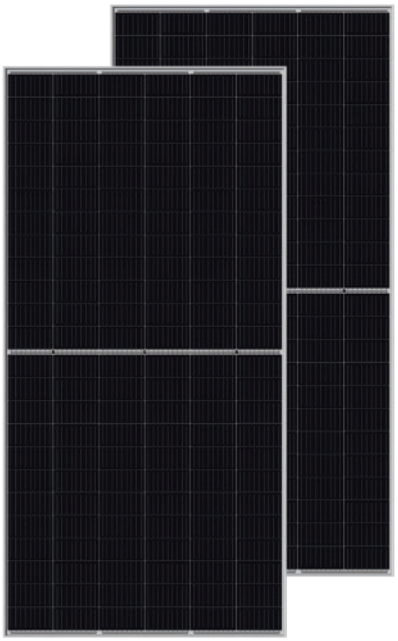
TALESUN

BIPRO

TD6I72M 144-cell

430 - 450W

bifacial dual glass
9BB half-cut mono perc



KEY FEATURES

9BB half-cut cell technology
New circuit design, lower internal current, lower Rs loss

Industry leading high yield
Bifacial PERC cell technology,
5%-25% more yield depends on different conditions

Excellent Anti-PID performance
2 times of industry standard Anti-PID test by TUV SUD

Wider application
No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area

IP68 junction box
High waterproof level

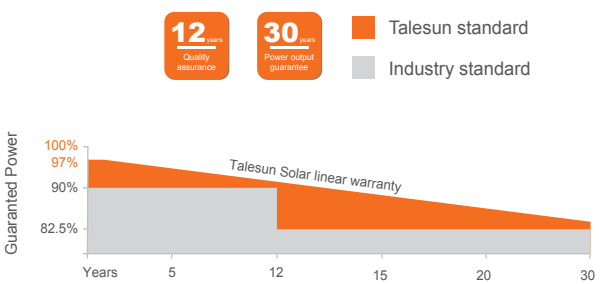
SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 1703
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

CEC Approved

TIS.1843-2553 TIS.2580-2555

PERFORMANCE WARRANTY



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Annual Module Capacity Globally: 8GW
China: 7GW
Thailand: 1GW

Talesun Solar is one of the world's largest integrated clean energy providers, who develops, manufactures and delivers highly reliable and cost-effective solar modules and integrated PV energy solutions for every application and market, for homes, businesses and utility power plants. It was ranked as one of the top 10 module suppliers in 2018, and was also listed as global TIER1 module supplier by BNEF since 2015.

ELECTRICAL PARAMETERS

Performance at STC (Power Tolerance 0 ~ +3%)

Maximum Power (Pmax/W)	430	435	440	445	450
Operating Voltage (Vmpp/W)	41.2	41.4	41.6	41.8	42.0
Operating Current (Impp/A)	10.44	10.51	10.58	10.65	10.72
Open-Circuit Voltage (Voc/V)	49.6	49.8	50.0	50.2	50.4
Short-Circuit Current (Isc/A)	11.09	11.16	11.22	11.29	11.36
Module Efficiency ηm(%)	19.3	19.5	19.7	19.9	20.2

Performance at NMOT

Maximum Power (Pmax/W)	402.5	407.2	411.9	416.6	421.4
Operating Voltage (Vmpp/W)	38.8	39.0	39.2	39.4	39.6
Operating Current (Impp/A)	10.37	10.44	10.51	10.58	10.65
Open-Circuit Voltage (Voc/V)	47.0	47.2	47.4	47.6	47.8
Short-Circuit Current (Isc/A)	11.18	11.25	11.31	11.38	11.45

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m², Ambient Temperatue 20°C, Air Mass AM1.5, Wind Speed 1m/s

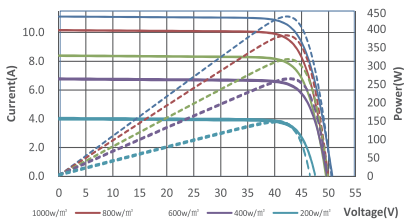
Electrical characteristics with different rear side power gain (refer to 440W front)

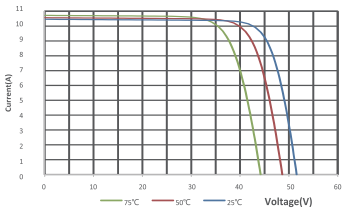
Pmax gain	Pmax/W	Vmpp/W	Impp/A	Voc/V	Isc/A
5%	462	41.6	11.1	50.0	11.8
10%	484	41.6	11.6	50.0	12.3
15%	506	41.6	12.2	50.0	12.9
20%	528	41.6	12.7	50.2	13.5
25%	550	41.6	13.2	50.2	14.0

MECHANICAL SPECIFICATION

Cell Type	Half-cell 9 busbar
Cell Dimensions	166*166mm (6inches)
Cell Arrangement	144 (6*24)
Weight	29kg (63.9lbs)
Module Dimensions	2132*1048*30mm (83.94*41.26*1.18inches)
Cable Length	300/300mm (11.81/11.81inches)
Cable Cross Section Size	4mm² (0.006inches²)
Front Glass	2.0mm (0.08inches) AR Coated Heart Strengthened Glass
Black Glass	2.0mm (0.08inches) Heat Strengthened Glass (White Grid Glass)
No. of Bypass Diodes	3/6
Packing Configuration	35pcs/carton, 700pcs/40hq
Frame	30mm (1.18inches) Anodized Aluminium Alloy
Junction Box	IP68

I-V CURVE

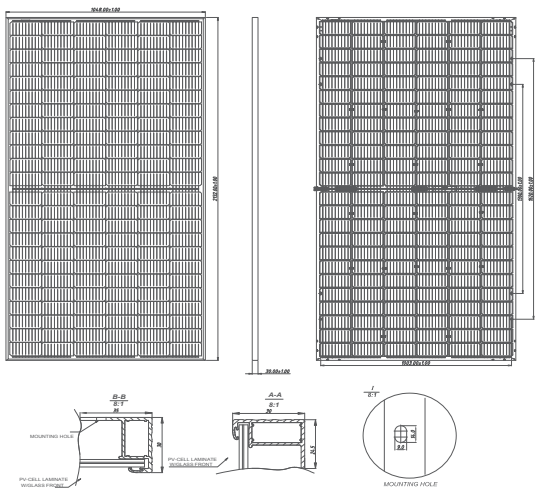




OPERATING CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C ~ +85°C
Maximun Series Fuse	20A
Static Loading	5400pa
Conductivity at Ground	≤0.1Ω
Safety Class	II
Resistance	≥100MΩ
Connector	MC4 Compatible
Backside Output Ratio* *Under STC: Backside Output Ratio = $P_{max(rear)}$ /$P_{max(front)}$	60% - 80%

TECHNICAL DRAWINGS



TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.36%/°C
Temperature Coefficient Voc	-0.26%/°C
Temperature Coefficient Isc	+0.043%/°C
NMOT	42±3°C

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