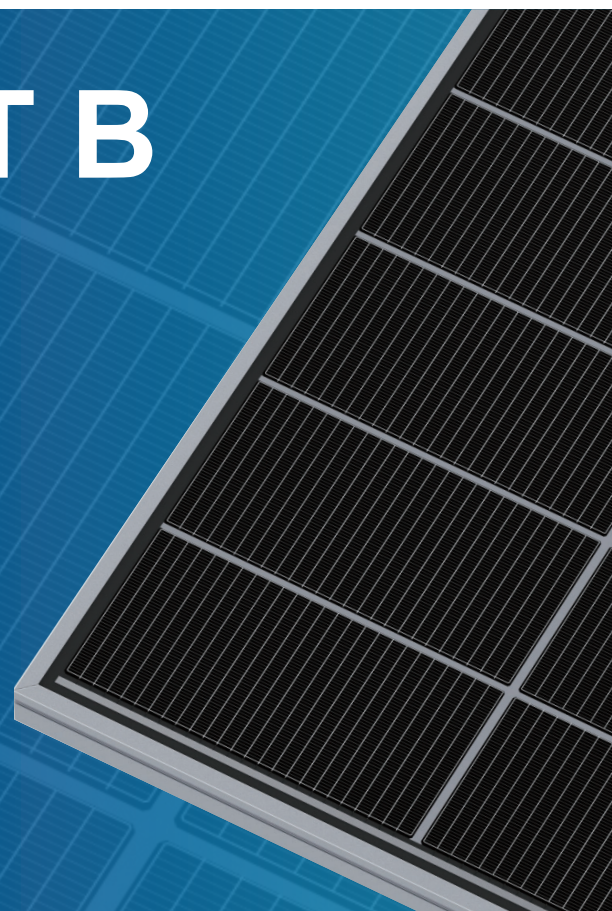


MSP-690 W HJT B



Hyper-link Interconnection

Patented Technology

680-705 Wp

Power Output Range

22.7 %

Higher Efficiency

0~+3%

Positive Power Tolerance



No B-O caused LID



Ultra-high bifacial factor



Ultra-high power generation, ultra-low carbon emission



Most stable power temperature coefficient



Lead technology of metallization process

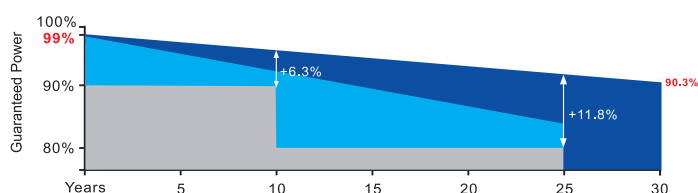


Excellent anti-LID & anti-PID performance

LINEAR PERFORMANCE WARRANTY

15 years product warranty / 30 years linear power warranty

0.3% Annual Degradation over 30 years



Linear Warranty ■
Common module's Linear ■
Industry Standard ■

ELECTRICAL DATA (STC)

| Model Type | MSP W HJT B | | | | | |
|-------------------------------|-------------|-------|-------|-------|-------|-------|
| Rated Power in Watts-Pmax(Wp) | 680 | 685 | 690 | 695 | 700 | 705 |
| Open Circuit Voltage-Voc(V) | 49.47 | 49.56 | 49.65 | 49.74 | 49.83 | 49.92 |
| Short Circuit Current-Isc(A) | 17.48 | 17.56 | 17.66 | 17.74 | 17.82 | 17.91 |
| Maximum Power Voltage-Vmpp(V) | 41.48 | 41.56 | 41.63 | 41.71 | 41.78 | 41.86 |
| Maximum Power Current-Impp(A) | 16.41 | 16.50 | 16.60 | 16.68 | 16.77 | 16.86 |
| Module Efficiency (%) * | 21.9 | 22.1 | 22.2 | 22.4 | 22.5 | 22.7 |

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Bifacial factor: 85±10(%) * Module Efficiency (%): Rounding to the nearest number

Electrical characteristics with 10% rear side power gain

| | | | | | | |
|-----------------------------------|-------|-------|-------|-------|-------|-------|
| Total Equivalent power -Pmax (Wp) | 748 | 754 | 759 | 765 | 770 | 776 |
| Open Circuit Voltage-Voc(V) | 49.47 | 49.56 | 49.65 | 49.74 | 49.83 | 49.92 |
| Short Circuit Current-Isc(A) | 19.23 | 19.32 | 19.43 | 19.51 | 19.60 | 19.70 |
| Maximum Power Voltage-Vmpp(V) | 41.48 | 41.56 | 41.63 | 41.71 | 41.78 | 41.86 |
| Maximum Power Current-Impp(A) | 18.05 | 18.15 | 18.26 | 18.35 | 18.44 | 18.55 |

