

**182TOPCon-Half-cell Mono-facial Module(54)**

**Product Feature**



High Power Output  
Low LCOE



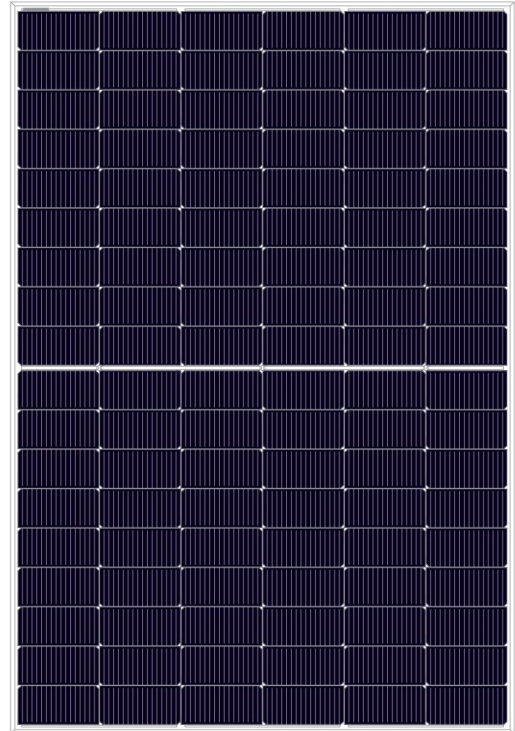
Maximum Power  
up to 440W+



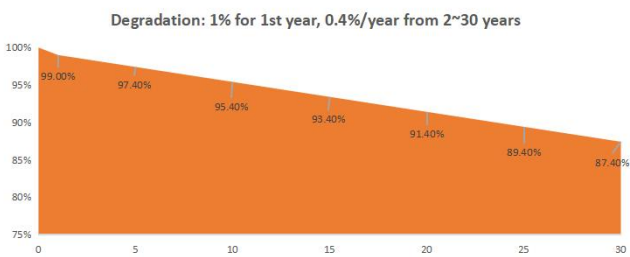
High Reliability



Low Degradation



**Linear Warranty**



Warranty for Material and Processing



Warranty for Linear Power output

**Management System certification**

- ISO9001: 2015/Quality Management System
- ISO14001: 2015/Environmental Management System
- ISO45001: 2018/Occupational Health and Safety Management System
- IEC62941: 2019/Quality system for PV module manufacturing

**Product certification**



Electrical Characteristics (STC)					
Moduel type: TWMND-54HS***					
Maximum Power: Pmax [W]	420	425	430	435	440
Open Circuit Voltage: Voc [V]	38.85	39.00	39.15	39.30	39.45
Short Circuit Current: Isc [A]	13.57	13.62	13.67	13.72	13.77
Voltage at Maximum Power: Vmp [V]	32.92	33.09	33.26	33.43	33.60
Current at Maximum Power: Imp [A]	12.76	12.85	12.93	13.01	13.10
Module Efficiency: η [%]	21.5	21.8	22.0	22.3	22.5
STC: Irradiance 1000W/m <sup>2</sup> , Cell Temperature 25°C, AM=1.5, Test Uncertainty: ±3%					

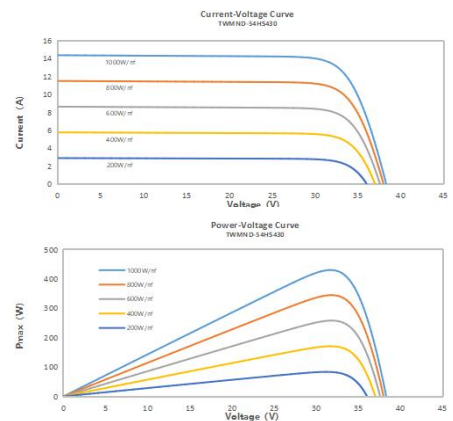
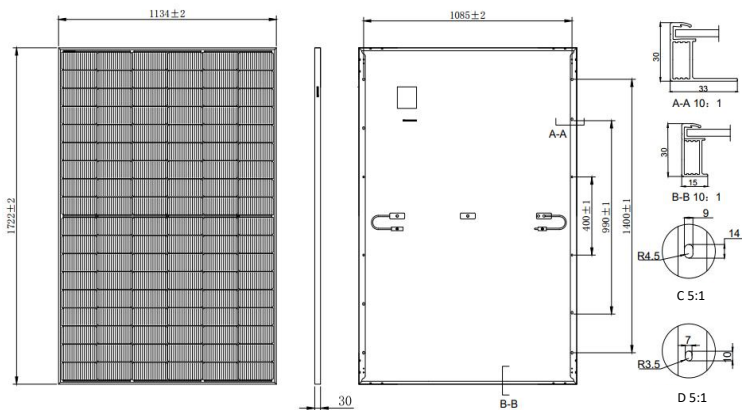
Electrical Characteristics (NMOT)					
Maximum Power: Pmax [W]	316.0	320.0	324.0	327.8	331.8
Open Circuit Voltage: Voc [V]	36.89	37.04	37.19	37.33	37.47
Short Circuit Current: Isc [A]	10.90	10.96	11.02	11.06	11.10
Voltage at Maximum Power: Vmp [V]	30.64	30.81	30.98	31.14	31.30
Current at Maximum Power: Imp [A]	10.31	10.39	10.46	10.52	10.60
NMOT: Irradiance 800W/m <sup>2</sup> , Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s					

