



M10 SERIES


DT144HBG 575~595W


**N-type TOPCon Bifacial
Double-Glass PV Module**


M10 series


Utilizing N-type TOPCon battery technology and integrating SMBB with half-cell module technology, these modules offer enhanced reliability and lower LID/ETID degradation.


Product Features


 Utilizing N-type TOPCon Multi-busbar (SMBB) cell technology to achieve lower resistance and effectively enhance product power output.

 Enhanced reliability and lower LID (Light Induced Degradation) effects.

 Superior temperature coefficient ensuring higher power generation in extreme temperature regions.

 Adoption of 40.24mm ribbon to effectively reduce shading and improve module efficiency.

 Half-cell technology for better mechanical load performance.

 The entire module has passed certification for a front-side snow load of 5400Pa and a wind load of 2400Pa.

Management System



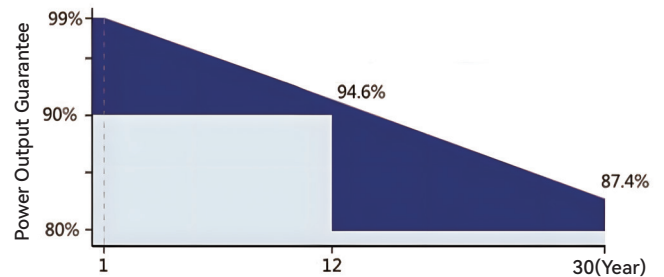
ISO9001:2015
ISO14001:2015
ISO45001:2018

Product Certification



Our products are widely used in residential, commercial, and ground-mounted photovoltaic power generation systems. We adhere to strict quality inspection standards and continuously strive for zero-defect products to ensure that our solar modules deliver superior power output and high reliability.

Product Warranty



12-year product quality and workmanship warranty

30-year linear power output warranty

1% first-year degradation, **0.4%** subsequent annual power degradation

Electrical Parameters @ STC

| | | | | | | |
|---------------------------|-------------------------|-------|-------|-------|-------|-------|
| Maximum Power | P _{max} (Wp) | 575 | 580 | 585 | 590 | 595 |
| Power Tolerance | (%) | | | 0~+3 | | |
| Maximum Power Voltage | V _{mp} (V) | 42.22 | 42.37 | 42.52 | 42.67 | 42.82 |
| Maximum Power Current | I _{mp} (A) | 13.62 | 13.69 | 13.76 | 13.83 | 13.90 |
| Open Circuit Voltage | V _{oc} (V) | 50.88 | 51.02 | 51.16 | 51.30 | 51.44 |
| Short Circuit Current | I _{sc} (A) | 14.39 | 14.47 | 14.55 | 14.63 | 14.71 |
| Module Efficiency | (%) | 22.26 | 22.45 | 22.65 | 22.84 | 23.03 |
| Bifacial Factor Reference | (%) | | | 80±5% | | |
| 5% P _{max} | P _{max} (Wp) | 604 | 609 | 614 | 620 | 625 |
| 5% Module Efficiency | (%) | 23.37 | 23.57 | 23.78 | 23.98 | 24.18 |
| 15% P _{max} | P _{max} (Wp) | 661 | 667 | 673 | 679 | 684 |
| 15% Module Efficiency | (%) | 25.60 | 25.82 | 26.04 | 26.27 | 26.49 |
| 25% P _{max} | P _{max} (Wp) | 719 | 725 | 731 | 738 | 744 |
| 25% Module Efficiency | (%) | 27.82 | 28.07 | 28.31 | 28.55 | 28.79 |

STC: Irradiance 1000 W/m², Module Temperature 25°C, Air Mass 1.5.

Electrical Parameters @ NMOT

| | | | | | | |
|-----------------------|-------------------------|-------|-------|-------|-------|-------|
| Maximum Power | P _{max} (Wp) | 434 | 438 | 442 | 446 | 449 |
| Maximum Power Voltage | V _{mp} (V) | 39.49 | 39.63 | 39.77 | 39.91 | 40.05 |
| Maximum Power Current | I _{mp} (A) | 11.00 | 11.05 | 11.11 | 11.17 | 11.22 |
| Open Circuit Voltage | V _{oc} (V) | 48.43 | 48.57 | 48.70 | 48.83 | 48.97 |
| Short Circuit Current | I _{sc} (A) | 11.62 | 11.68 | 11.75 | 11.81 | 11.88 |

NMOT: Irradiance 800 W/m², Ambient Temperature 20°C, Air Mass 1.5, Wind Speed 1 m/s.

Temperature Coefficients

| | |
|---------------------------------------------------------------------|-----------|
| Temperature Coefficient of Maximum Power (P _{max}) | -0.29%/°C |
| Temperature Coefficient of Open Circuit Voltage (V _{oc}) | -0.24%/°C |
| Temperature Coefficient of Short Circuit Current (I _{sc}) | +0.04%/°C |

Mechanical Parameters

| | |
|---------------------------------------------|-----------------------------|
| Cell Type | N-type TOPCon Mono 182×91mm |
| Number of Cells | 144 (6×24) |
| Module Dimensions (Length x Width x Height) | 2278×1134×30mm |
| Module Weight | 32kg |
| Frame Material | Anodized Aluminum Frame |
| Junction Box | Ip68 |
| Cable Cross-Section/Length | 4mm ² /300mm |

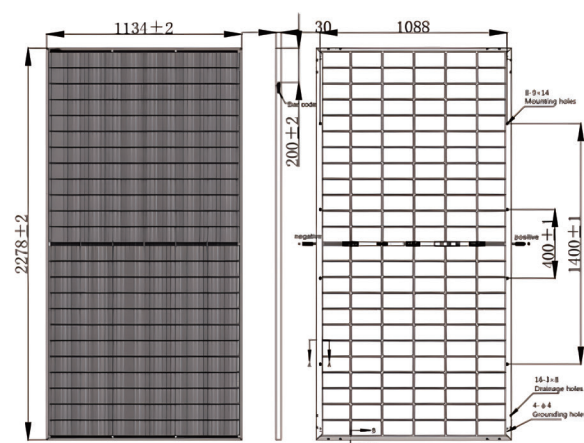
Operating Conditions

| | |
|---------------------------------------------|--------------|
| Maximum System Voltage | 1500V DC |
| Operating Temperature | -40~+85 °C |
| Maximum Wind Load / Snow Load | 2400/5400 Pa |
| Maximum Protection Current | 25A |
| Application Class | Class A |
| Fire Rating | Class B |
| Nominal Module Operating Temperature (NMOT) | 42±3 °C |

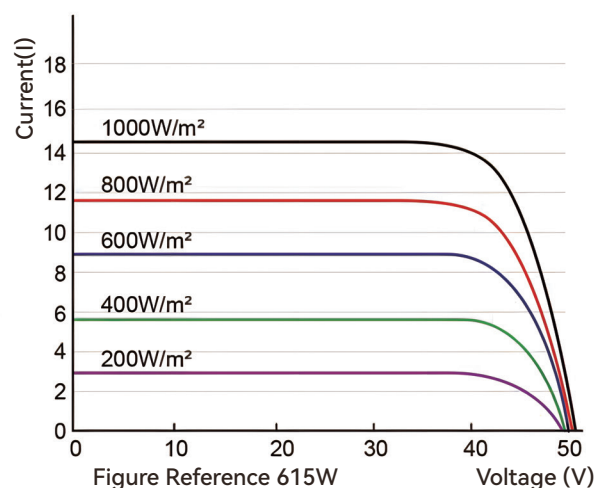
Packaging Information

| | |
|----------------------|-----------------------------|
| Single Package | 36 pcs/pallet |
| 17.5m / 13.5m / 40HQ | 900 pcs / 792 pcs / 720 pcs |

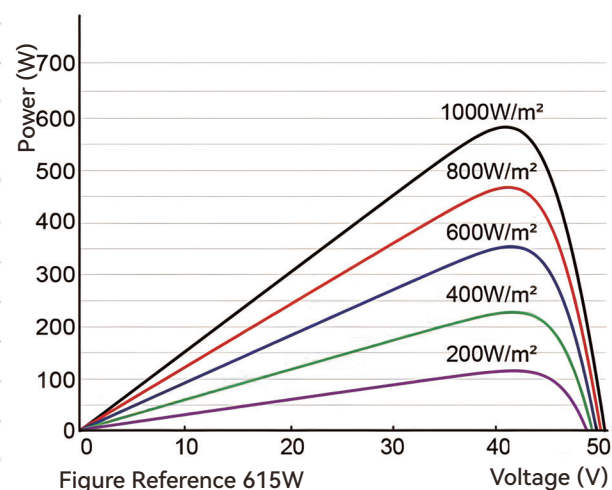
Module Dimensions (mm)



Current-Voltage Curve / I-V Curve



Power-Voltage Curve / P-V Curve



*Power measurement tolerance: ±3%

*Product specifications are subject to change without prior notice.



210R SERIES

FT132HBG 605~625W

N-type TOPCon Bifacial
Double-Glass PV Module

M10 series

Utilizing N-type TOPCon battery technology and integrating SMBB with half-cell module technology, these modules offer enhanced reliability and lower LID/ETID degradation.

Product Features



Utilizing N-type TOPCon Multi-busbar (SMBB) cell technology to achieve lower resistance and effectively enhance product power output.



Enhanced reliability and lower LID (Light Induced Degradation) effects.



Superior temperature coefficient ensuring higher power generation in extreme temperature regions.



Adoption of 40.24mm ribbon to effectively reduce shading and improve module efficiency.



Half-cell technology for better mechanical load performance.



The entire module has passed certification for a front-side snow load of 5400Pa and a wind load of 2400Pa.

Management System



ISO9001:2015

ISO14001:2015

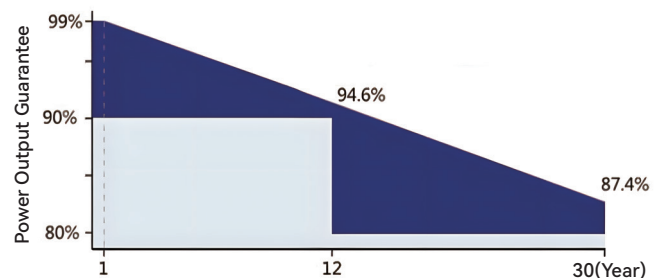
ISO45001:2018

Product Certification



Our products are widely used in residential, commercial, and ground-mounted photovoltaic power generation systems. We adhere to strict quality inspection standards and continuously strive for zero-defect products to ensure that our solar modules deliver superior power output and high reliability.

Product Warranty



12-year product quality and workmanship warranty

30-year linear power output warranty

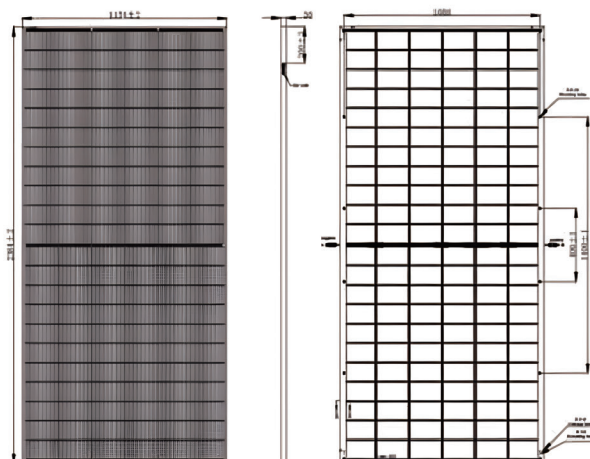
1% first-year degradation, **0.4%** subsequent annual power degradation

Electrical Parameters @ STC

| | | | | | | |
|---------------------------|-------------|-------|-------|-------|-------|-------|
| Maximum Power | Pmax (Wp) | 605 | 610 | 615 | 620 | 625 |
| Power Tolerance | (%) | | | 0~+3 | | |
| Maximum Power Voltage | Vmp (V) | 40.50 | 40.80 | 41.10 | 41.40 | 41.70 |
| Maximum Power Current | Imp (A) | 14.94 | 14.96 | 14.98 | 14.99 | 15.01 |
| Open Circuit Voltage | Voc (V) | 48.70 | 49.00 | 49.30 | 49.60 | 49.90 |
| Short Circuit Current | Isc (A) | 15.83 | 15.86 | 15.89 | 15.91 | 15.94 |
| Module Efficiency | (%) | 22.38 | 22.56 | 22.75 | 22.93 | 23.12 |
| Bifacial Factor Reference | (%) | | | 80±5% | | |
| 5% Pmax | Pmax (Wp) | 635 | 641 | 646 | 651 | 656 |
| 5% Module Efficiency | (%) | 23.50 | 23.69 | 23.89 | 24.08 | 24.27 |
| 15% Pmax | Pmax (Wp) | 696 | 702 | 707 | 713 | 719 |
| 15% Module Efficiency | (%) | 25.74 | 25.95 | 26.16 | 26.37 | 26.59 |
| 25% Pmax | Pmax (Wp) | 756 | 763 | 769 | 775 | 781 |
| 25% Module Efficiency | (%) | 27.97 | 28.20 | 28.44 | 28.67 | 28.90 |

STC: Irradiance 1000 W/m², Module Temperature 25°C, Air Mass 1.5.

Module Dimensions (mm)



Electrical Parameters @ NMOT

| | | | | | | |
|-----------------------|-------------|-------|-------|-------|-------|-------|
| Maximum Power | Pmax (Wp) | 457 | 461 | 464 | 468 | 472 |
| Maximum Power Voltage | Vmp (V) | 37.88 | 38.16 | 38.44 | 38.72 | 39.00 |
| Maximum Power Current | Imp (A) | 12.06 | 12.08 | 12.10 | 12.10 | 12.12 |
| Open Circuit Voltage | Voc (V) | 46.36 | 46.64 | 46.93 | 47.22 | 47.50 |
| Short Circuit Current | Isc (A) | 12.78 | 12.80 | 12.83 | 12.84 | 12.87 |

NMOT: Irradiance 800 W/m², Ambient Temperature 20°C, Air Mass 1.5, Wind Speed 1 m/s.

Temperature Coefficients

| | |
|--------------------------------------------------------|-----------|
| Temperature Coefficient of Maximum Power (Pmax) | -0.29%/°C |
| Temperature Coefficient of Open Circuit Voltage (Voc) | -0.24%/°C |
| Temperature Coefficient of Short Circuit Current (Isc) | +0.04%/°C |

Mechanical Parameters

| | |
|---------------------------------------------|------------------------------|
| Cell Type | N-type TOPCon Mono 182×105mm |
| Number of Cells | 132 (6×22) |
| Module Dimensions (Length x Width x Height) | 2382×1134×30mm |
| Module Weight | 32.5kg |
| Frame Material | Anodized Aluminum Frame |
| Junction Box | Ip68 |
| Cable Cross-Section/Length | 4mm ² /300mm |

