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Solar Panel Guide Specification Data Sheet

**Galaxy Energy GmbH
GS 240-280 MONO 60-6
GS245mTs-60**

Also available on the web at
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**GALAXY ENERGY SOLAR MODULE
GS SERIES 250 - 280W MONO 60-6**

galaxy
Energy

Energy Systems for the future

GALAXY ENERGY SOLAR MODULE GS SERIES 250 - 280W MONO 60-6

ELECTRICAL SPECIFICATIONS (STC)			GS240m	GS245m	GS250m	GS255m	GS260m	GS265m	GS270m	GS275m	GS280m
max power	P_{MPP}	Wp	240	245	250	255	260	265	270	275	280
max power point voltage	U_{MPP}	V	29,9	30,1	30,3	30,6	30,8	31,1	31,3	31,6	31,9
max power point current	I_{MPP}	A	8,03	8,14	8,25	8,33	8,44	8,52	8,63	8,70	8,78
open circuit voltage	U_{OC}	V	37,4	37,6	37,7	37,9	38,1	38,3	38,5	38,7	38,9
short circuit current	I_{SC}	A	8,61	8,69	8,77	8,85	8,93	9,01	9,09	9,17	9,25
module efficiency	%		14,78	15,09	15,40	15,71	16,01	16,32	16,63	16,94	17,25
module power tolerance	%		-0/+2%	-0/+2%	-0/+2%	-0/+2%	-0/+2%	-0/+2%	-0/+2%	-0/+2%	-0/+2%
maximum reverse current	IR	A	14A	14A	14A	14A	14A	14A	14A	14A	14A

The electronic data are valid for standard test conditions (STC): 1000 W / m²; 25 ° C; AM 1.5

TEMPERATURE COEFFICIENT

temperature limit	°C	-40°C~+85°C
nominal cell temperature	NOCT °C	45+3°C
power	P_{MPP} %/K	-0,45%/K
voltage	U_{MPP} %/K	-0,35%/K
current	I_{SC} %/K	+0,055%/K
open circuit voltage	U_{OC} %/K	-0,35%/K
short circuit current	I_{SC} %/K	+0,055%/K

DIMENSIONS AND WEIGHT

length x width	1640x990 mm
frame size - height	50 mm
weight	19,00 kg

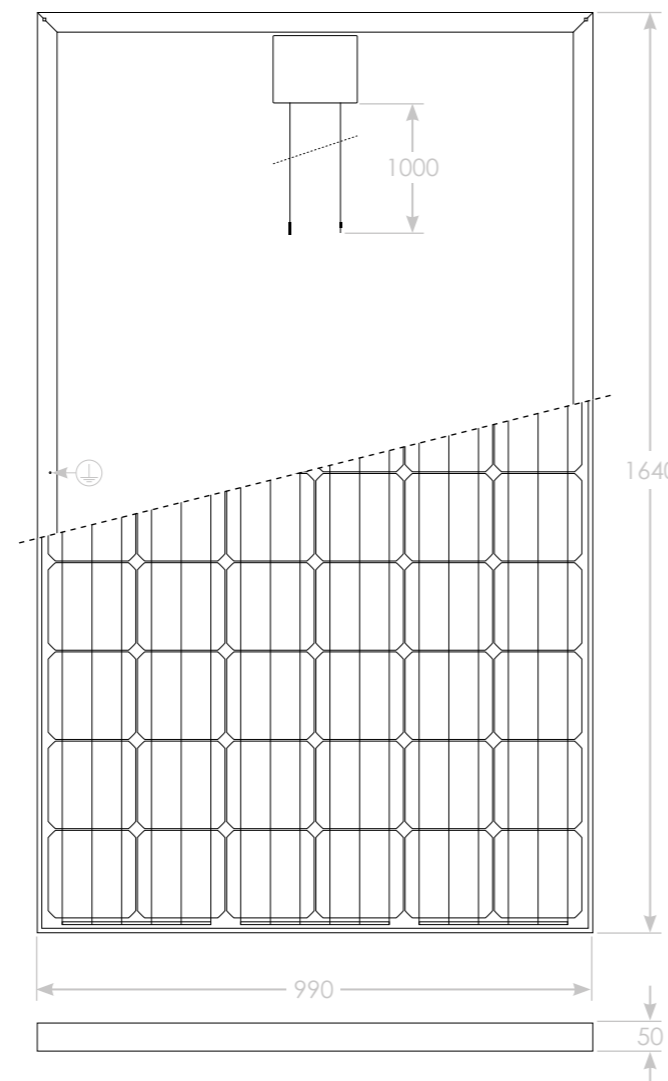
BASIC DATA

cells per module	60 pieces
cell dimensions	156x156mm; 6Inch
cell type	Monocrystalline-Si
bypassdiodes in the module	6 pieces - parallel
junction box	Galaxy Box - IP65
connecting cables	4mm ² / 1000mm
connectors	GE4 with Goldcontact
low iron glass	3,2mm annealed
hollow frame profile	anodized aluminum

LIMITS

maximum system voltage	1000 V (IEC) DC
maximum weight load	550 kg/m ²
fire class	B1 _{roof}

CERTIFICATES AND GUARANTEES



Aluminium junction boxes

All module types are available with aluminium junction box.

- Absolute fire safety
- Low resistance
- 100 % ammonia resistance

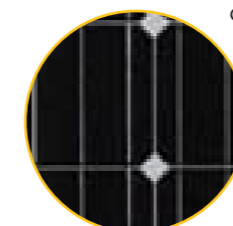
Galaxy Energy junction boxes

Our own-developed junction box for more performance and security.

