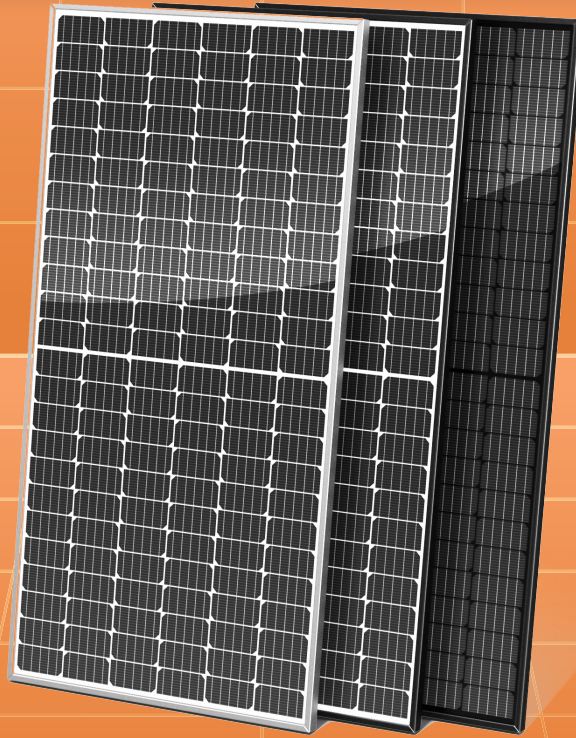


# STANDARD SOLAR PANELS

GermanSolar's standard solar panels are high efficiency, convenient, and easy to use



GermanSolar  
The Partner For Your Solar Lifetime!



## PREMIUMLINE MAX

### G1 144 MONO CELL SOLAR PANELS

GSM-400W 405W 410W 415W 420W

GermanSolar is a specialist in customization, introducing colored glass, frames, and back-sheet material and shapes to aesthetically match your ideas with the prospective application. With innovative technology and design, GermanSolar offers high quality modules with enhanced aesthetic appearance for building structures and facades. By providing outstanding customization options, GermanSolar supports your required project needs with colored and shaped panels of your choice, and consults with you in choosing the right size, thickness, shape, and color to complement the design of your application and your building.

#### FEATURES



Best price-performance ratio



Positive power of up to +5.00 Wp



EL tested and micro cracks inspected



Fully automated production line with German quality engineering and design standards



Better performance in diffused sunlight and high temperature



High ammonia & salt mist resistant certified, and PID-free



Withstands wind loads up to 2400Pa / heavy snow loads up to 5400Pa



12-year limited product warranty



25-year linear performance warranty



IEC61215: CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES – DESIGN QUALIFICATION AND TYPE APPROVAL  
IEC61730: Photovoltaic (PV) module safety qualification



EN IEC 61730: PHOTOVOLTAIC (PV) MODULE SAFETY QUALIFICATION 2014/35/EU: THE LOW VOLTAGE DIRECTIVE

STANDARD SOLAR PANELS

**ELECTRICAL DATA**

Nominal Max. Power (Pmax)* (W)	400	405	410	415	420
Open Circuit Voltage (Voc) (V)	49.39	49.58	49.77	49.96	50.15
Short Circuit Current (Isc) (A)	10.17	10.25	10.32	10.40	10.47
Max. Power Voltage (Vmpp) (V)	41.83	42.04	42.25	42.46	42.67
Max. Power Current (Impp) (A)	9.56	9.63	9.70	9.77	9.84
Module Efficiency (%)	19.88	20.13	20.38	20.63	20.87
Power Tolerance (%)	± 3				
Power Temperature Coefficient γ	-0.36 % / °C				
Current Temperature Coefficient α	+0.04 % / °C				
Voltage Temperature Coefficient β	-0.36 % / °C				

\*STC: Irradiance 1000 W / m<sup>2</sup>, cell temperature 25 °C, AM = 1.5, Tolerance of Pmax is within + / - 3 %.

**NOCT \*\***

Nominal Max. Power (Pmax)* (W)	302	306	310	314	318
Open Circuit Voltage (Voc) (V)	47.39	47.55	47.71	47.87	48.03
Short Circuit Current (Isc) (A)	8.08	8.13	8.19	8.25	8.31
Max. Power Voltage (Vmpp) (V)	39.83	40.04	40.25	40.46	40.67
Max. Power Current (Impp) (A)	7.59	7.65	7.70	7.75	7.81
NMOT (Nominal Module Operating Temperature) (°C)	41 ± 3				

\*\* NOCT: Irradiance at 800 W / m<sup>2</sup>, ambient temperature 20 °C, Wind Speed 1 m / s. AM = 1.5.

**MECHANICAL DATA**

Dimensions (mm)	2008 × 1002 × 30
Weight (kg)	22
Solar Cells (mm)	Mono 158.75 × 79.37
Front Glass	3.2 mm glass
Backsheet	White or black
Frame	Anodised aluminum alloy
Junction Box	IP68, 3 diodes
Cables	4 mm <sup>2</sup> , 300 mm in length, length can be customized / UV resistant
Connectors	MC4 original / MC4 compatible

**PACKAGING**

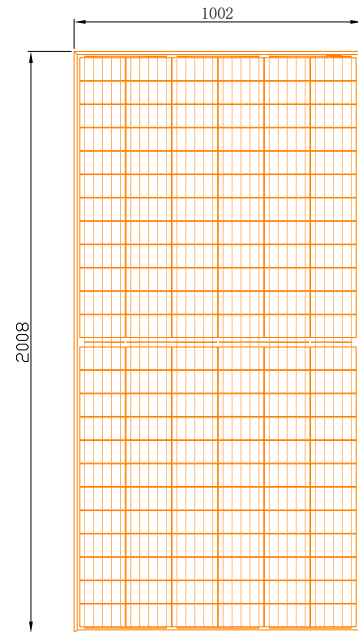
Modules Per Pallet (pcs)	36
Pallets Per Container (pcs)	22
Module quantity per 40' container (pcs)	792

**OPERATING CONDITIONS**

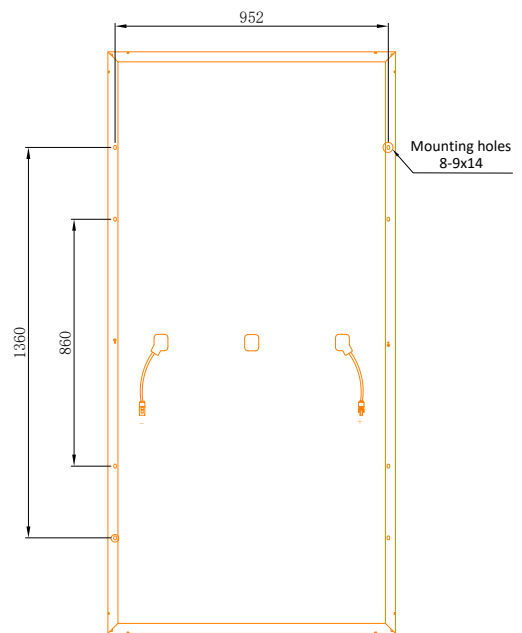
Max. System Voltage (V)	1500
Operating Temperature (°C)	-40 ~ +85
Max. Series Fuse Rating (A)	30
Front Side Maximum Static Loading/ Rear Side Maximum Static Loading (Pa)	5400 / 2400

**Design (mm)**

Front View



Back View



**LINEAR PERFORMANCE WARRANTY**

12-Year Product Warranty | 25-Year Performance Warranty