Mechanical Parameters	
Cell Type	TNC
Cell Orientation	108[6×18]
Dimensions	1722±2×1134±2×30mm
Weight	20.5 kg
Front Glass	3.2 mm AR coated heat strengthened glass
Backsheet	White
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Cable	4.0 mm <sup>2</sup>
Cable length	+1200mm,-1200mm,length can be customized
Wind/Snow load	2400Pa/5400Pa
Packaging	36 pcs per pallet,936 pcs per 40'HC
Fire class rating	Class C

Temperature rating	
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C
NMOT	45±2°C

Operating Parameters	
Operating Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Power Output Tolerance	0~+5W

### Drawing(Unit:mm)



Statement: With technological process and product update, there maybe deviation between the technical parameters of Tongwei's module products and the technical parameters contained in the 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.

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## **Cable Type**

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Zhejiang Renhe Photovoltaic Technology Co., Ltd.  
Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.  
Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.  
Ningbo Kibor Wire&Cable Co., Ltd.  
Wuxi Xinhongye Wire&Cable Co., Ltd.  
Trina Solar Co., Ltd.  
Changshu JHOSIN Communication Technology Co., Ltd.  
SUZHOU YONGHAO CABLE CO LTD  
QC Solar (Suzhou) Corporation  
Suzhou Baohing Electric Wire & Cable Manufacturer Co., Ltd.  
Changshu JHOSIN Communication Technology Co., Ltd.  
Jiangsu Tongling Electric Co., Ltd.  
Zhejiang Chuangyuan Photovoltaic Technology Co.,Ltd.  
Tongwei Solar (Hefei) Co., Ltd.

## **Connector type**

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05-8, Zhejiang Renhe Photovoltaic Technology Co., Ltd.  
PV-KST4-EVO2/xy\_UR , PV-KBT4-EVO2/xy\_UR, Stäubli Electrical Connectors AG  
PV-KST4-EVO2A/xy, PV-KBT4 EVO2A/xy, Stäubli Electrical Connectors AG  
UTXCFabcd, UTXCMabcd, Amphenol Technology (Shenzhen) Co., Ltd.  
RHC2xyzu, Zhejiang Renhe Photovoltaic Technology Co., Ltd.  
PV-JM608, Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.  
PV-JM601A, Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.  
H4CFC4DMS; H4CMC4DMS, Amphenol Technology (Shenzhen) Co., Ltd.  
PV4-S1yx, Tyco Electronics (Shanghai) Co., Ltd.  
HQC4, Hanwha Q CELLS (Qidong) Co., Ltd  
PV-CO02-xy, SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD  
PV-JK03M-2, Jiangxi Jinko PV Material Co., Ltd.  
TS4-xz, Trina Solar Co., Ltd.  
TS4, Trina Solar Co., Ltd.  
Z4S-abcd, Zerun Co., LTD.  
H4Cabcdef, Amphenol Technology (Shenzhen) Co., Ltd.  
PV-CF-C-2, 5-4-SETxxxx, PV-CM-C-2, 5-4-SETxxxx, Phoenix Contact GmbH & Co.KG  
PV-ZH202B, Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.  
QC4.10-cds, QC Solar (Suzhou) Corporation  
PV-MH5, Ningbo Minghe New Energy Technology Co., Ltd.  
TL-CABLE01S-F, TL-CABLE01S, Jiangsu Tongling Electric Co., Ltd.  
BIGabc4efgh, Trina Solar Co., Ltd.  
PV-KST4-EVO 2A/xy\_UR; PV-KBT4-EVO 2A/xy\_UR, Stäubli Electrical Connectors AG

**Connector type**

PV-XT101.1, Suzhou Xietong Photovoltaic Technology Co., Ltd.

PV-JK03M2/xy, Jiangxi Jinko PV Material Co., Ltd.

TW-PVCON-01, Tongwei Solar (Hefei) Co., Ltd.

PV-CY03L, Zhejiang Chuangyuan Photovoltaic Technology Co., Ltd.

PV-CY20L, Zhejiang Chuangyuan Photovoltaic Technology Co., Ltd.