

## N-Type

### ToPCon Bifacial Module Half-cell Double Glass Module

## TMX 695 MH9GANT-132A

### 680 - 695 Wp

#### 132 HALF-CUT TOPCon

TRIMAX Solar HALF-CUT TOPCon modules are extremely powerful and guarantee maximum reliability for high and long-term yields. Bifacial technology enables additional energy generation from the rear (up to 30%). 30 years lifespan enables 10-30% additional power generation compared to conventional P-type modules.

#### HIGHLY EFFICIENT DESIGN

TRIMAX Solar HALF-CUT TOPCon modules are designed to maximize module efficiency. The low-loss, original Stäubli MC4-Evo2 connectors ensure maximum performance.

#### COMPREHENSIVELY TESTED AND CERTIFIED

TRIMAX Solar produces high-quality and reliable photo-voltaic modules according to international standards (ISO 9001: 2015, ISO 14001: 2015, ISO 45001: 2018).

TRIMAX Solar HALF-CUT PERC modules are certified to IEC 61215 and IEC 61730 and have also undergone salt spray and ammonia corrosion testing. The 100% PID-free solar cells reliably provide stable yields throughout the warranty period and beyond.

30 YEARS  
87.4% linear  
performance  
guarantee

15 YEARS  
product  
guarantee

0 - 5 WP  
positive  
tolerance



# TMX 695 MH9GANT-132A

## ELECTRICAL DATA AT STC

|                                 |           |       |       |       |
|---------------------------------|-----------|-------|-------|-------|
| Rated power Pmax (Wp)           | 680       | 685   | 690   | 695   |
| Rated voltage Pmax – Vmp (V)    | 38,55     | 38,74 | 38,94 | 39,13 |
| Rated current Pmax – Imp (A)    | 17,64     | 17,68 | 17,72 | 17,76 |
| Open circuit voltage – Voc (V)  | 46,50     | 46,69 | 46,88 | 47,07 |
| Short circuit current – Isc (A) | 18,69     | 18,74 | 18,79 | 18,84 |
| Module efficiency (%)           | 21,89     | 22,05 | 22,21 | 22,37 |
| Sorting (plus tolerance)        | 0 ~ +5 Wp |       |       |       |

STC (Standard Test Conditions) : Irradiance 1000 W/m<sup>2</sup>, Air Mass = 1.5, Cell Temperature 25°C, Measurement Tolerance Pmax ± 3%, Voc ± 3%, Isc ± 4%

## ELECTRICAL DATA AT NOCT

|                                 |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|
| Power at Pmax (Wp)              | 513   | 517   | 521   | 525   |
| Voltage at Pmax – Vmp (V)       | 36,15 | 36,36 | 36,56 | 36,74 |
| Current at Pmax – Imp (A)       | 14,19 | 14,22 | 14,25 | 14,29 |
| Open circuit voltage – Voc (V)  | 44,37 | 44,56 | 44,75 | 44,94 |
| Short circuit current – Isc (A) | 15,05 | 15,09 | 15,13 | 15,17 |

NOCT (normal operating cell temperature) : Irradiation 800W/m<sup>2</sup>, Air Mass = 1.5, Wind Speed 1m/s, Ambient Temperature 20°C

## With Different Power Generation Gain (regarding 690W as an example)

| Power Gain (%) | Power Output (Wp) | Voltage Mpp-Vmpp (V) | Current Mpp-Imp (A) | Voltage Open Circuit-Voc (V) | Short Circuit Current-Isc (A) |
|----------------|-------------------|----------------------|---------------------|------------------------------|-------------------------------|
| 10             | 759               | 38,94                | 19,49               | 46,88                        | 20,67                         |
| 15             | 794               | 38,94                | 20,38               | 46,88                        | 21,61                         |
| 20             | 828               | 38,94                | 21,26               | 46,88                        | 22,55                         |
| 25             | 863               | 38,94                | 22,15               | 46,88                        | 23,49                         |
| 30             | 897               | 38,94                | 23,04               | 46,88                        | 24,43                         |

## SPECIFICATIONS

|                 |  |
|-----------------|--|
| Cells           | 210 mm HALF-CUT TOPCon                       |
| Number of cells | 132 (6x22)                                   |
| Dimensions      | 2384 x 1303 x 35 mm                          |
| Weight          | 38 kg  |
| Glass           | 2,0 mm, heat strengthened glass(Front/Back)  |
| Frame           | Anodized Aluminium alloy,silver              |
| Junction-box    | IP68, 3 Bypass diodes                        |
| Cable           | UV-resistant   4,0 mm <sup>2</sup>   1200 mm |
| Connector       | Stäubli MC4-Evo2 <sup>1</sup>                |
| Bifaciality     | 80±5%  |

## TEMPERATURE COEFFICIENT

|                              |            |
|------------------------------|------------|
| Temperature coefficient Pmax | -0,310 %/K |
| Temperature coefficient Voc  | -0,26 %/K  |
| Temperature coefficient Isc  | +0,046 %/K |
| NMOT                         | 42 ±2°C    |

## LIMITING VALUES

|                            |                       |
|----------------------------|-----------------------|
| Operating temperature (°C) | -40 ~ +85             |
| Maximum system voltage (V) | 1500                  |
| Max Series Fuse Rating (A) | 35                    |
| Safety class               | Class II              |
| Maximum load capacity (Pa) | Snow 5400 / Wind 2400 |

## PACKAGING

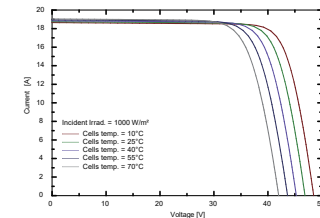
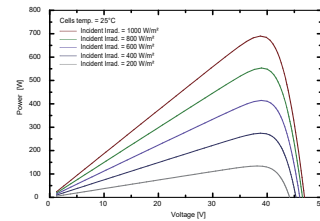
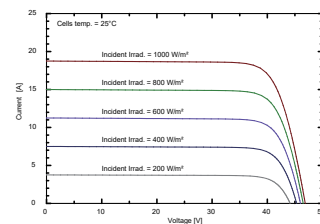
|                       |        |
|-----------------------|--------|
| Container             | 40' HC |
| Modules per pallet    | 31     |
| Modules per Container | 558    |

Technical data are average values and may vary slightly. The associated data of the individual measurement are decisive. Possible light-induced degradation of the power after commissioning is not taken into account. Technical data is subject to change without notice. The current data sheets are available online at [www.trimax-solar.com](http://www.trimax-solar.com). All specifications in this data sheet comply with DIN EN 50380. Further information can be found in the installation manual. WEEE

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<sup>1</sup> or comparable

## ELECTRICAL CHARACTERISTICS (690W)



## TECHNICAL DRAWING

