



# Conergy Black 230PA

The Conergy Black 230PA offers high output levels at an attractive price/performance ratio. Equipped with 60 efficient, polycrystalline cells, they have proven their value in practical applications and years of operation. They are characterized by high yields and a long service life. Conergy P production is certified to ISO 9001 international quality standards and Conergy continually monitors the production process to insure product quality. These high-efficiency modules are powerful and versatile enough for any application from residential through utility scale.

Solar modules in the Conergy P-series are also available with monocrystalline and polycrystalline cells in other power classes and different module dimensions.



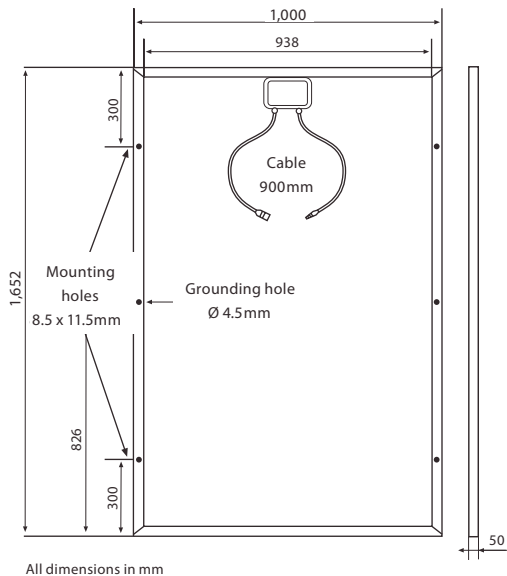
## Features:

- | Attractive price/performance ratio
- | High-efficiency 3-busbar cells
- | Certified to UL1703, IEC/EN61215, 61730
- | High-performance,  $\pm 3\%$  power tolerance
- | 5-year product warranty



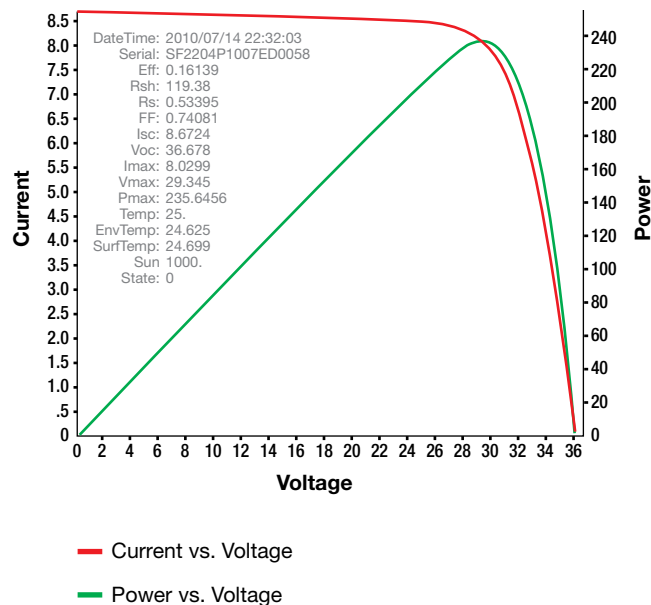
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<b>Module dimensions</b>	
(L x W x H)	1652 x 1000 x 50 mm/65.0 x 39.4 x 2.0 in
Cell dimensions	156 x 156 mm/6.14 x 6.14 in
Number of cells	60
Module weight	22 kg/48.5 lb
Static wind/snow load	5400PA/113psf
Glass	Tempered, A/R coating
Junction box	IP65 Class
Cable	900 mm/35.4 in PV Wire, 4 mm <sup>2</sup>
Connector	Amphenol H4 (MC4 compatible)
<b>Certifications</b>	
Operating certifications	cULus, IEC 61215 Ed.2
Fire safety classification	Class C
<b>Warranty</b>	
Material and workmanship warranty	5 years
Power warranty 1	90%/12 years
Power warranty 2	80%/25 years

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<b>Rated power (P<sub>max</sub>)<sup>1</sup></b>	230W
<b>Power tolerance</b>	±3%
<b>Module efficiency</b>	13.90%
<b>Maximum power voltage (V<sub>mpp</sub>)</b>	30.00V
<b>Maximum power current (I<sub>mpp</sub>)</b>	7.67A
<b>Open circuit voltage (V<sub>oc</sub>)</b>	36.8V
<b>Short circuit current (I<sub>sc</sub>)</b>	8.34A
<b>Nominal Operating Cell Temperature (NOCT)</b>	45.9°C/114.6°F
<b>Temperature coefficient (P<sub>max</sub>)</b>	-0.45%/°C
<b>Temperature coefficient (V<sub>oc</sub>)</b>	-0.32%/°C
<b>Temperature coefficient (I<sub>sc</sub>)</b>	+0.04%/°C
<b>Operating temperature range</b>	-40°C - +85°C / -40°F - +136°F
<b>Maximum system voltage</b>	600V (UL)/1000V (IEC)
<b>Maximum Series Fuse Rating</b>	15A



<sup>1</sup> At Standard Test Conditions (STC): 1000W/m<sup>2</sup>, 25°C, AM 1.5 spectral density  
<sup>2</sup> Available at additional cost

Available from: