

**Shingled
bifacial module**

**TH630~655PMB6
68SDC**



Features of Module



Shingling Technology

Innovative structure, low-temperature adhesive bonding, high-density layout.



Beautiful Appearance

Uniform layout, better aesthetic.



Superior Safety and Reliability

No hidden welding crack, low operating temperature, high pressure resistance.



Low System Cost

High module efficiency, reducing system cost.



Low Hot Spot Risk

Parallel circuit design reduces shading loss.



Low Shading Loss

Full parallel arrangement brings high effective power generation hours.



Eco-friendly

Adhering to green philosophy, no fluorine and low lead.

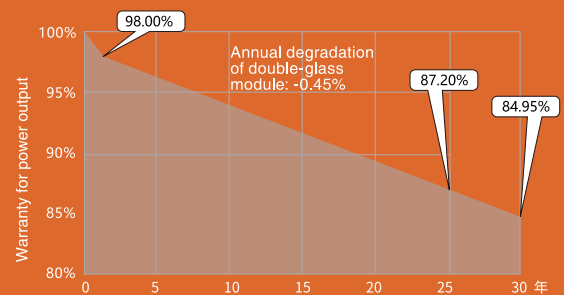
Linear Power Output Warranty

15

15-year
warranty for
materials.

30

30-year
warranty for
linear power
output.



Quality Management System and Product Certification

IEC61215/61730、IEC62804(PID)、IEC61701(Salt)、
IEC62716 (Ammonia)、IEC60068-2-68(Sand)
ISO 9001:2015 / quality management system
ISO 14001:2015 / environmental management system
ISO 45001:2018 / occupation health safety management system
ISO 50001:2011 / energy management system
IEC TS 62941—2016 / PV industry quality management system



Electrical Characteristics (STC)

Module type: TH630-655PMB6-68SDC	655	650	645	640	635	630
Maximum power - P _m (W)	655	650	645	640	635	630
Open circuit voltage - V _{oc} (V)	46.3	46.2	46.1	46.0	45.9	45.8
Short circuit current I _{sc} (A)	18.13	18.03	17.93	17.83	17.73	17.63
Voltage at maximum power point - V _m (V)	38.4	38.3	38.3	38.2	38.1	38.0
Current at maximum power point - I _m (A)	17.04	16.95	16.86	16.76	16.67	16.57
Module efficiency - η (%)	21.3	21.2	21.0	20.9	20.7	20.5

Electrical Characteristics (NMOT)

Maximum power - P _m (W)	491	488	484	480	476	473
Open circuit voltage - V _{oc} (V)	44.1	44.0	43.9	43.8	43.7	43.6
Short circuit current I _{sc} (A)	14.61	14.53	14.45	14.36	14.28	14.20
Voltage at maximum power point - V _m (V)	36.6	36.6	36.5	36.4	36.3	36.2
Current at maximum power point - I _m (A)	13.41	13.34	13.27	13.19	13.12	13.04

* STC: Irradiation 1000W/m²; AM1.5; environmental temperature 25°C; tested according to EN 60904-3;
 * NMOT: irradiation 800W/m²; wind speed 1m/s; environmental temperature 20°C;
 * P_m tolerance: 0~+5W; power test uncertainty: $\pm 3\%$; V_{oc}[V], I_{sc}[A], V_m[V] and I_m[A] test tolerance: $\pm 3\%$
 * Bifaciality: 70% $\pm 5\%$;

Comparison of Rear Power Gains (650W)

Power Gain - PG	5%	10%	15%	20%	25%	30%
Maximum power - P _m (W)	683	715	748	780	813	845
Open circuit voltage - V _{oc} (V)	46.1	46.1	46.1	46.2	46.2	46.2
Short circuit current I _{sc} (A)	18.93	19.84	20.74	21.64	22.54	23.44
Voltage at maximum power point - V _m (V)	38.2	38.2	38.2	38.3	38.3	38.3
Current at maximum power point - I _m (A)	17.80	18.65	19.49	20.34	21.19	22.04

Mechanical Parameters

Size	2355×1303×35mm (L×W×H)
Weight	38.5kg
Glass	Double-glass, 2.0mm toughened glass
Frame	Anodic alumina alloy frame
Cell type	Monocrystalline silicon cell
Cell layout	408 (68*6)
Junction box	IP68, split-type, 3 diodes
Cable	4mm ² , +600mm/-1200mm (vertical), +250mm/-150mm (horizontal), customizable
Connector	MC4 compatible / original EVO2
Packaging mode	31pcs/pallet; 558pcs/40'HQ; 744pcs/truck

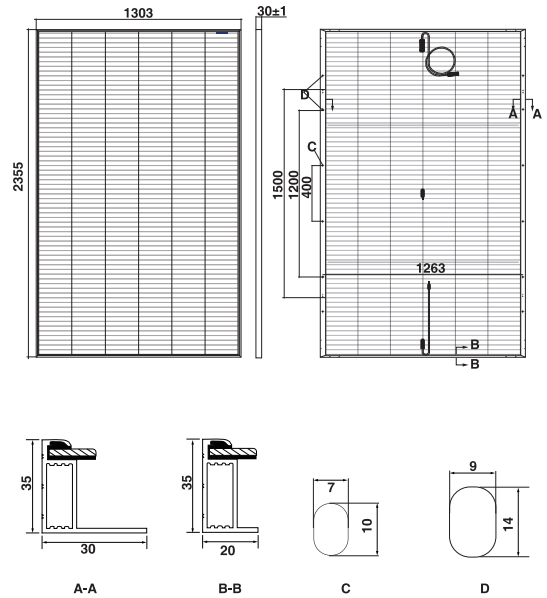
Temperature Parameters

NMOT	42.30 °C ($\pm 2^{\circ}\text{C}$)
Open circuit voltage temperature coefficient	-0.28%/°C
Short circuit current temperature coefficient	+0.04%/°C
Maximum power temperature coefficient	-0.36%/°C

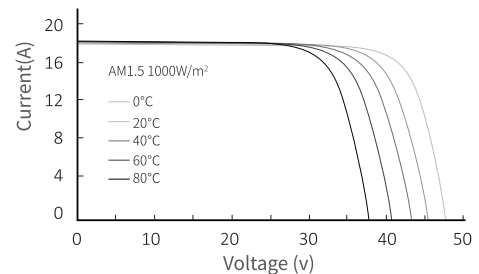
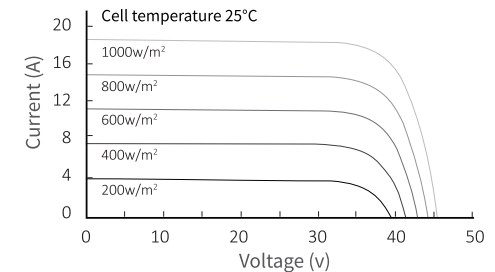
Maximum Rated Parameters

Maximum system voltage (V)	DC1500 (IEC)
Maximum fuse rated current (A)	30
Maximum front static load (Pa)	Front 5400 / Rear 2400
Working temperature (°C)	-40~+85
Hail resistance	Maximum diameter 25mm, impact speed 23m/s

Drawings



I-V Curve



Statement:

With technological progress and product updates, there may be deviations between the technical parameters of Tongwei's module products and the technical parameters contained in this specification, and Tongwei Solar has the right to adjust the technical parameters at any time without notifying the customer, the final interpretation of the technical specification is vested in Tongwei Solar.