



## FEATURES AND ADVANTAGES

- Aluminum junction box for better cooling and fire prevention
- Tempered 4 mm safety solar glass with 50 mm anodized aluminum frame
- 12 years product warranty

# LEONARDO 230/235 W<sub>p</sub> polycrystalline high efficiency silicon modules

Thanks to the new producing technologies and the high research and development investments Albasolar can also offer the European silicon poly-crystalline module, synonym of high qualitative standards and law regulated certifications.

The European module offers the compliance with international directives regarding both the quality and the efficiency, together with a high degree of performance and reliability.

The robust 50 mm frame realized in aluminium alloy is a synonym of extraordinary resistance and utmost duration, even in difficult weather condition environments. Further energetic and economical output are ensured by the exclusively positive tole-

rance of the Albasolar silicon modules.

Versatile in their usage, they are suitable to home and industrial systems and can be installed both in vertical and horizontal position with excellent results.

They frequently undergo visual and electrical controls requiring resistance tests that simulate the effect on the structures. The company provides a 12 years guarantee on the products and 25 on the power.

Albasolar modules, in compliance with IEC regulation 61215 and IEC 61730 are TUV guaranteed and tested by the Politecnico of Torino.

CODE	A0290PC230-EU-60	A0290PC235-EU-60	
Component materials	cells per module	60	
	cell dimensions	156 x 156	
	cell type	blu square	
Electrical characteristics	max. power	230 Wp	235 Wp
	power tolerance		0 +5%
	module efficiency	14%	14,3%
	maximum power current - Imp	7,75 A	7,91 A
	maximum power voltage - Vmpp		30,0 V
	short circuit current - Isc	8,08 A	8,34 A
	open circuit current - Voc	37,11 V	37,20 V
	NOCT		46 °C
Thermal and system integration parameters	temperature coefficient of Isc		+0,054 %/K
	temperature coefficient of Voc		-0,33 %/K
	temperature coefficient of power		-0,43 %/K
	max system voltage		1000 V
	solar cell configuration		6 x 10
	number of bypass diodes		3
	junction box and connectors	aluminium junction box (IP67) with 4 mm <sup>2</sup> cable and MC4 connectable plugs	
Dimensions	frame	50 mm aluminium hollow profile	
	length	1660 mm	
	width	990 mm	
	thickness	50 mm	
	thickness with J-Box	50 mm	
	weight	23 kg	
Guarantees	performance warranty	25 years power guarantee (90% until 12 years, 80% until 25 years)	
	product warranty	12 years	
Certificates		IEC EN 61215	
		IEC EN 61730	
		factory inspection, UL	

#### Our silicon poly-crystalline module characteristics:

- High quality and performance according to the strictest European standards
- Low iron and tempered 4 mm safety solar glass with high transmittance
- Maximum strength with 50 mm anodized aluminum hollow chamber profile
- Continuous and constant quality control and strength tests
- Aluminum Junction box, better heat dissipation for increasing efficiency of the module and complete safety against fire
- Simple and safe installation with standardized clamp system
- Passed mechanical load test of 5400 Pa to withstand heavier snow load
- Product lawfully Italian but assembled and built in Germany with the highest quality standards

#### Guarantee conditions:

- 12 years guarantee on the product
- 25 years guarantee on the power voltage (90% until 12 years, 80% until 25 years)
- Certificates and compliance with standard IEC 61215 (2nd ed.)
- Class protection II / IEC 61730 standard
- TUV certificate



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