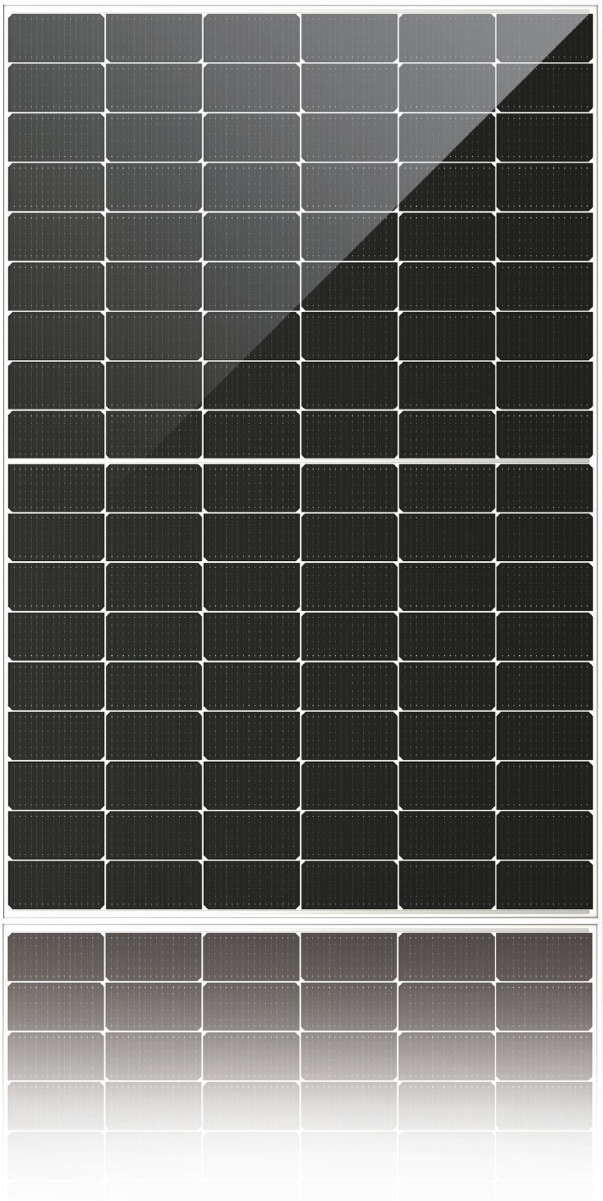
DAHAI SOLAR

TOPCon module

DHM54T31-TP

410-435W

High efficiency TOPCon module



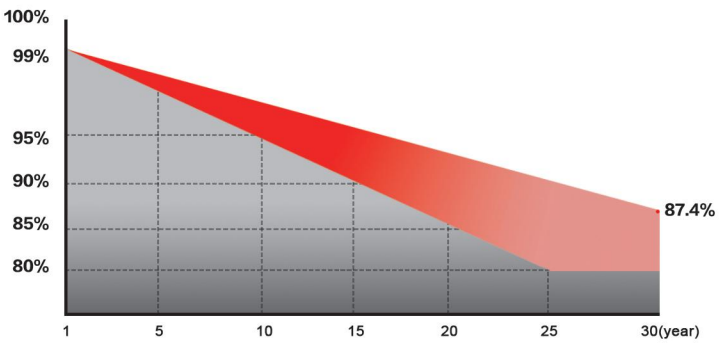
- Using the latest TOPCon 16BB silicon cells, the output power reaches 435W with a conversion efficiency reaching 22.28%.
- The same area of higher power, light weight, easy to install
- Ultra-low attenuation rate, first year attenuation ≦1%, 2-30 years linear attenuation ≤ 0.4%
- Fully automatic production line with full quality inspection to ensure product assurance
- Components are resisting wind loads of 2400pa and snow loads of 5400pa

DAHAI SOLAR is a renewable energy enterprise founded in 2011 , with 5GW high efficiency solar module production capacity, 10GW silicon production capacity. Adhering to the brand concept of "new energy, new world", Dahai solar has always been committed to doing a stand out in the photovoltaic industry, transforming light with ingenuity and provide green energy to everybody.

30 YEARS — 30 YEAR LINEARITY POWER OUTPUT WARRANTY

25 YEARS — 25 YEARS OF EXCELLENT PRODUCTS MATERIAL AND PROCESS WARRANTY

30 YEAR EXCESS LINEAR POWER OUTPUT WARRANTY



The power attenuation shall not exceed 1% in the first year and 0.4% in the following years.