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

ELECTRICAL DATA (NMOT)

| Model Type | MSP W HJT B | | | | | |
|--------------------------------|-------------|-------|-------|-------|-------|-------|
| Maximum Power-Pmax (Wp) | 519.3 | 523.0 | 527.2 | 530.9 | 534.5 | 538.0 |
| Open Circuit Voltage-Voc (V) | 46.35 | 46.44 | 46.52 | 46.61 | 46.69 | 46.78 |
| Short Circuit Current-Isc (A) | 14.34 | 14.40 | 14.48 | 14.55 | 14.61 | 14.68 |
| Maximum Power Voltage-Vmpp (V) | 38.78 | 38.85 | 38.93 | 39.00 | 39.07 | 39.14 |
| Maximum Power Current-Impp (A) | 13.39 | 13.46 | 13.54 | 13.61 | 13.68 | 13.76 |

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

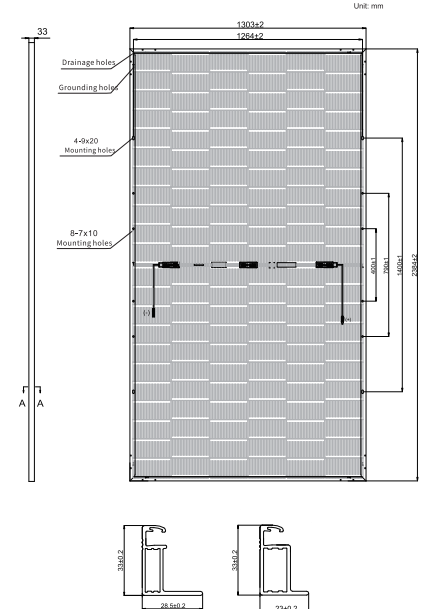
MECHANICAL DATA

| | |
|--------------------|--|
| Solar cells | n-type HJT |
| Cell configuration | 132 cells (6×11+6×11) |
| Module dimensions | 2384×1303×33mm |
| Weight | 37.5kg |
| Superstrate | High Transmission, AR Coated Heat Strengthened Glass |
| Substrate | Heat Strengthened Glass |
| Frame | Anodized Aluminium Alloy, Silver Color |
| J-Box | Potted, IP68, 1500VDC, 3 Schottky bypass diodes |
| Cables | 4.0mm ² , Positive(+)350mm, Negative(-)230mm (Connector Included), or customized length |
| Connector | PV-SY02, IP68 |

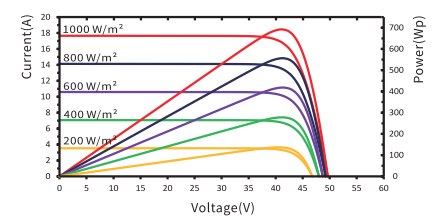
TEMPERATURE & MAXIMUM RATINGS

| | |
|---|-------------|
| Nominal Module Operating Temperature (NMOT) | 43°C±2°C |
| Temperature Coefficient of Voc | -0.22%/°C |
| Temperature Coefficient of Isc | 0.047%/°C |
| Temperature Coefficient of Pmax | -0.24%/°C |
| Operational Temperature | -40°C~+85°C |
| Maximum System Voltage | 1500VDC |
| Max Series Fuse Rating | 35A |
| Limiting Reverse Current | 35A |

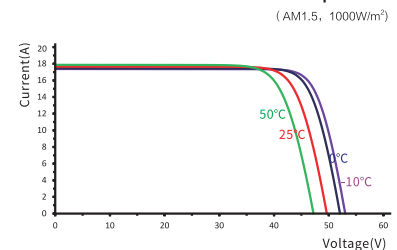
Dimensions of PV Module



I-V characteristics at different irradiances



I-V characteristics at different temperatures



PACKAGING CONFIGURATION

| MSP-690 W HJT B | 40ft(HQ) |
|--|----------------|
| Number of modules per container | 594 |
| Number of modules per pallet | 33 |
| Number of pallets per container | 18 |
| Packaging box dimensions (LxWxH) in mm | 1320×1125×2520 |
| Box gross weight[kg] | 1289 |