





# TNOC 3.0

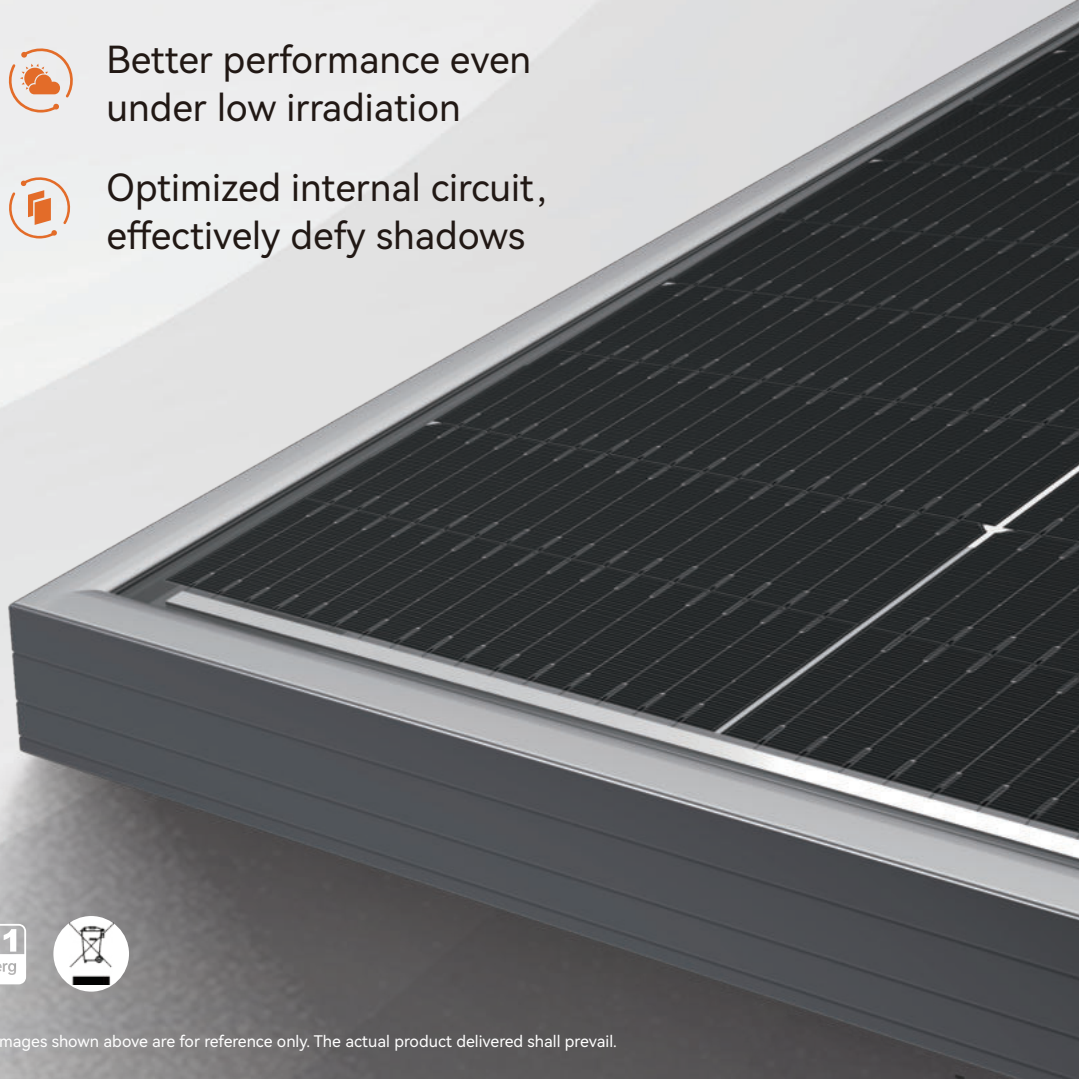
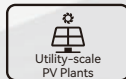
## N-type Bifacial Module (66)

