max. Dynamic Mechanical Load	4800 Pa

## Warranties and Certifications

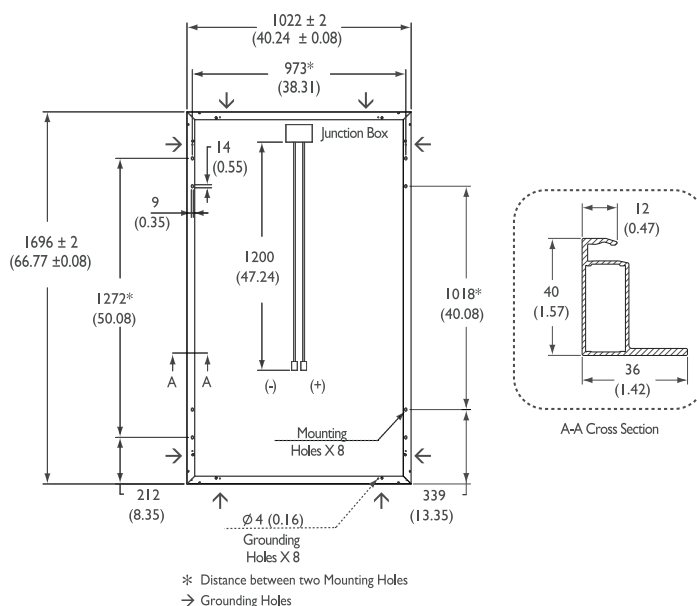
Product Warranty	Maximum 15 years for material and workmanship
Performance Guarantee	Guaranteed linear degradation to 82.5% for 25 years <sup>*1</sup>
Certifications	According to IEC/EN 61215 and IEC/EN 61730 guidelines <sup>*2</sup>

\*1: Please refer to warranty letter for detail  
 \*2: Please confirm other certifications with official dealers

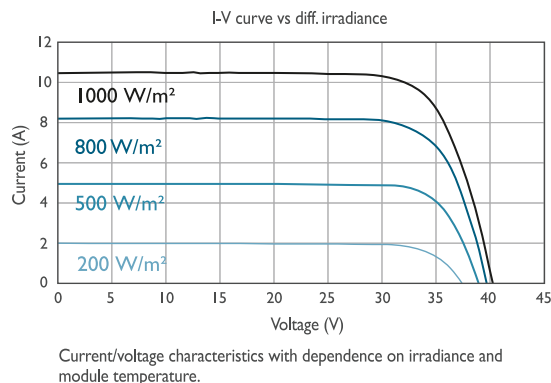
## Packing Configuration

Container	20' GP	40' GP	40' HQ
Pieces per Pallet	26	26	26
Pallets per Container	6	13	26
Pieces per Container	156	338	676

## Dimensions mm (inch)



## I-V Curve



### About AU Optronics

AU Optronics (AUO) is a leading global manufacturer of TFT-LCD committed to providing green solutions to its worldwide customers in a manner that is sustainable and friendly to the environment. In addition to its strengths in product and technological innovation, AUO stresses its commitment to going green and to utilizing manufacturing excellence to develop high efficiency solar solutions for residential, commercial, and utility segments.



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