



TUNGHSU

210 series

Mono solar modules

110 cell porcelain white single glass multi-busbar half-cut modules



530-550W

Tunghsu components with high efficiency and high reliability

- * Advanced production equipment, highly automated process control, world-class production technology
- * The company has a product research and development laboratory that meets the new ISO/IEC international standards
- * Excellent weak light performance, resistant to salt spray and ammonia corrosion.
- Passing the certification test of the PV standards.
- * Certified by international quality management and environmental management system
- * Application grade:A, Safe grade: II, Fireproofing grade:C

Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO 45001: Occupation Health and Safety Management System

GB/T 23001-2017: Management system with Integration of Information Technology and Industrialization



Non-destructive cutting

Higher battery bending strength and module mechanical performance
Improve anti-PID performance through battery process optimization and material control



Higher customer value

Effectively reduce system BOS cost, achieve lower LCOE, and increase project profitability



Higher power generation performance

Lower temperature coefficient (-0.34%) and lower working temperature bring more power generation
Half-cell technology brings stronger anti-shadow occlusion ability



Higher power output

MBB technology adopted, reaching 550Wp highest output, efficiency 21.0%
Higher module power and 1500V system voltage
210mm wafer, and Half cut technology adopted

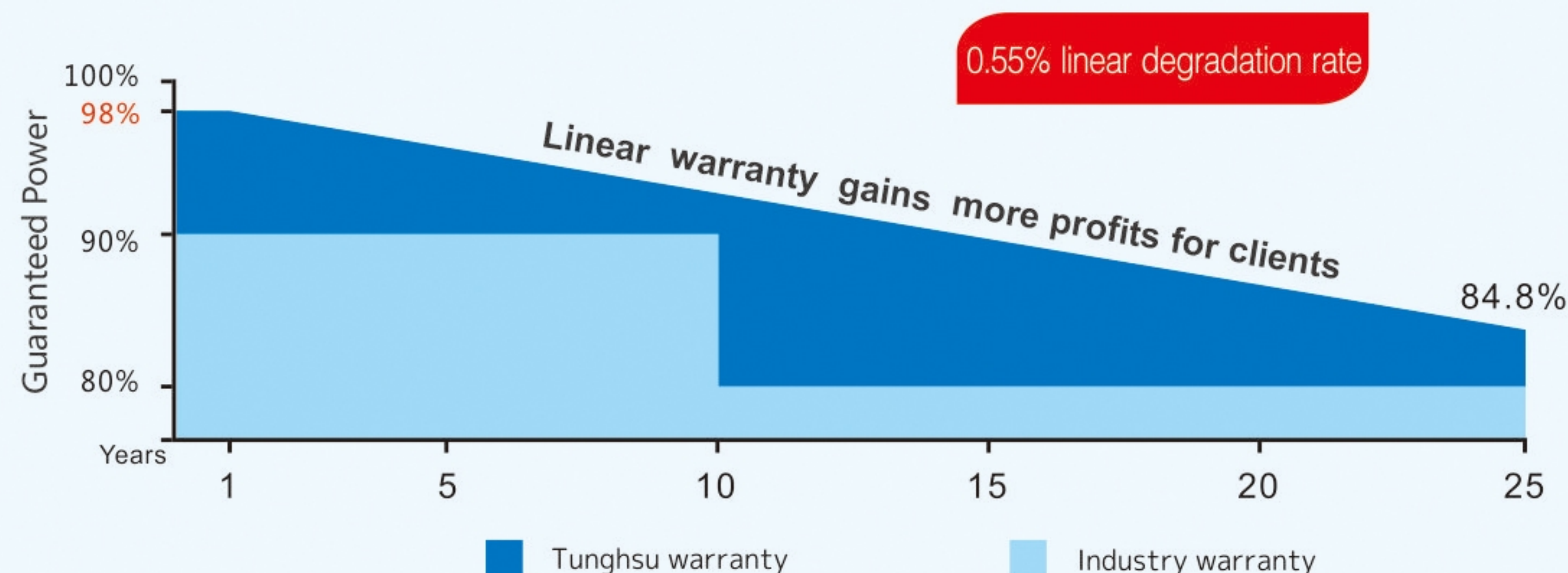


Certified to withstand the most challenging environmental conditions

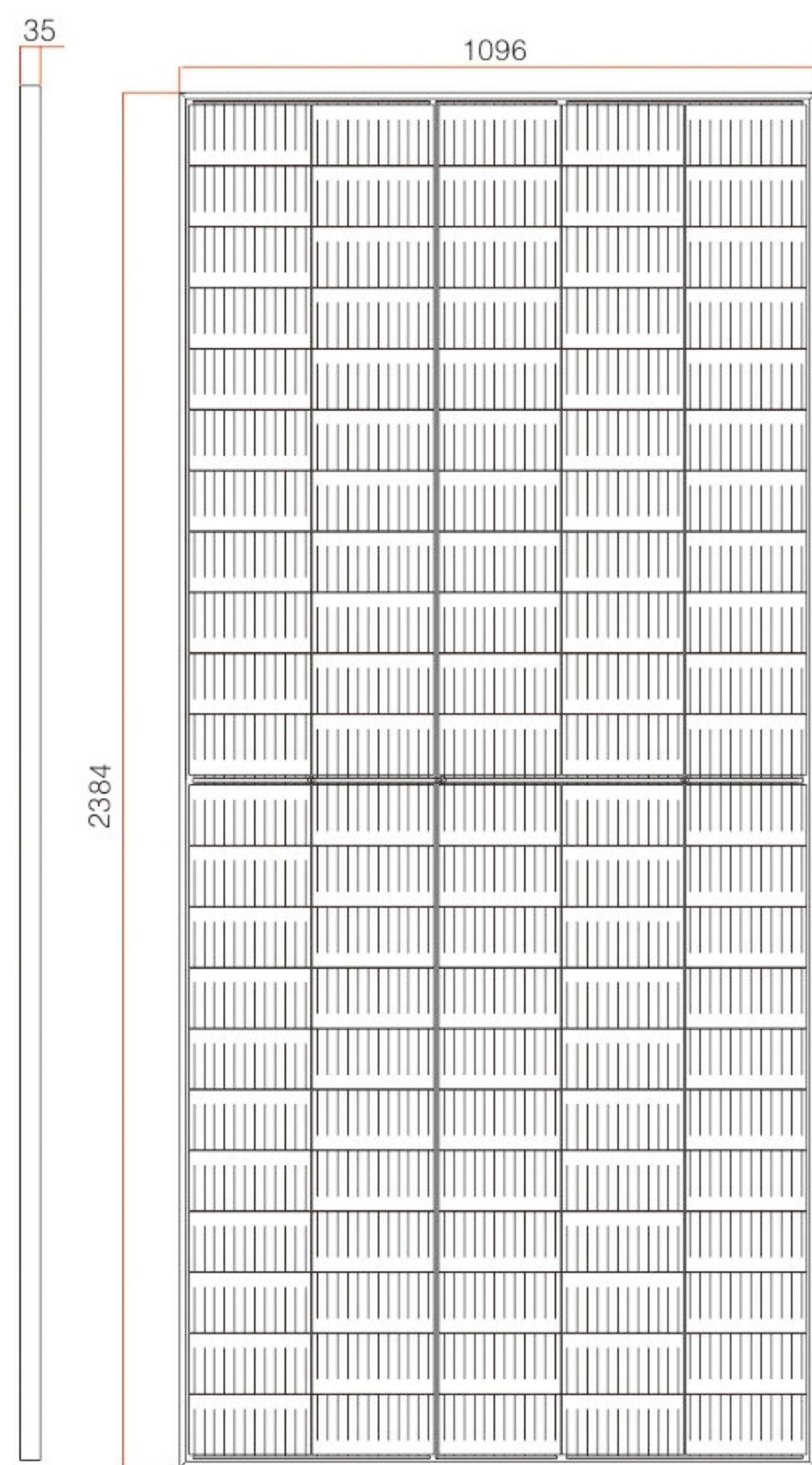
2400 Pa wind load
5400 Pa snow load

Industry-leading linear warranty

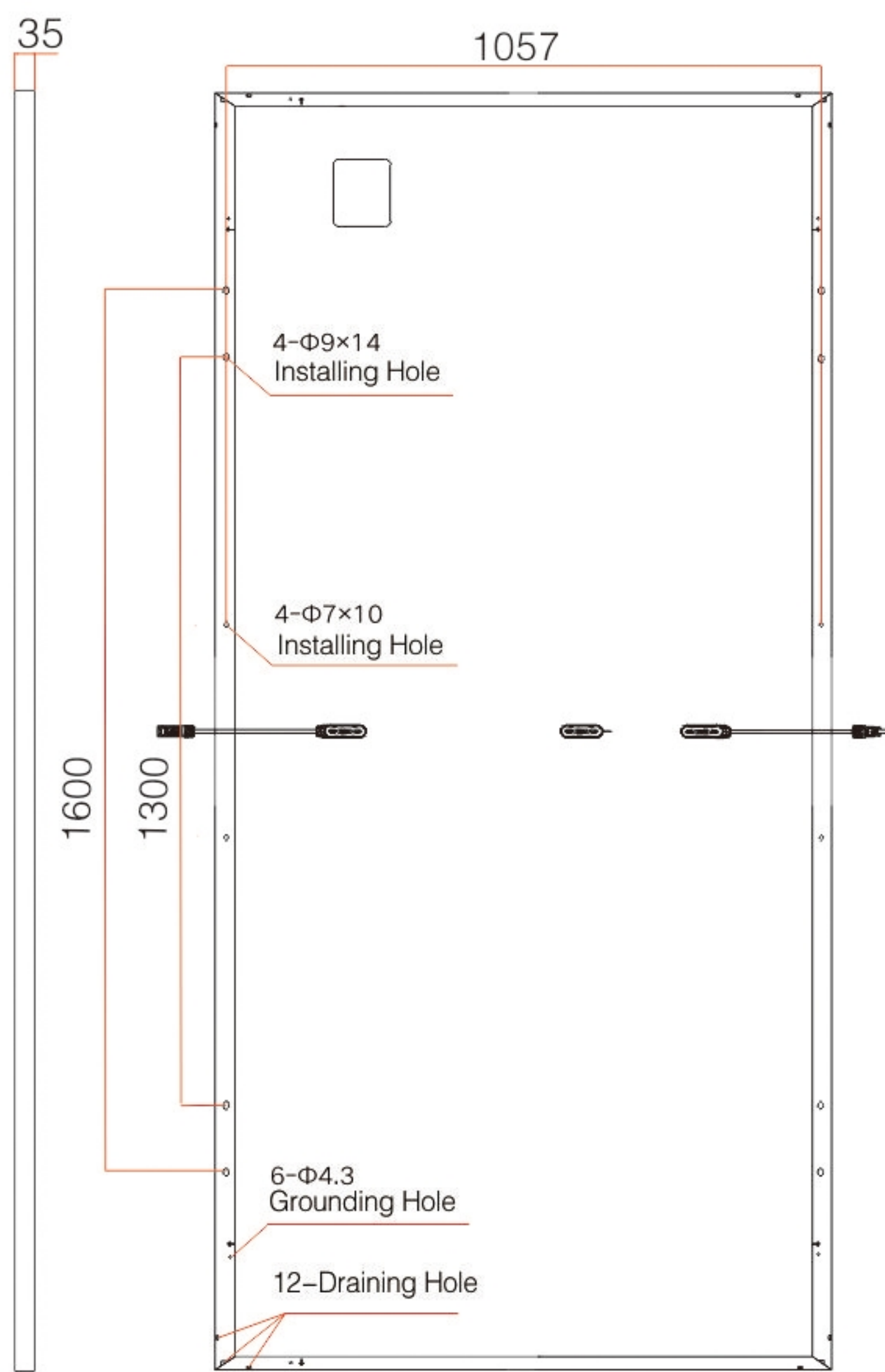
+15 Year Product Warranty +25Year Linear Power Warranty



DIMENSIONS OF PV MODULE(mm)