TWMNH-66QD

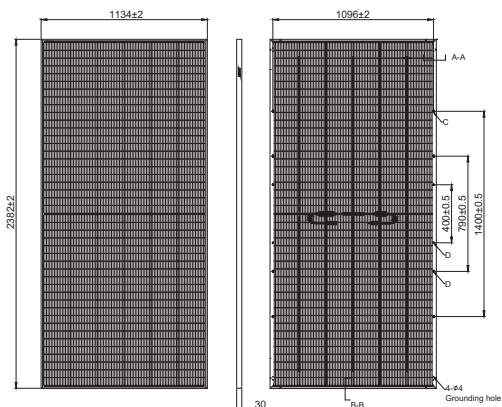


-  Lower inner loss, pioneering power and efficiency
-  High Bifaciality, increased customer benefits
-  Better performance even under low irradiation
-  Optimized internal circuit, effectively defying shadows

615-670W



**Drawings (Unit: mm)**



**Electrical Characteristics (STC)**

Module type:	TWMNH-66 QD615	TWMNH-66 QD420	TWMNH-66 QD625	TWMNH-66 QD630	TWMNH-66 QD635	TWMNH-66 QD440
Maximum Power: Pmax [W]	615	620	625	630	635	640
Open Circuit Voltage: Voc [V]	49.33	49.45	49.57	49.69	49.81	49.93
Short Circuit Current: Isc [A]	15.89	15.95	16.01	16.07	16.13	16.20
Voltage at Maximum Power: Vmp [V]	40.65	40.82	40.99	41.16	41.32	41.48
Current at Maximum Power: Imp [A]	15.13	15.19	15.25	15.31	15.37	15.43
Module Efficiency: η [%]	22.77	22.95	23.14	23.32	23.51	23.69

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM=1.5, Power measurement tolerance: ±3%, Voc measurement tolerance: ±5%, Isc measurement tolerance: ±5%

**Electrical Characteristics (BNPI)**

Maximum Power: Pmax [W]	682	687	693	699	704	710
Open Circuit Voltage: Voc [V]	49.33	49.45	49.57	49.69	49.81	49.93
Short Circuit Current: Isc [A]	17.61	17.68	17.74	17.81	17.88	17.95
Voltage at Maximum Power: Vmp [V]	40.65	40.82	40.99	41.16	41.32	41.48
Current at Maximum Power: Imp [A]	16.78	16.83	16.91	16.99	17.04	17.12

\* BNPI: Front side irradiance 1000W/m<sup>2</sup>, Rear side irradiance 135W/m<sup>2</sup>, Cell Temperature=25°C, AM=1.5, Power measurement tolerance: ±3%, Voc measurement tolerance: ±5%, Isc measurement tolerance: ±5%

**Electrical Characteristics (BSI)**

Short Circuit Current: Isc [A]	19.51	19.58	19.65	19.73	19.81	19.88
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\* BSI: Front side irradiance 1000W/m<sup>2</sup>, Rear side irradiance 300W/m<sup>2</sup>, Cell Temperature=25°C, AM=1.5, Isc measurement tolerance: ±5%

**Electrical characteristics with different rear side power gain**

5%	Maximum Power: Pmax[W]	645	651	656	661	666	672
	Module Efficiency: η [%]	23.88	24.10	24.29	24.47	24.66	24.88
15%	Maximum Power: Pmax[W]	707	713	718	724	730	736
	Module Efficiency: η [%]	26.17	26.40	26.58	26.80	27.03	27.25
25%	Maximum Power: Pmax[W]	768	775	781	787	793	800
	Module Efficiency: η [%]	28.43	28.69	28.91	29.14	29.36	29.62

**Temperature Rating**

Temperature Coefficient of Pmax	-0.26%/°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	+0.046%/°C

