GermanSolar USA™

THE PARTNER FOR YOUR SOLAR LIFETIME!

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Anti-Dumping Duty Free

Better Solar

PremiumLine Commercial GSM6-60 285W-300W

German engineered, PremiumLine modules are designed and built to achieve top quality performance, maximize energy production and ensure long-lasting durability. Each PremiumLine module is assembled with our automated manufacturing processes. And the PremiumLine surpasses strict in-house and independent testing, guaranteeing the high level of quality our engineers stand behind.

Highlights

- Up to 4.99 W more module performance because of positive classes
- Flash data for every panel
- 12-year product warranty
- 25-year linear performance warranty
- Potential induced degradation (PID) Free
- Effective hotspot-prevention processes ensure durability
- More power due to better power tolerance: ±3%
- Improved water and snow runoff with chamfered frame drainage and snow runoff
- Better performance in diffused sunlight and high temperature
- High ammonia and salt mist resistance certified
- Glass with anti-reflective coating
- Individual testing and surveying, quality assurance by permanent production control incl. EL-test
- UV stabilized, aesthetically pleasing black anodized frame
- Best price-performance ratio

Built-in durability

GermanSolar only uses cell materials from leading premium cell manufacturers. To eliminate the possibility of hotspot formation thoroughly, strict control-criteria mandate a thermal picture of each cell before and after processing.

Positive classes: (-0/+4.99)

All GermanSolar modules are positively classed. Each PremiumLine module is up to 4.99 Wp above its rated power. So no matter what PremiumLine module you choose, you are guaranteed up to 4.99 Wp more.

25-year linear performance warranty

Our 25-year linear performance warranty covers for power loss less than 3% in the first year and only 0.35% degradation per year therafter.

Intertek

PERFORMANCE TESTED SALT MIST RESISTANT PHOTOVOLTAIC PRODUCT

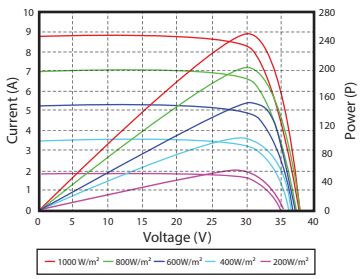
PERFORMANCE TESTED CORROSIVE GAS (NH_3) RESISTANT PHOTOVOLTAIC PRODUCT

Description

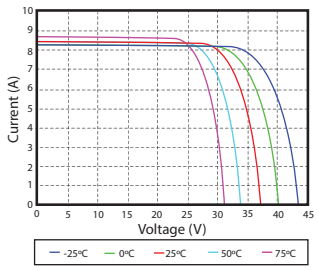
Item		Module Type GSM6 285/290/295/300W			
Electrical parameters at STC					
Maximum Power	Pmax(W)	285W	290W	295W	300W
Power Tolerance	W	0~+5W	0~+5W	0~+5W	0~+5W
Tolerance	(%)	±3%	±3%	±3%	±3%
Open Circuit Voltage	Voc(V)	38.40	38.64	39.06	39.30
Short Circuit Current	Isc(A)	9.59	9.64	9.69	9.74
Maximum Power Voltage	Vmpp(V)	31.74	32.10	32.52	32.88
Maximum Power Current	Impp(A)	9.00	9.05	9.10	9.14
Module Efficiency	(%)	17.50	17.80	18.10	18.40
Solar Cell Efficiency	(%)	19.90	20.20	20.60	20.90
STC: Irradiance 1000W/m2, Cell temperature 25°C, AM1.5					
Electrical parameters at NOCT					
Maximum Power	Pmax(W)	212W	216W	220W	223W
Open Circuit Voltage	Voc(V)	3.56	35.78	36.17	36.39
Short Circuit Current	Isc(A)	7.77	7.81	7.85	7.89
Maximum Power Voltage	Vmpp(V)	29.93	30.27	30.67	31.01
Maximum Power Current	Impp(A)	7.08	7.14	7.17	7.19
NOCT: Irradiance 800W/m2, Ambient temperature 20°C, Wind speed 1 m/s					
Mechanical Characteristics					
Cell Type	(mm)	156 x 156(Mono-Crystalline Silicon)			
Number of Cells	(Pcs)	60			
Maximum System Voltage	(V)	DC1000			
Temp. Coeff of Voc	(%/K)	–0.323%/K			
Temp. Coeff of Isc	(%/K)	+0.047%/K			
Temp. Coeff. Of Pmax	(%/k)	-0.414%/K			
Operating Temperature	(°C)	-40°C to +85°C			
Nominal Operating Cell Temperature	(°C)	47±2			
Max Series Fuse	(A)	15			
Insulation	(MΩ)	50			
Wind Bearing	(Pa)	≤5400			
Pressure Bearing	(Pa)	≤2400			