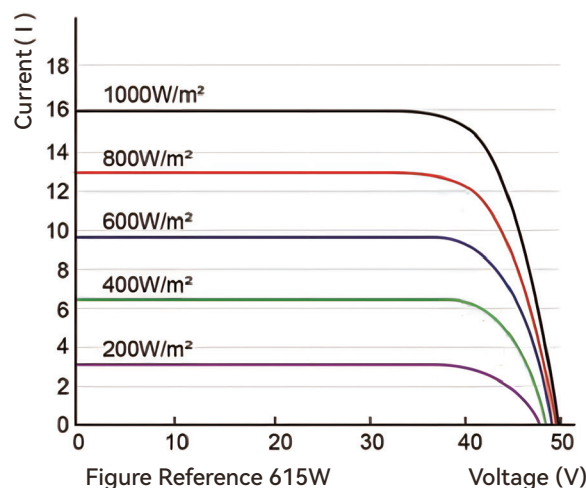
Operating Conditions

| | |
|---------------------------------------------|--------------|
| Maximum System Voltage | 1500V DC |
| Operating Temperature | -40~+85 °C |
| Maximum Wind Load / Snow Load | 2400/5400 Pa |
| Maximum Protection Current | 30A |
| Application Class | Class A |
| Fire Rating | Class B |
| Nominal Module Operating Temperature (NMOT) | 42±3 °C |

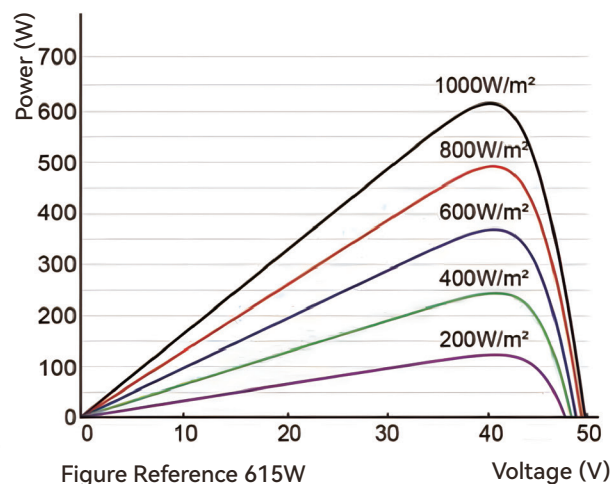
Packaging Information

| | |
|----------------------|-----------------------------|
| Single Package | 36 pcs/pallet |
| 17.5m / 13.5m / 40HQ | 864 pcs / 792 pcs / 576 pcs |

Current-Voltage Curve / I-V Curve



Power-Voltage Curve / P-V Curve



*Power measurement tolerance: ±3%
*Product specifications are subject to change without prior notice.



G12 SERIES

ET132HBG 695~720W

N-type TOPCon Bifacial
Double-Glass PV Module

M10 series

Utilizing N-type TOPCon battery technology and integrating SMBB with half-cell module technology, these modules offer enhanced reliability and lower LID/ETID degradation.

Product Features



Utilizing N-type TOPCon Multi-busbar (SMBB) cell technology to achieve lower resistance and effectively enhance product power output.



Enhanced reliability and lower LID (Light Induced Degradation) effects.



Superior temperature coefficient ensuring higher power generation in extreme temperature regions.



Adoption of 40.24mm ribbon to effectively reduce shading and improve module efficiency.



Half-cell technology for better mechanical load performance.



The entire module has passed certification for a front-side snow load of 5400Pa and a wind load of 2400Pa.

Management System



ISO9001:2015

ISO14001:2015

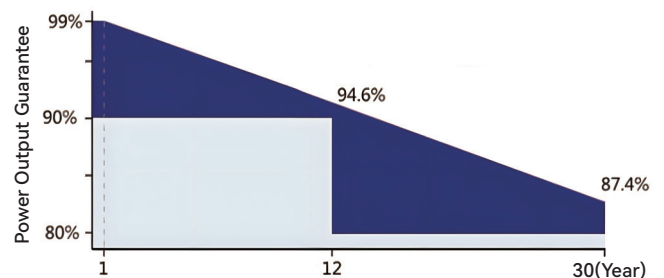
ISO45001:2018

Product Certification



Our products are widely used in residential, commercial, and ground-mounted photovoltaic power generation systems. We adhere to strict quality inspection standards and continuously strive for zero-defect products to ensure that our solar modules deliver superior power output and high reliability.

