

# VDL-M18/G156

## 605-620W

182±1.5×92.875±1.5mm  
Cells 144

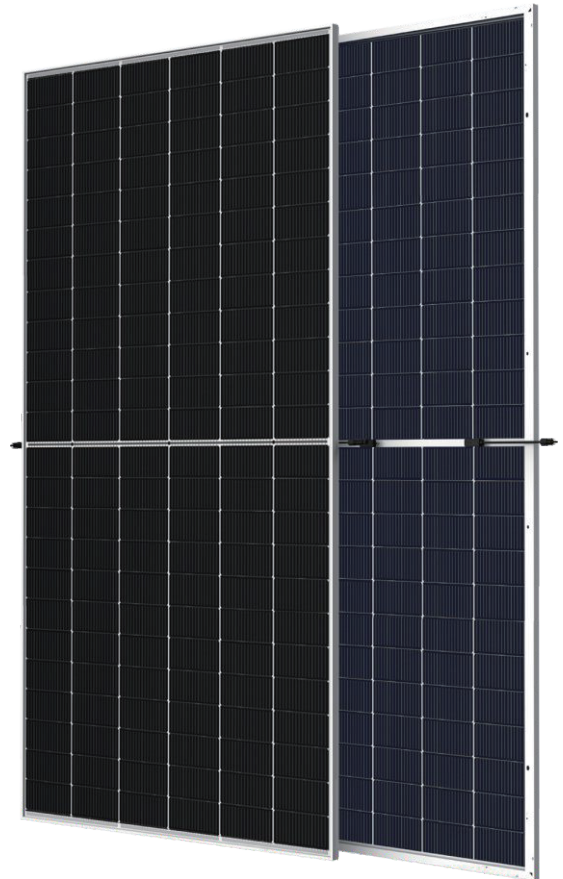
**Bifacial Double Glass**

**N-TYPE Half-Cell Module**

Max Power Out: 620W

Max Efficiency: 23.43%

Power Tolerance: 0~+5W



### SMBB Technology

Better light trapping and current collection to improve module power output and reliability



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



### Reduced Hot Spot Loss

Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.



### Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

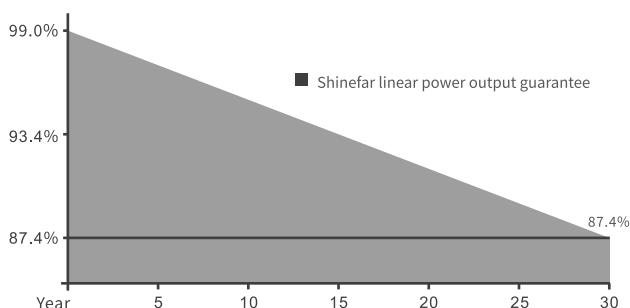


### High Energy Generation, Low LCOE

Low Pmax temp coefficient increases energy production

## Superior Warranty

- 15-year material & technology warranty
- 30-year linear power output warranty

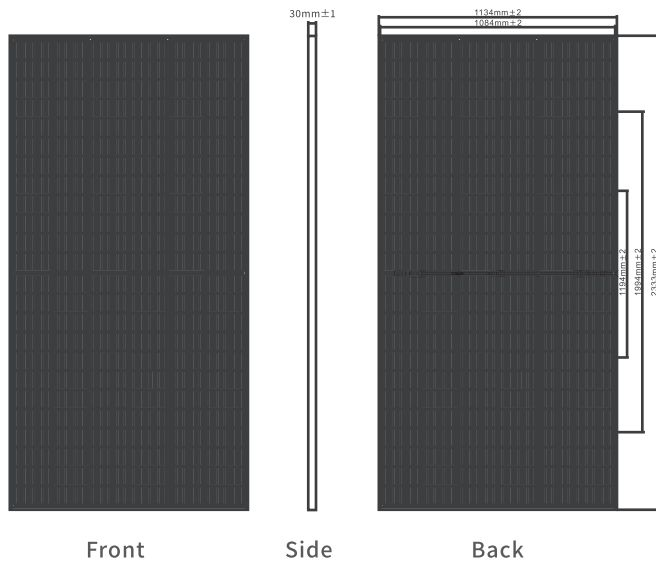


## Comprehensive Products and System Certificates

- IEC/EN61215-1:2021 & IEC/EN61215-2:2021
- IEC/EN61730-1:2016 & IEC/EN61730-2:2016
- UL61730-1:2017 & UL61730-2:2017
- UL61215-1:2017 & UL61215-2:2017
- IEC 61701:2020-Saltmist
- IEC 62716:2013-Ammonia
- IEC 62804:2020-PID
- IECCE Certificate Body (CB)
- UKCA:EN61730-2018
- ISO9001 & ISO14001 & ISO45001



