

# BIFACIAL 690 - 730 Watt Silver Frame



## Key features

- ✓ Passed IEC 5400 Pa mechanical loading test.
- ✓ The modules can withstand high wind-pressure, snow loads and extreme temperatures.
- ✓ Our high performing modules have an industry low tolerance of 0±5%.
- ✓ Our solar cells offer high conversion efficiency to ensure the highest quality.
- ✓ Highest quality with our cells.

Highest quality with our cells.  
18MBB Heterojunction Technology

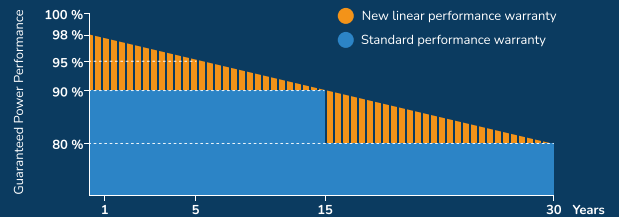


## Quality and safety

- ✓ Industry leading power output warranty  
**15 years / 90%**  
**30 years / 80%**
- ✓ 25-year warranty on materials & workmanship
- ✓ Fire test: Class 1



## Premium performance warranty



## Applications



On-grid residential roof-tops



On-grid commercial-industrial roof-tops



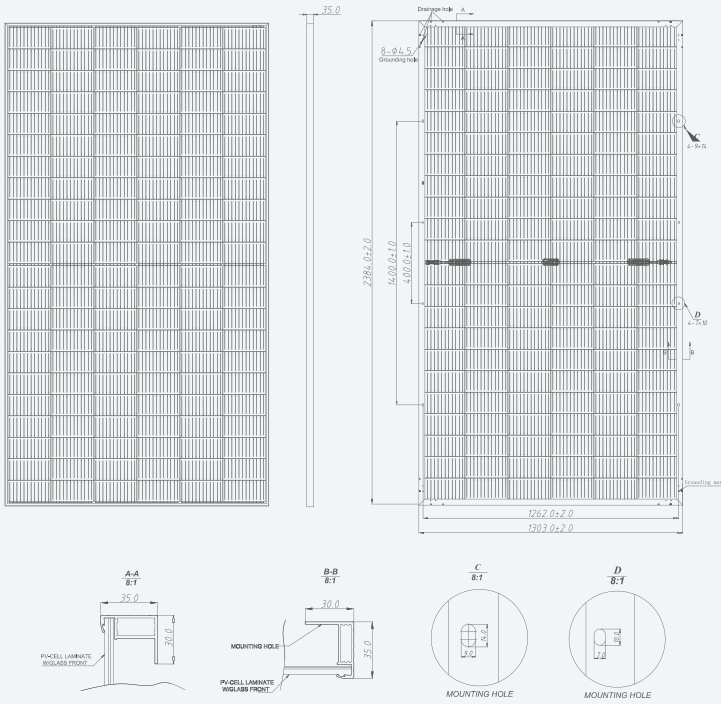
Solar power plants



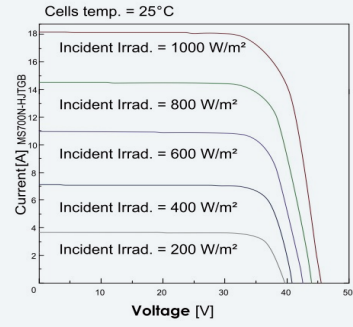
Off-grid systems

# Engineering drawings

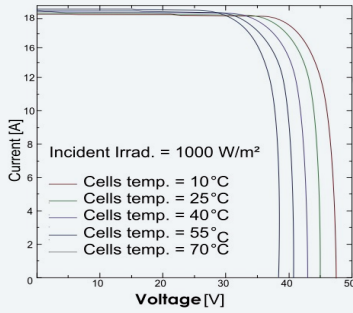
# Electrical performance & temperature dependence



I-V CURVES AT DIFFERENT TEMPERATURE (680W)



I-V / P-V CURVE AT DIFFERENT TEMPERATURE (680W)



## Electrical characteristics

## Mechanical data

Module Type	SNG680M-132	SNG685M-132	SNG690M-132	SNG695M-132	SNG700M-132	SNG710M-132	SNG720M-132	SNG730M-132
<b>TESTING CONDITION<sup>(1)</sup></b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>	<b>STC<sup>(2)</sup>/NMOT</b>
Maximum Power at STC (Pmax)	680Wp/ 517.89Wp	685Wp/ 521.70Wp	690Wp/ 525.50Wp	695Wp/ 529.31Wp	700Wp/ 533.12Wp	710Wp/ 540.74Wp	720Wp/ 548.35Wp	730Wp/ 555.97Wp
Maximum Power Voltage (Vmp)	42.32/39.96	42.49/40.11	42.66/40.28	42.83/40.44	43.00/40.58	43.34/40.90	43.67/41.21	44.00/41.52
Max Power Current (Imp)	16.07A/12.96A	16.13A/13.01A	16.18A/13.05A	16.23A/13.09A	16.29A/13.14A	16.39A/13.22A	16.49A/13.30A	16.60A/13.39A
Open-circuit Voltage (Voc)	49.79V/45.96V	49.99V/46.16V	50.19V/46.36V	50.39V/46.56V	50.59V/46.76V	50.90V/47.04V	51.21V/47.33V	51.76V/47.84V
Short-circuit Current (Isc)	17.10A/13.79A	17.16A/13.84A	17.21A/13.88A	17.27A/13.93A	17.33A/13.97A	17.47A/14.08A	17.60A/14.18A	17.66A/14.23A
Module Efficiency (%)	22.21%	22.37%	22.53%	22.69%	22.86%	23.19%	23.52%	23.85%
Operating Temperature 0C	-40°C± ~ +85°C							
Maximum system voltage	1500V DC							
Maximum series fuse rating	30A							
Power tolerance	0±6%							
Temperature coefficients of Pmax	-0.26%/°C							
Temperature coefficients of Voc	-0.24%/°C							
Temperature coefficients of Isc	0.04%/°C							
Nominal operating cell temperature (NOCT)	42.3±2 °C							

Cell type	Heterojunction Technology (210x210mm)
No. of cells	132 (6x22)
Dimensions	2384x1303x35mm
Weight	38.8 kg
Front Glass	2.0mm AR Coating Semi-tempered glass
Back Glass	2.0mm AR Glazed Semi-tempered glass
Frame	Anodized Aluminium Alloy Silver Frame
Junction Box	IP68 Rated, 3 diodes
Output Cables	TUV: 1x4.0mm <sup>2</sup> / UL 12AWG Length: 400/1400mm or customized length
Connectors	Copper, Silver Plated, MC 4

## Packaging configuration

Dimensions	35mm
No. of pieces per pallet	31
Total number of pallets	17
Module quantity per 40' container	527

(1) Measurement Tolerances: Pmax (+/- 5%), Isc & Voc (+/- 5%) - Power Classification 0/+5%  
 (2) STC (Standard Testing Condition): Irradiance 1000w/m², Cell Temperature 25°C, AM 1.5  
 (3) NMOT (Nominal Operating Module Temperature): Irradiance 800/m², NMOT: Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

STC/NMOT



Irradiance 1000W/m²



Module Temperature 25°C



AM = 1.5