Product Warranty



12-year product quality and workmanship warranty

30-year linear power output warranty

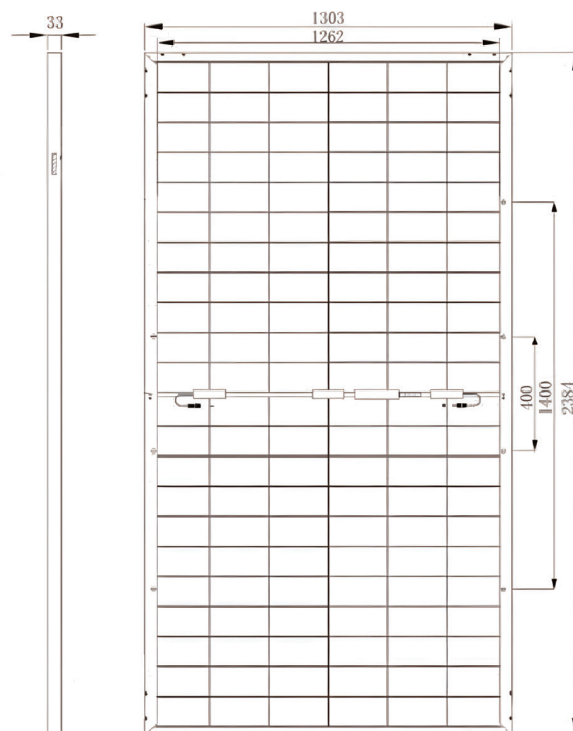
1% first-year degradation, **0.4%** subsequent annual power degradation

Electrical Parameters @ STC

| | | | | | | | |
|---------------------------|-----------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power | P _{max} (Wp) | 695 | 700 | 705 | 710 | 715 | 720 |
| Power Tolerance | (%) | 0~+3 | | | | | |
| Maximum Power Voltage | V _{mp} (V) | 40.30 | 40.50 | 40.70 | 40.90 | 41.10 | 41.30 |
| Maximum Power Current | I _{mp} (A) | 17.25 | 17.29 | 17.33 | 17.37 | 17.41 | 17.45 |
| Open Circuit Voltage | V _{oc} (V) | 48.40 | 48.60 | 48.80 | 49.00 | 49.20 | 49.40 |
| Short Circuit Current | I _{sc} (A) | 18.28 | 18.32 | 18.36 | 18.40 | 18.44 | 18.48 |
| Module Efficiency | (%) | 22.37 | 22.53 | 22.70 | 22.86 | 23.02 | 23.18 |
| Bifacial Factor Reference | (%) | 80±5 | | | | | |
| 5% P _{max} | P _{max} (Wp) | 730 | 735 | 740 | 746 | 751 | 756 |
| 5% Module Efficiency | (%) | 23.49 | 23.66 | 23.83 | 24.00 | 24.17 | 24.34 |
| 15% P _{max} | P _{max} (Wp) | 799 | 805 | 811 | 817 | 822 | 828 |
| 15% Module Efficiency | (%) | 25.73 | 25.91 | 26.10 | 26.28 | 26.47 | 26.66 |
| 25% P _{max} | P _{max} (Wp) | 869 | 875 | 881 | 888 | 894 | 900 |
| 25% Module Efficiency | (%) | 27.97 | 28.17 | 28.37 | 28.57 | 28.77 | 28.97 |

STC: Irradiance 1000 W/m², Module Temperature 25°C, Air Mass 1.5.

Module Dimensions (mm)



Electrical Parameters @ NMOT

| | | | | | | | |
|-----------------------|-----------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power | P _{max} (Wp) | 531 | 535 | 539 | 543 | 547 | 551 |
| Maximum Power Voltage | V _{mp} (V) | 37.93 | 38.12 | 38.31 | 38.50 | 38.68 | 38.87 |
| Maximum Power Current | I _{mp} (A) | 14.02 | 14.05 | 14.08 | 14.11 | 14.15 | 14.18 |
| Open Circuit Voltage | V _{oc} (V) | 45.98 | 46.17 | 46.36 | 46.55 | 46.74 | 46.93 |
| Short Circuit Current | I _{sc} (A) | 14.74 | 14.77 | 14.80 | 14.83 | 14.87 | 14.90 |

NMOT: Irradiance 800 W/m², Ambient Temperature 20°C, Air Mass 1.5, Wind Speed 1 m/s.