COMPLETE QUALITY MANAGEMENT SYSTEM AND PRODUCT CERTIFICATION

CQC TUV CE
IEC 61215, IEC 61730
ISO 9001:Quality Management System
ISO 14001:Environmental Management System
ISO 45001:Occupational Health And Safety Management System

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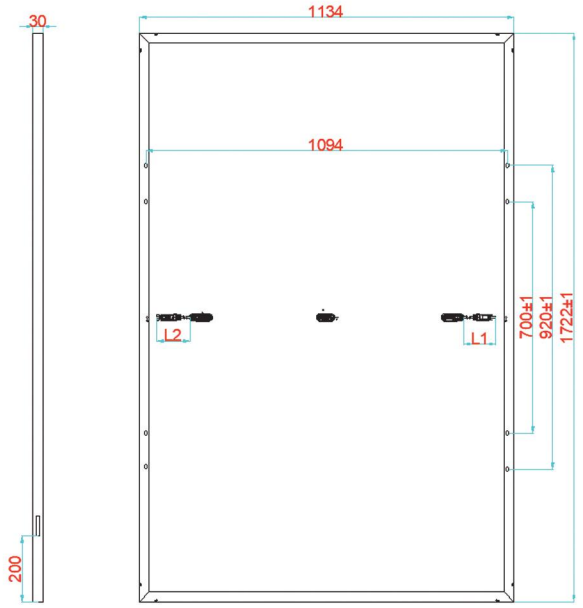
DHM54T31-TP 410-435W

Maximum efficiency	Power tolerance	Highest component conversion efficiency	First year attenuation	Decay over the years
435W	0~+5W	22.28%	≤1.0%	≤0.4%

MECHANICAL PROPERTIES

Battery type	Monocrystalline-TOPCon
Component weight	21.5kg
Component Size	1722×1134×30mm
Number of Cells	108(6x18)
Cable cross-sectional area	4mm²
Junction Box	IP68, 3 diodes
Connector	MC4-EVO2
Packaging information	36 pieces/pallet 936 pieces /40 'container



WORKING PARAMETERS

Maximum system voltage	1500V (TUV)
Operating temperature	-40℃~+85℃
Maximum fuse current rating	25A
Maximum static load, front	5400pa
Maximum static load,back side	2400pa
nominal battery operating temperature	45±2℃
Application Level	classA

TEMPERATURE CHARACTERISTICS

Power	-0.350%/℃
Open circuit voltage	-0.274%/℃
Short-circuit current	0.044%/℃

ELECTRICAL PERFORMANCE PARAMETERS UNDER STC

Modle	DHM54T31 -410/TP	DHM54T31 -415/TP	DHM54T31 -420/TP	DHM54T31 -425/TP	DHM54T31 -430/TP	DHM54T31 -435/TP
Maximum power (W)	410	415	420	425	430	435
Voltage at maximum power point (VMP/V)	31.65	31.85	32.05	32.25	32.45	32.65
Current at maximum power point (IMP/A)	12.95	13.03	13.10	13.18	13.25	13.32
Open circuit voltage (VOC/V)	37.53	37.78	38.03	38.28	38.53	38.78
Short circuit current (ISC/A)	13.90	13.94	13.99	14.04	14.09	14.13
Component efficiency [%]	21.00%	21.25%	21.51%	21.76%	22.02%	22.28%
Power tolerance (W)	0~+5					
Standard test environment	Irradiance 1000W/㎡, cell temperature 25℃, spectrum AM1.5					

Note:Due to continuous innovation, research and product upgrading, the parameters in this specification are not just a component, but can only be used for comparison between different types.

ELECTRICAL PERFORMANCE PARAMETERS UNDER NOCT

Modle	DHM54T31 -410/TP	DHM54T31 -415/TP	DHM54T31 -420/TP	DHM54T31 -425/TP	DHM54T31 -430/TP	DHM54T31 -435/TP
Maximum power (W)	305	309	312	316	320	324
Voltage at maximum power point (Vmp)[V]	29.55	29.73	29.91	30.12	30.33	30.56
Current at maximum power point (Imp)[A]	10.32	10.39	10.45	10.50	10.55	10.59
Open circuit voltage (Voc)[V]	34.94	35.16	35.36	35.56	35.76	35.96
Short circuit current (Isc)[A]	11.43	11.55	11.61	11.67	11.75	11.83
Nominal cell operating temperature(NOCT)	Irradiance800W/㎡, ambient temperature20℃, spectrum AM1.5G, wind speed 1m/s					