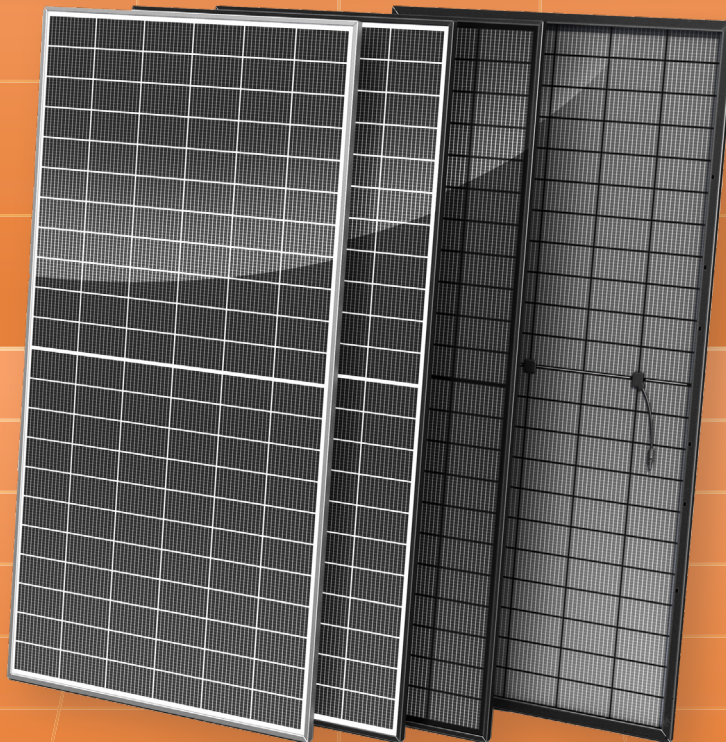


# STANDARD SOLAR PANELS

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



**GermanSolar**  
The Partner For Your Solar Lifetime!



## BIFACIAL APOLLO MAX G12R 132 MONO CELL SOLAR PANELS

GSM-610W 615W 620W 625W 630W

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

 <p>Best price-performance ratio</p>	 <p>Positive power of up to +5.00 Wp</p>	 <p>EL tested and micro cracks inspected</p>	 <p>Fully automated production line with German quality engineering and design standards</p>				
 <p>Better performance in diffused sunlight and high temperature</p>	 <p>High ammonia &amp; salt mist resistant certified, and PID-free</p>	 <p>Withstands wind loads up to 2400Pa / heavy snow loads up to 5400Pa</p>	 <p>15-year limited product warranty</p>				
 <p>30-year linear performance warranty</p>						<p>IEC61215: CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES – DESIGN QUALIFICATION AND TYPE APPROVAL IEC61730: Photovoltaic (PV) module safety qualification</p>	 <p>EN IEC 61730: PHOTOVOLTAIC (PV) MODULE SAFETY QUALIFICATION 2014/35/EU: THE LOW VOLTAGE DIRECTIVE</p>

STANDARD SOLAR PANELS

**ELECTRICAL DATA**

Nominal Max. Power (Pmax)* (W)	610	615	620	625	630
Open Circuit Voltage (Voc) (V)	50.63	50.80	50.98	51.16	51.35
Short Circuit Current (Isc) (A)	15.32	15.37	15.42	15.47	15.52
Max. Power Voltage (Vmpp) (V)	42.00	42.15	42.30	42.46	42.62
Max. Power Current (Impp) (A)	14.53	14.60	14.66	14.72	14.79
Module Efficiency (%)	22.58	22.77	22.95	23.14	23.32
Power Tolerance (%)	± 3				
Power Temperature Coefficient $\gamma$	-0.35 % / °C				
Current Temperature Coefficient $\alpha$	+0.04 % / °C				
Voltage Temperature Coefficient $\beta$	-0.27 % / °C				

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

**BSTC \* \***

Nominal Max. Power (Pmax)* (W)	680	685	690	695	700
Open Circuit Voltage (Voc) (V)	50.63	50.80	50.98	52.16	51.35
Short Circuit Current (Isc) (A)	17.08	17.13	17.19	17.25	17.30
Max. Power Voltage (Vmpp) (V)	42.00	42.15	42.30	42.46	42.62
Max. Power Current (Impp) (A)	16.20	16.26	16.32	16.37	16.43
NMOT (Nominal Module Operating Temperature) (°C)	41 ± 3				

\*\*BSTC: Front side irradiation 1000 W / m<sup>2</sup>, back side reflection irradiation 135 W / m<sup>2</sup>, AM = 1.5, ambient temperature 25 °C.

**MECHANICAL DATA**

Dimensions (mm)	2382 x 1134 x 30
Weight (kg)	33.6 ( 2.0 mm glass ) or 31.6 ( 1.6 mm glass )
Solar Cells (mm)	HJT Mono 182 x 105
Front Glass	2.0 mm glass or 1.6 mm glass
Back Glass	2.0 mm glass or 1.6 mm glass
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**

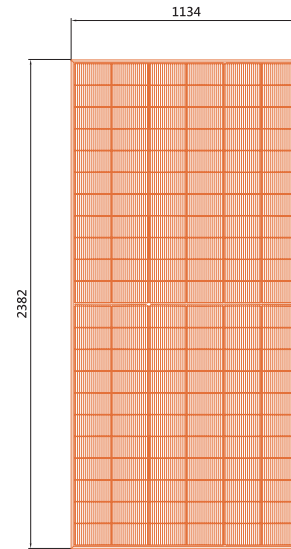
Modules Per Pallet (pcs)	36
Pallets Per Container (pcs)	22
Module quantity per 40' container (pcs)	720

**OPERATING CONDITIONS**

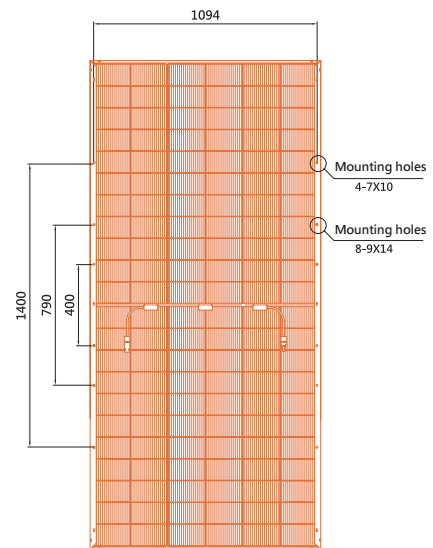
Max. System Voltage (V)	1500
Operating Temperature (°C)	-40 ~ +85
Max. Series Fuse Rating (A)	30
Front Side Maximum Static Loading/ Rear Side Maximum Static Loading (Pa)	5400 / 2400

**Design (mm)**

Front View



Back View



**LINEAR PERFORMANCE WARRANTY**

15-Year Product Warranty | 30-Year Performance Warranty