- Low resistance
- Better cooling effect
- Goretex membrane
- 1 m cable length

3,2 mm tempered textured glass

The ideal solution for high light transmission and optimum stability – the structure prevents the sun rays from reflecting on the pane, that ensures as much light as possible getting on the cell.



Solar glasses without AR-coating

Many module manufacturers nowadays use solar glasses with chemically applied anti-reflection-coat.

The short-living AR-coating increases the module performance by 3 – 5 %. Already within the first years, the modules lose 3 – 5 % performance due to the loss of this coating. Due to that reason we exclusively use modules without AR-coating.

Fully automated soldering

We exclusively use cells with the highest efficiencies possible. All cells are soldered almost contactless and are stringed fully-automated.

100% EL controlled

All modules are checked for electroluminescence, that's how we make sure that our modules leave production without any micro cracks.



50mm frame

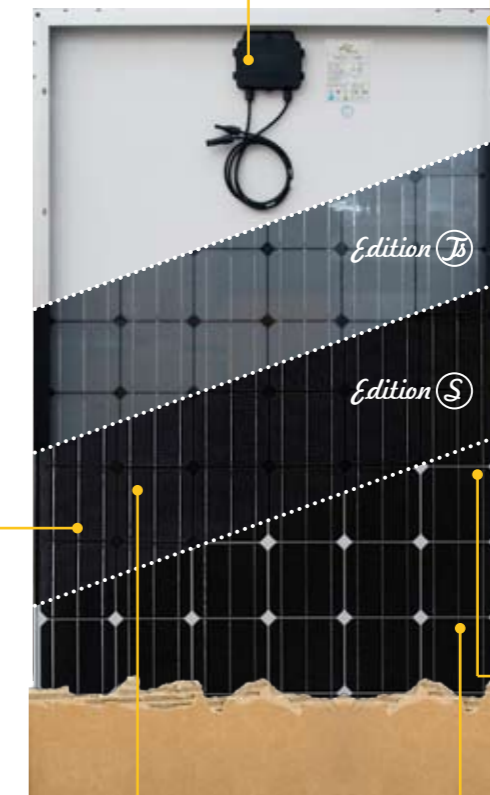
Sturdy hollow chamber frame profiles with a height of 50mm are used. In the edges the frame is pressed with a reverse angle. This method prevents the modules from extreme twist and thereby prevents micro cracks in the cells. Thus a continuously high performance can be guaranteed.

Calibration frame

For a perfect mounting work and an optically harmonic pv plant all our modules are calibrated for exact squareness.

Double bonding

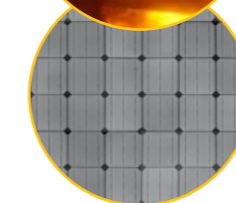
The double bonding introduced by us cares for absolute tightness between frame and laminate and is due to that an absolutely necessary criterion. It further belongs to the Galaxy Standard and guarantees high longevity for all our module types.



Warranty

We, as multiple awarded company, keep our promises – always.

- 10 years product warranty
- 25 years performance guarantee
- DIN ISO and TÜV certified
- Plus tolerance performance bond
- Fire protection class B1_{roof}
- High capacitance up to 550kg/m²



Vertical packaging

All modules are packed vertically from us, due to that fact the laminates have no chance to swing or twist also with ungentle transport conditions. The accrument of micro cracks is consequently reduced to an absolute minimum.

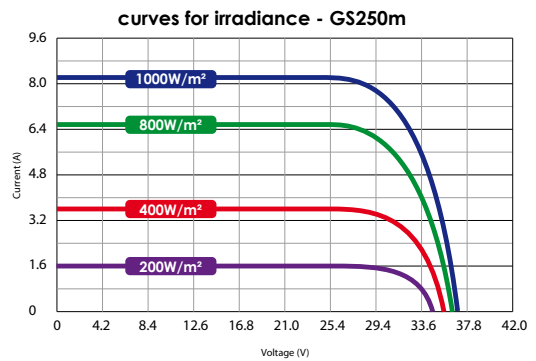
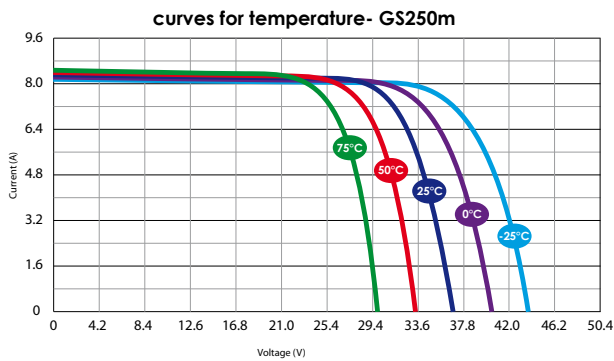


The precision assembly of all of these components is the signature of the Galaxy modules.

In our DIN ISO9001 and DIN 14001 certified company, quality and environmental friendliness are at the first place. All components such as cells, glass, junction box and cables are subject to constant controls.

Every module is flashed before and after lamination and is EL-tested to detect any possible micro cracks. This very fact enables us to offer a 10 year product guarantee. The combination of the performance guarantee for 25 years ensures a secure investment for the future.

Galaxy Energy guarantees optimum quality and a sustained performance of the module.



DLG Fokus Test 2011 ammonia resistance



PLUS X AWARD 2012 best product of the year



innovation Award 2013



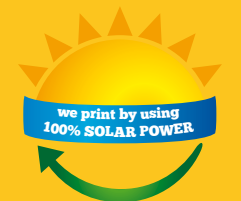
Intersolar AWARD 2013 Solar Projects in Europe



German middle class Summit 2014 TOP 100 Top Innovator



German Solar Award 2014 Solar architecture and urban development



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Specifications are subject to change without prior notice.

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