**Operating Parameters**

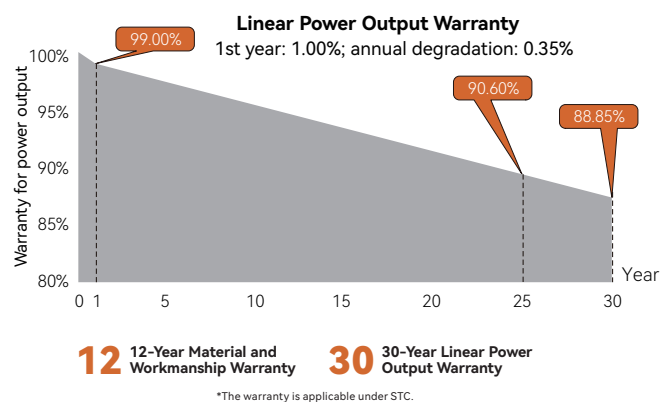
Operating Temperature*	[T <sub>95</sub> ]≤70°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	35A
Power Output Tolerance	0~+3%
Bifaciality coefficient of Pmax	85±5%
Bifaciality coefficient of Voc	98±5%
Bifaciality coefficient of Isc	85±5%
Fire Class Rating	Class C

\*The module operating temperature can reach up to 85°C for short term.

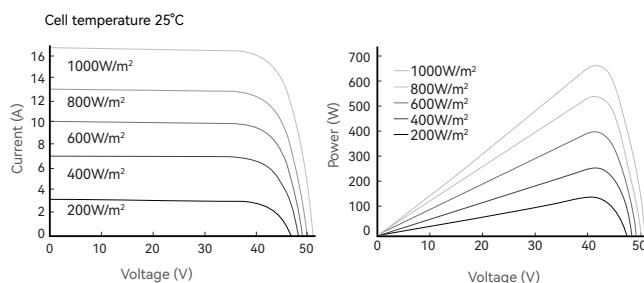
**Mechanical Parameters**

Cell Type	TNC
Cell Orientation	264[6×44]
Dimension	2382±2×1134±2×30mm
Weight	32.7 kg
Front Glass	2.0 mm AR coating semi tempered glass
Rear Glass	2.0 mm semi tempered glass
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Cable	4.0 mm <sup>2</sup>
Cable Length	+400mm,-600mm or ±1400mm,length can be customized
Connector	TW-PVCON-01,TW-PVCON-02(Tongwei Solar) PV-KST4-EVO2/xy_UR, PV-KBT4-EVO2/xy_UR(Staubli) PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy(Staubli) PV-ZH202B(Zhejiang Zhonghuan Sunter)
Maximum Static Test Load	5400Pa (positive) / 2400Pa (negative)
Packaging (Per pallet)	36 pcs
Packaging	720 pcs per 40'HC

**Warranty**



**Curve**



**Certifications**

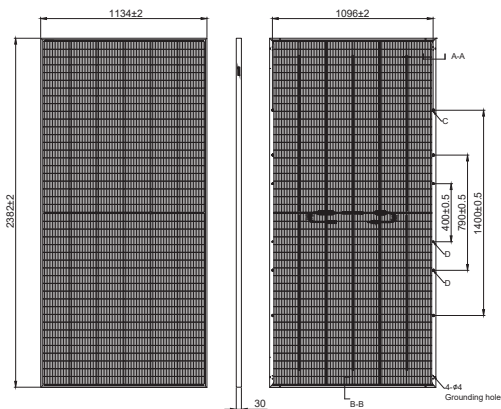
**Quality Management System and Product Certification**

- ISO 9001: 2015 / Quality Management System
- ISO 14001: 2015 / Environmental Management System
- ISO 45001: 2018 / Occupational Health and Safety Management System
- ISO 50001: 2018 / Energy Management System
- IEC 62941: 2019 / Quality System for PV Module Manufacturing
- IEC 61215 (2021) / IEC 61730 (2023), IEC TS 62804, IEC 60068-2-68



