GADIR
NEXT SOLAR GENERATION

Thin film GADIR a-SiR photovoltaic module

Gadir a-SiR Reflector

The GADIR a-SiR solar module is manufactured with amorphous silicon using state-of-the art manufacturing techniques, which offer strong competitive advantages over other technologies.

Cost efficient

Thin film Amorphous module's manufacturing process requires significantly less energy input and 99% less silicon compared to crystalline modules. This lower cost per unit produced, combined with a higher energy return on energy invested, translates into a faster payback time.

Higher energy yield

Due to its low temperature coefficient, and a better yield on non tilted installations and in diffuse light conditions, amorphous silicon modules outperform other modules by generating more energy per installed unit power.

This module is therefore especially suitable for all climatic regions especially for warmer even if the orientation is not optimal. Apart from its other strengths, its esthetical design allows it to perfectly adapt as a building integrated photovoltaic solution.

The Gadir a-SiR module is manufactured under stringent quality controls. Production takes place in a highly modern factory using an integrated automated production line from leading Swiss Oerlikon Solar. The technology is based on the plasmatic deposition of a fine amorphous silicon layer.

The factory

The plant, located in the Bay of Cadiz, Spain, operates with an annual production of more than 40 MW.

DE00005.04

Warranties

5 years warranty against materials/manufacturing defects.

Power warranty: 90% of nominal power for the first 10 years and 80% from then on according to warranty terms.

Qualified, IEC 61646
Safety tested, IEC 61730
Periodic inspection

PHOTOVOLTAIC MODULE
3YC7

Certification TÜV, IEC 61646, 61730 IEC and security class II.

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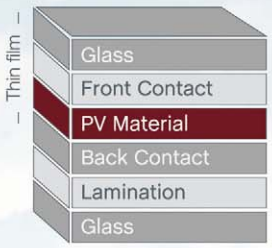
Module structure

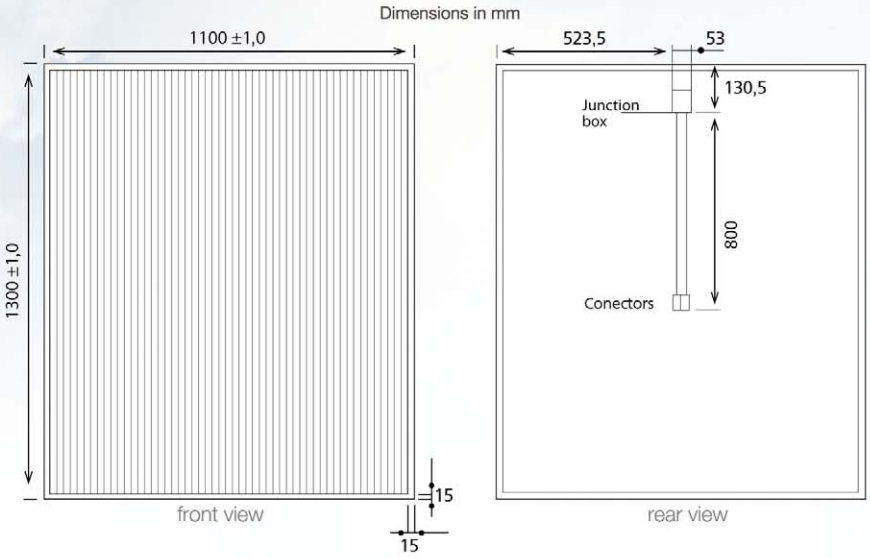
Front Glass	Float Glass 3,2 mm
Cell	Single Junction a- SI PIN with reflector
Lamination	Encapsulated Polyvinyl Butyral (PVB)
Rear Glass	Tempered Glass 3,2 mm
Frame	Frameless

Dimensions and Weight

Length	1300 ± 1 mm
Width	1100 ± 1 mm
Thickness	7,2 mm
Weight	25,5 kg



Module characteristics

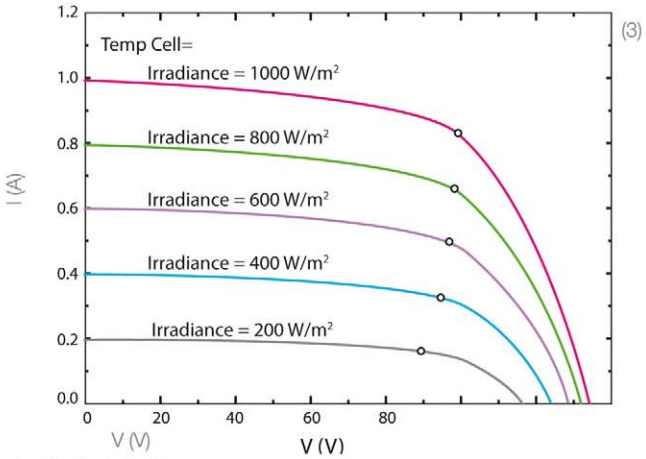


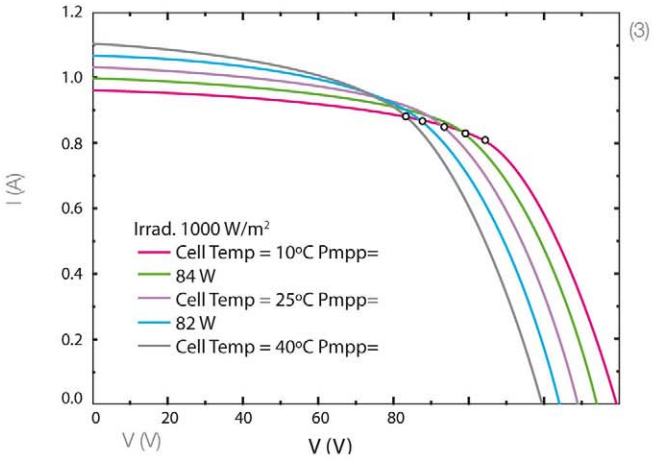
	Stabilized Values(1) Pmpp(2)	Vmpp	Impp	Voc	Isc (w)	Initial Values Pmpp	Vmpp	Impp	Voc	Isc (w)
GADIR a-SiR.70	70	87	0,81	137	1,08	91	98	0,92	142	1,11
GADIR a-SiR.75	75	92	0,83	137	1,08	97	103	0,94	144	1,11
GADIR a-SiR.80	80	96	0,84	137	1,08	104	108	0,95	144	1,11
GADIR a-SiR.85	85	101	0,85	138	1,08	110	113	0,96	145	1,11
GADIR a-SiR.90	90	103	0,87	138	1,09	117	116	0,99	145	1,12
GADIR a-SiR.95	95	104	0,91	138	1,12	123	117	1,03	145	1,15
GADIR a-SiR.100*	100	104	0,96	138	1,17	130	119	1,08	145	1,21
GADIR a-SiR.105*	105	105	1,00	138	1,22	136	121	1,13	145	1,27
	Power in Watts					Power in Watts				

Thermal Characteristics

Temperature Range	-40º...85ºC
Isc Temperature Coeficient	+0,04 %/K
Voc Temperature Coeficient	-0,28 %/K
Pmpp Temperature Coeficient	-0,21 %/K
Impp Temperature Coeficient	+0,09%/K
Vmpp Temperature Coeficient	-0,29%/K

(1) The parameters repressent best current knowledge and are indicative. Garantee is given on STC: 1000 W/m²; AM=1,5; T=25ºC. (2) Pmpp Tolerance ±2,5 Wp.
* UL certification pending





(3) Curves showing typical values.

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