NOCT**	47°C ±2°C
Module efficiency reduction at 200 W/m²***	-0.6 (±0.3)% abs
Max. System Voltage	1000 V DC
IP Protection Level	IP 65
Module Technology	Glass-Foil Laminate with anodized aluminum frame
Module Design	Cover material: Solar glass with antireflection surface treatment, 0.13 in (3.2mm); Encapsulation: EVA-Solar Cells -EVA; Back material
No. and Type of Solar Cells	60 crystalline solar cells 6.14 x 6.14 in (156 x 156 mm) 0.007 in ± 1.18 x 103 (180 um ± 30 µhm)
Cables	Junction box with MC4 connectors, cables: 2 x 3.28 ft/0.006 in2 (2 x 1 m/4 mm²)
Junction Box	IP 67 rated, with 3 bypass diodes
Dimensions (lxwxh)	64.56 x 39.05 x 1.57 in (1640 x 992 x 40mm)
Weight	40.8 lbs/ 18.5 kg
Operating Temperature Range	-40 ... +185°F (-40 ... +85˚C)
Ambient Temperature Range	-40 ... +113°F (-40 ... +45˚C)
Mechanical Ratings	Suction pressure and load of 50 lb/ft² (2400 Pa) approved (Wind speed 81 mph (130 km/h) with safety factor 3), load of 5400 Pa approved
Certification	IEC 61215 : 2005 IEC 61730 -1/-2 : 2004 IEC 61701 : 1995 (salt mist resistant) DLG Focus Test (ammonia resistant) UL 1703 approved ETL Fire-Rating Type 1 UL 1703 Fire Class: C FSEC listing UNI 9177 Class 1 EN 13501- 1 Class E
Positive Sorting	-0 Wp / +4.99 Wp
Pallet Dimensions in weight / size	1177.3 lbs (66.93 x 44.49 x 45.28) inches 26 modules per pallet
Module Qty per Container	728pcs/40'HQ
Product Warranty	12 years
Performance Warranty	25 years, according to the Warranty Conditions of GermanSolar Linear Warranty

I-V Curves

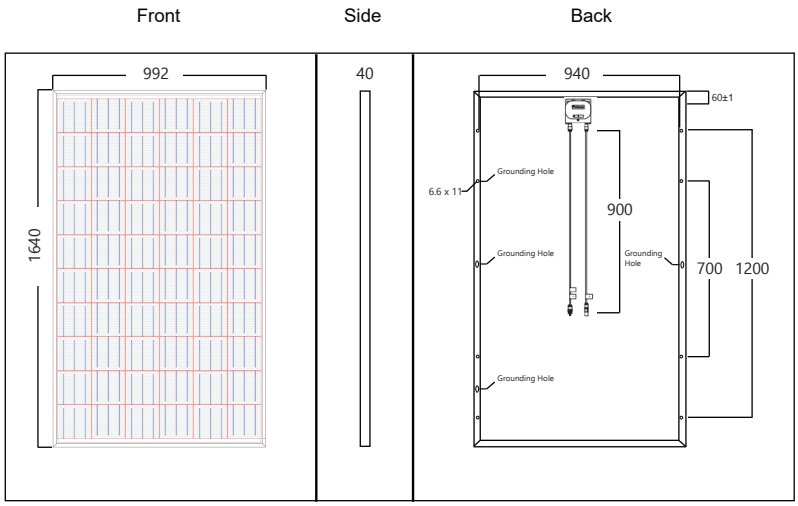


Current-Voltage and Power-Voltage Curves at Different Irradiances

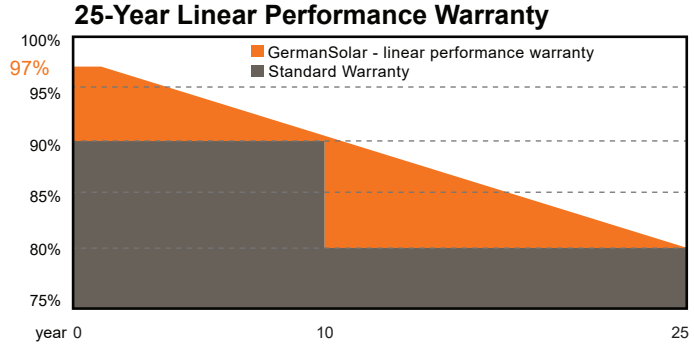


Current-Voltage Curves at Different Temperatures

PHYSICAL CHARACTERISTICS Unit: mm



25-Year Linear Performance Warranty



SCAN ME

* STC-Standard Conditions, measurement conditions: intensity irradiation 1000 W/m2, spectral distribution AM 1.5 temperature25 ± 2°C, according to standard EN 60904-3
** NOCT-Normal operation Cell Temperature, measurment conditions: irradation intensity 800 W/m², AM 1.5 temperature 20°C, wind speed 1m/s.
*** Reduced efficiency with the decrease in the intensity of irradation of 1000 W/m² and 200 W/m², temperature 25°C according EN 60904-1
**** Reverse current power rating: operation of the modules with an external power source is only permitted with a string fuse with a release current of <2 x Isc @ STC*
Measuring tolerance of Pmax @ STC ± 5% all other electric parameters ±10%
This data sheet conforms to EN 50380. GermanSolar reserves the right to change specifications without notice.

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