Scan the code for more information

**Drawings (Unit: mm)**



**Electrical Characteristics (STC)**

Module type:	TWMNH-66 QD645	TWMNH-66 QD650	TWMNH-66 QD655	TWMNH-66 QD660	TWMNH-66 QD665	TWMNH-66 QD670
Maximum Power: Pmax [W]	645	650	655	660	665	670
Open Circuit Voltage: Voc [V]	50.06	50.19	50.36	50.52	50.67	50.84
Short Circuit Current: Isc [A]	16.28	16.36	16.43	16.50	16.57	16.64
Voltage at Maximum Power: Vmp [V]	41.65	41.81	41.95	42.10	42.25	42.42
Current at Maximum Power: Imp [A]	15.49	15.55	15.62	15.68	15.74	15.80
Module Efficiency: η [%]	23.88	24.06	24.25	24.43	24.62	24.80

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM=1.5, Power measurement tolerance: ±3%, Voc measurement tolerance: ±5%, Isc measurement tolerance: ±5%

**Electrical Characteristics (BNPI)**

Maximum Power: Pmax [W]	715	721	726	732	737	743
Open Circuit Voltage: Voc [V]	50.06	50.19	50.36	50.52	50.67	50.84
Short Circuit Current: Isc [A]	18.04	18.13	18.21	18.29	18.36	18.44
Voltage at Maximum Power: Vmp [V]	41.65	41.81	41.95	42.10	42.25	42.42
Current at Maximum Power: Imp [A]	17.17	17.25	17.31	17.39	17.45	17.52

\* BNPI: Front side irradiance 1000W/m<sup>2</sup>, Rear side irradiance 135W/m<sup>2</sup>, Cell Temperature=25°C, AM=1.5 Power measurement tolerance: ±3%, Voc measurement tolerance: ±5%, Isc measurement tolerance: ±5%

**Electrical Characteristics (BSI)**

Short Circuit Current: Isc [A]	19.98	20.08	20.17	20.26	20.34	20.43
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\* BSI: Front side irradiance 1000W/m<sup>2</sup>, Rear side irradiance 300W/m<sup>2</sup>, Cell Temperature=25°C, AM=1.5 Isc measurement tolerance: ±5%

**Electrical characteristics with different rear side power gain**

	5%	15%	25%
Maximum Power: Pmax [W]	677	682	687
Module Efficiency: η [%]	25.06	25.25	25.43
Maximum Power: Pmax [W]	741	747	753
Module Efficiency: η [%]	27.43	27.65	27.88
Maximum Power: Pmax [W]	806	812	818
Module Efficiency: η [%]	29.84	30.06	30.28

**Temperature Rating**

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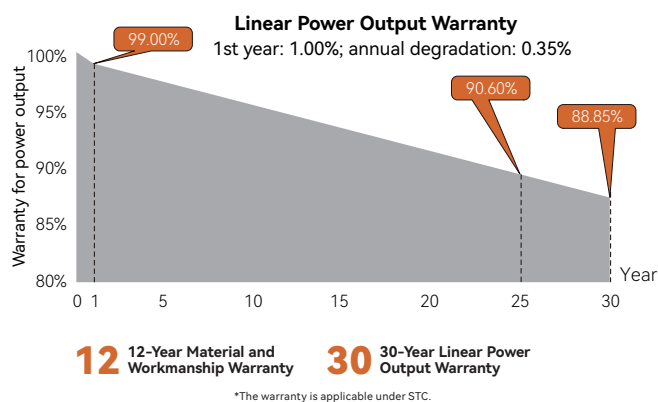
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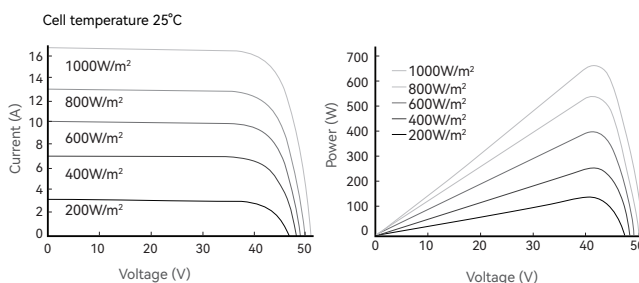
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