## Engineering Drawings



## Structural Parameter

|                      |                                                 |
|----------------------|-------------------------------------------------|
| Dimensions of Module | 2333×1134×30mm                                  |
| Weight               | 32.5kg                                          |
| Packing              | 37PCS/Pallet, 740PCS/40hq                       |
| Front Glass          | High Transparency Solar Glass 2.0mm             |
| Back Glass           | Heat Strengthened Glass 2.0mm                   |
| Frame                | Anodized Aluminum Alloy & Custom Color Accepted |
| J-Box                | IP68 Rated                                      |
| Cable                | 4.0mm <sup>2</sup> , 300mm                      |
| Bypass Diodes        | 3PCS                                            |
| Wind/ Snow Load      | 2400Pa/5400Pa                                   |
| Connector            | MC4 Compatible                                  |

## Electrical Specification

(STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM1.5G — NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind speed 1m/s)

| Module Type                     | SF-M18/G156605                     |        | SF-M18/G156610 |        | SF-M18/G156615 |        | SF-M18/G156620 |        |
|---------------------------------|------------------------------------|--------|----------------|--------|----------------|--------|----------------|--------|
| Testing Condition               | STC                                | NOCT   | STC            | NOCT   | STC            | NOCT   | STC            | NOCT   |
| Maximum Power (Pmax) [W]        | 605                                | 453.75 | 610            | 457.50 | 615            | 461.25 | 620            | 465.00 |
| Maximum Power Voltage (Vmp) [V] | 43.94                              | 42.18  | 44.11          | 42.35  | 44.28          | 42.52  | 44.45          | 42.68  |
| Maximum Power Current (Imp) [A] | 13.77                              | 10.76  | 13.83          | 10.80  | 13.89          | 10.85  | 13.95          | 10.88  |
| Open Circuit Voltage (Voc) [V]  | 52.60                              | 50.50  | 52.80          | 50.69  | 53.00          | 50.88  | 53.23          | 51.11  |
| Short Circuit Current (Isc) [A] | 14.53                              | 11.77  | 14.59          | 11.82  | 14.65          | 11.87  | 14.72          | 11.93  |
| Module Efficiency [%]           | 22.87                              |        | 23.06          |        | 23.25          |        | 23.43          |        |
| Cell Type [mm]                  | Mono 182±1.5×92.875±1.5, 144 Cells |        |                |        |                |        |                |        |
| Operational Temperature [°C]    | -40~+85°C                          |        |                |        |                |        |                |        |
| Maximum System Voltage          | 1500V DC                           |        |                |        |                |        |                |        |
| Max Series Fuse Rating          | 25A                                |        |                |        |                |        |                |        |

## Electrical Characteristics With Different Power Bin (Reference to 10% Irradiance Ratio)

|                                    |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|
| Total Equivalent Power (Pmax) [Wp] | 665.5 | 671   | 676.5 | 682   |
| Maximum Power Voltage (Vmp) [V]    | 43.94 | 44.11 | 44.28 | 44.45 |
| Maximum Power Current (Imp) [A]    | 15.15 | 15.21 | 15.28 | 15.34 |
| Open Circuit Voltage (Voc) [V]     | 52.60 | 52.80 | 53.00 | 53.23 |
| Short Circuit Current (Isc) [A]    | 16.11 | 16.18 | 16.26 | 16.32 |
| Irradiance Ratio (Rear/Front)      | 10%   |       |       |       |

## Temperature Ratings

|                                    |           |
|------------------------------------|-----------|
| Nominal Operating Cell Temperature | 45±2°C    |
| Temperature Coefficient of Isc     | +0.05%/°C |
| Temperature Coefficient of Voc     | -0.23%/°C |
| Temperature Coefficient of Pmax    | -0.30%/°C |

## Curve Diagram