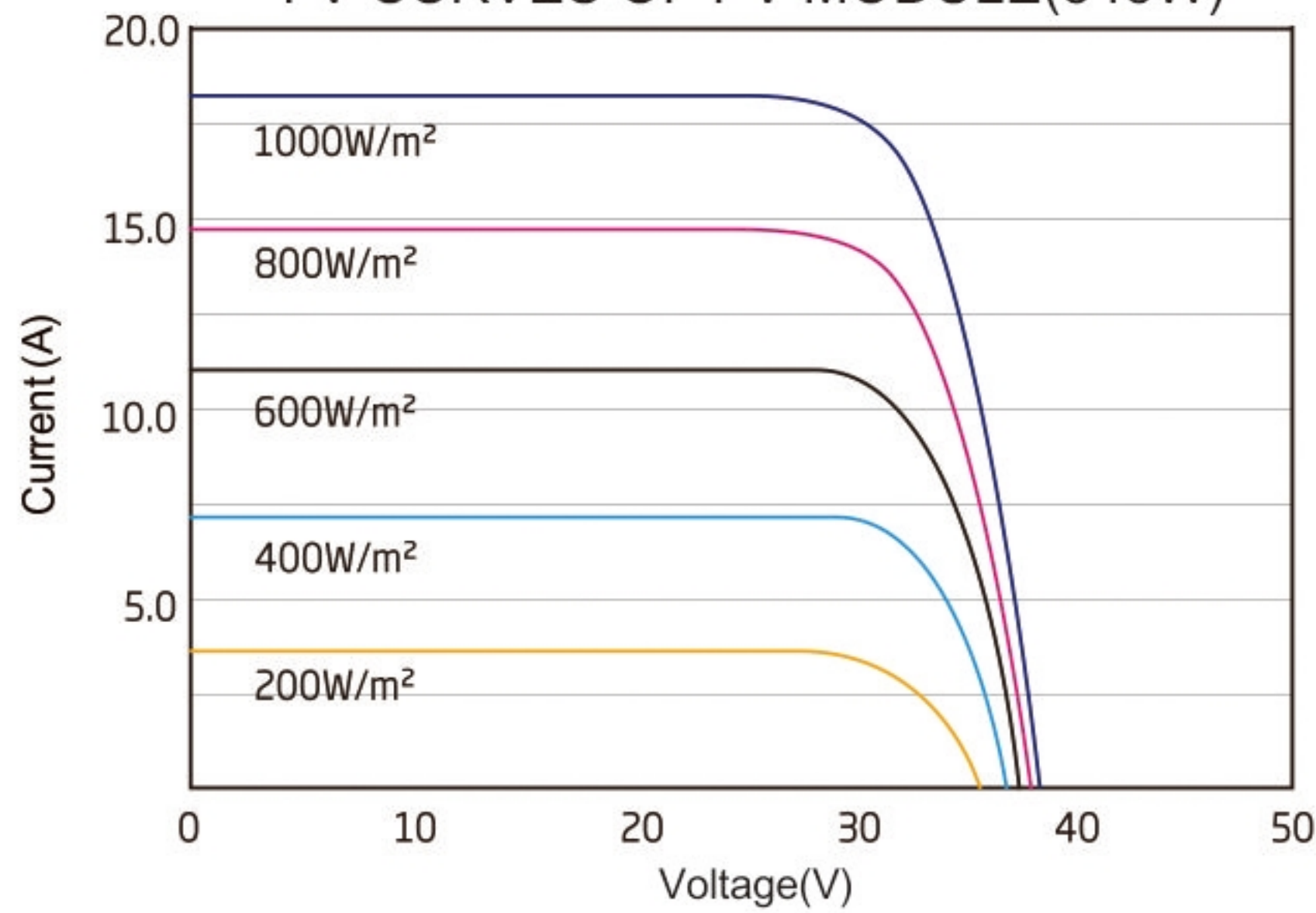


Front View

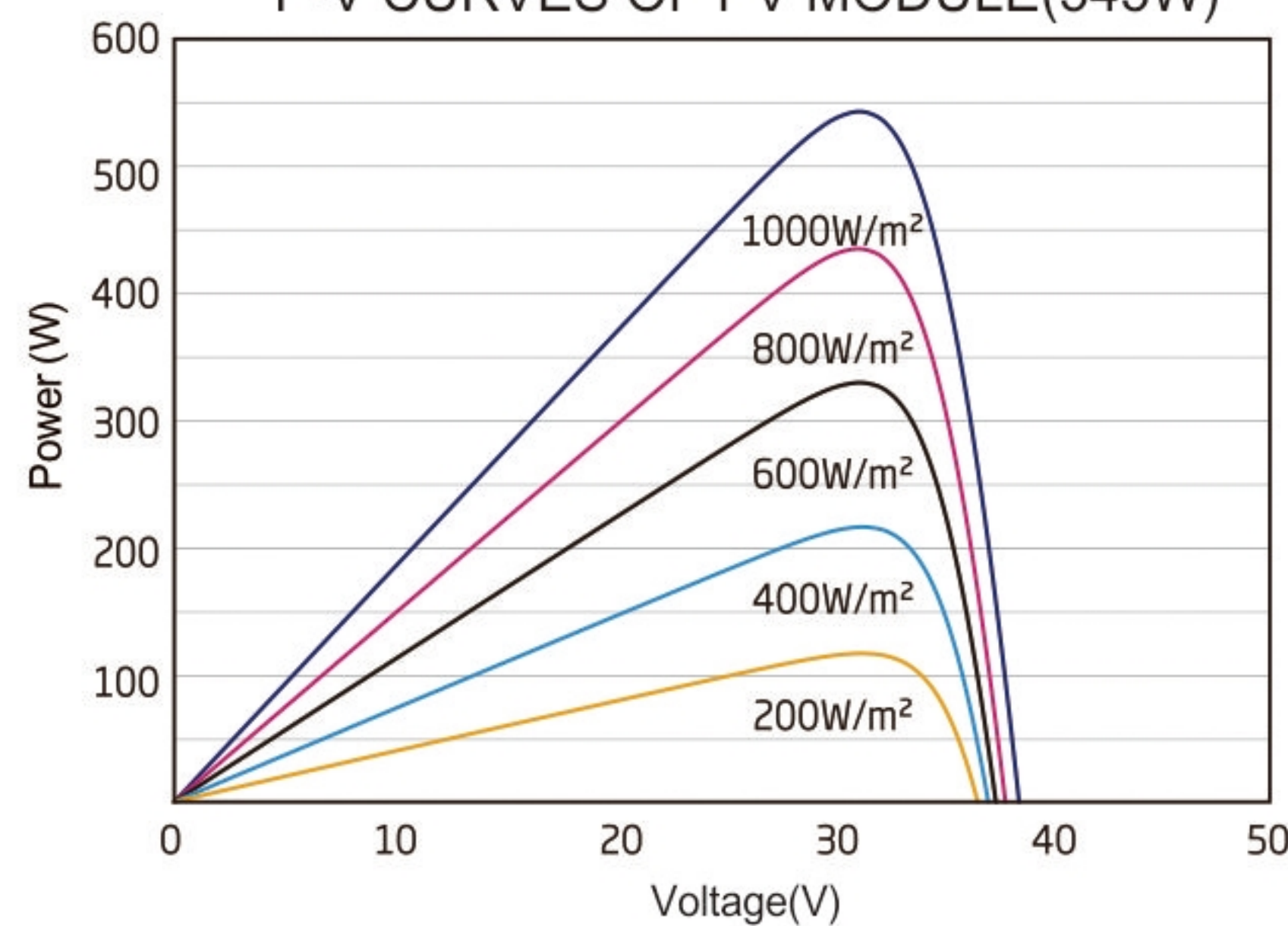


Back View

I-V CURVES OF PV MODULE(545W)



P-V CURVES OF PV MODULE(545W)



ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)	530	535	540	545	550
Power Output Tolerance- P_{MAX} (W)	0~ +5				
Maximum Power Voltage- V_{MPP} (V)	30.8	31.0	31.2	31.4	31.6
Maximum Power Current- I_{MPP} (A)	17.21	17.28	17.33	17.37	17.40
Open Circuit Voltage- V_{OC} (V)	37.1	37.3	37.5	37.7	37.9
Short Circuit Current- I_{SC} (A)	18.31	18.36	18.41	18.47	18.52
Module Efficiency η_m (%)	20.3	20.5	20.7	20.9	21.0

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

ELECTRICAL DATA (NOCT)

Maximum Power- P_{MAX} (Wp)	401	405	409	413	417
Maximum Power Voltage- V_{MPP} (V)	28.6	28.8	29.0	29.2	29.3
Maximum Power Current- I_{MPP} (A)	14.01	14.06	14.10	14.15	14.19
Open Circuit Voltage- V_{OC} (V)	35.0	35.1	35.3	35.5	35.7
Short Circuit Current- I_{SC} (A)	14.76	14.80	14.84	14.88	14.92

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	110cell (5x22)
Module Dimensions	2384x1096x35mm(93.86x 43.15x 1.38 inches)
Weight	28.5kg(62.83lb)
Front Glass	3.2mm (0.13 inches), High Transmission, Strengthened Coated Glass
Encapsulant Material	EVA
Backsheet	White
Frame	35 mm (1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	4.0mm ² , 350mm photovoltaic special cable, or customized
Connector	MC4, QC4

TEMPERATURE RATING

NOCT (Nominal Operating Cell Temperature)	43°C (± 2°C)
Temperature Coefficient of P_{MAX}	- 0.34%/°C
Temperature Coefficient of V_{OC}	- 0.25%/°C
Temperature Coefficient of I_{SC}	0.04%/°C

LIMIT PARAMETERS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

- 15 year Product Workmanship Warranty
- 25 year Linear Power Warranty

PACKAGING CONFIGURATION

- Modules per box: 31 pieces
- Modules per 40' container: 620 pieces

Note: Read the safety and installation instructions before using the product.

Affirm: With technological progress and product updates, the technical parameters of Tunghsu Kangtu's later component products may deviate from the technical parameters contained in this specification. Tunghsu Kangtu has the right to adjust various technical parameters at any time without notifying the customer. The final interpretation right of this technical specification belongs to Anhui Tunghsu Kangtu Solar Technology Co., Ltd.



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