Temperature Coefficients

| | |
|---------------------------------------------------------------------|-----------|
| Temperature Coefficient of Maximum Power (P _{max}) | -0.29%/°C |
| Temperature Coefficient of Open Circuit Voltage (V _{oc}) | -0.24%/°C |
| Temperature Coefficient of Short Circuit Current (I _{sc}) | +0.04%/°C |

Mechanical Parameters

| | |
|---------------------------------------------|------------------------------|
| Cell Type | N-type TOPCon Mono 210×105mm |
| Number of Cells | 132 (6×22) |
| Module Dimensions (Length x Width x Height) | 2384x1303x33mm |
| Module Weight | 38.5kg |
| Frame Material | Anodized Aluminum Frame |
| Junction Box | IP68 |
| Cable Cross-Section/Length | 4mm ² /300mm |

Operating Conditions

| | |
|---------------------------------------------|--------------|
| Maximum System Voltage | 1500V DC |
| Operating Temperature | -40~+85°C |
| Maximum Wind Load / Snow Load | 2400/5400 Pa |
| Maximum Protection Current | 35A |
| Application Class | Class A |
| Fire Rating | Class B |
| Nominal Module Operating Temperature (NMOT) | 42±3°C |

Packaging Information

| | |
|----------------------|-----------------------------|
| Single Package | 33 pcs/pallet |
| 17.5m / 13.5m / 40HQ | 792 pcs / 600 pcs / 594 pcs |

Current-Voltage Curve / I-V Curve

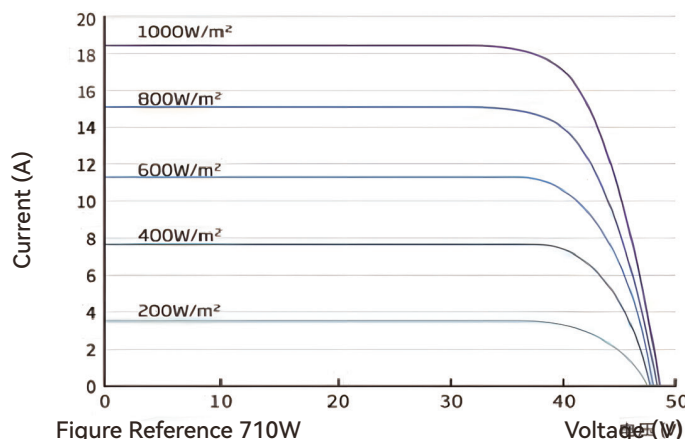


Figure Reference 710W

Power-Voltage Curve / P-V Curve

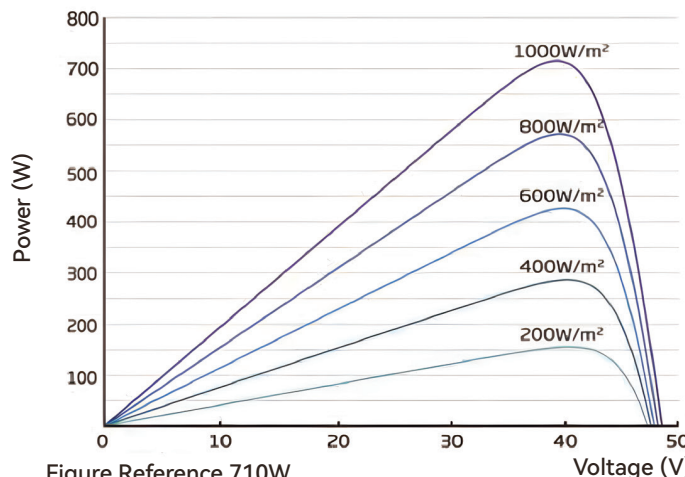


Figure Reference 710W

*Power measurement tolerance: ±3%

*Product specifications are subject to change without prior notice.