

610W

N-TYPE M10 HALF CELL MONO

BIFACIAL DOUBLE GLASS

GERMAN BRAND SOLAR PANEL

590W-610W

POWER OUTPUT RANGE

144 CELL

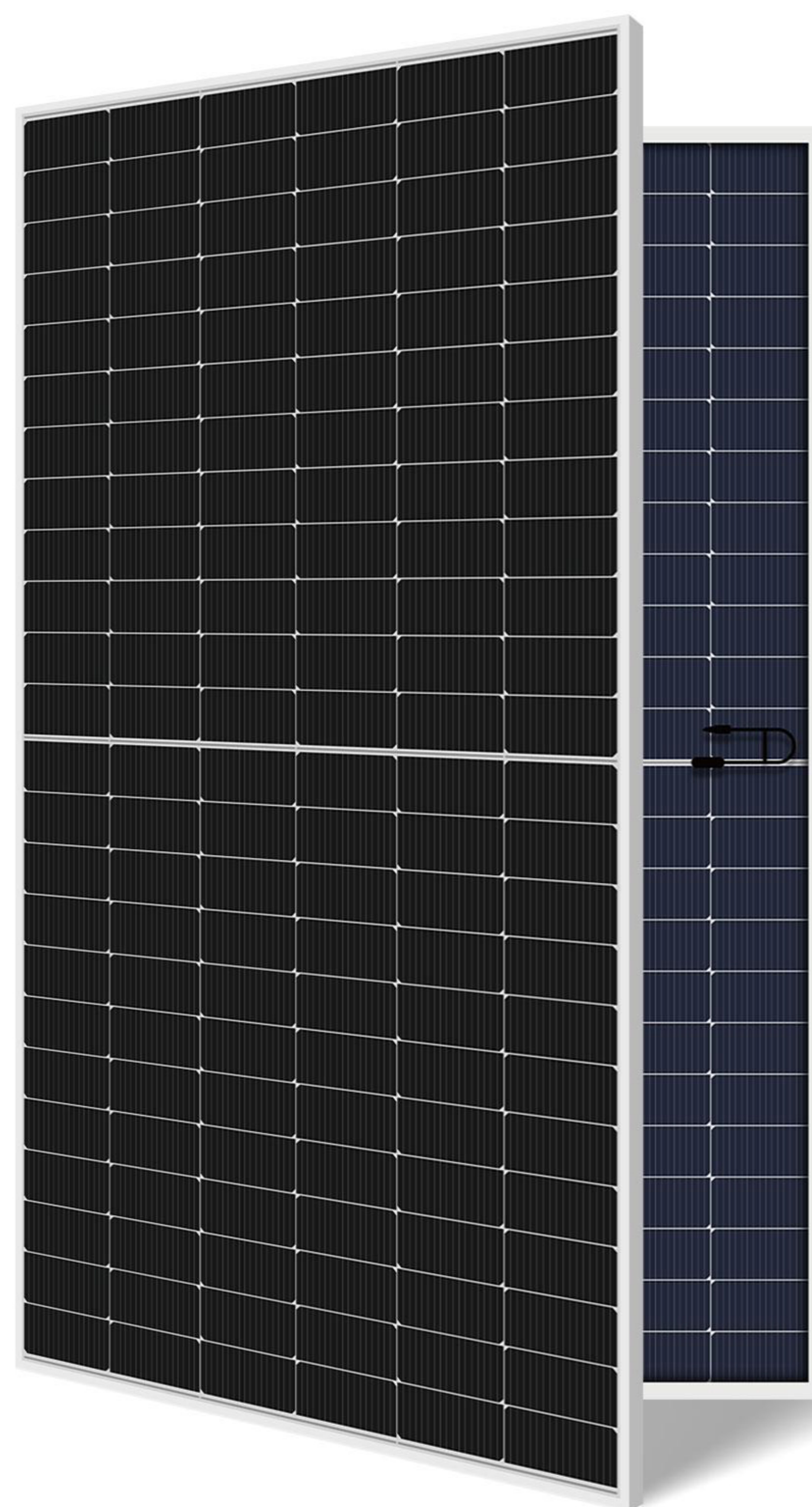
MBB MONO N-TYPE

23.6%

MAXIMUM EFFICIENCY

0 to +5W

POSITIVE POWER TOLERANCE



Product
Warranty



Output
Warranty



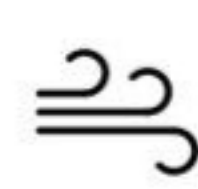
Higher Efficiency



Lower LID



German Technology



Sand Resistant



Environmentally Friendly



Stable Performance



Higher Output of Power

Effectively reduce the unit cost of PV solar system by watt



Optimize the temperature coefficient

Improve the performance under the condition of shadow and low temperature coefficient



Reduce the shadow loss on the power output

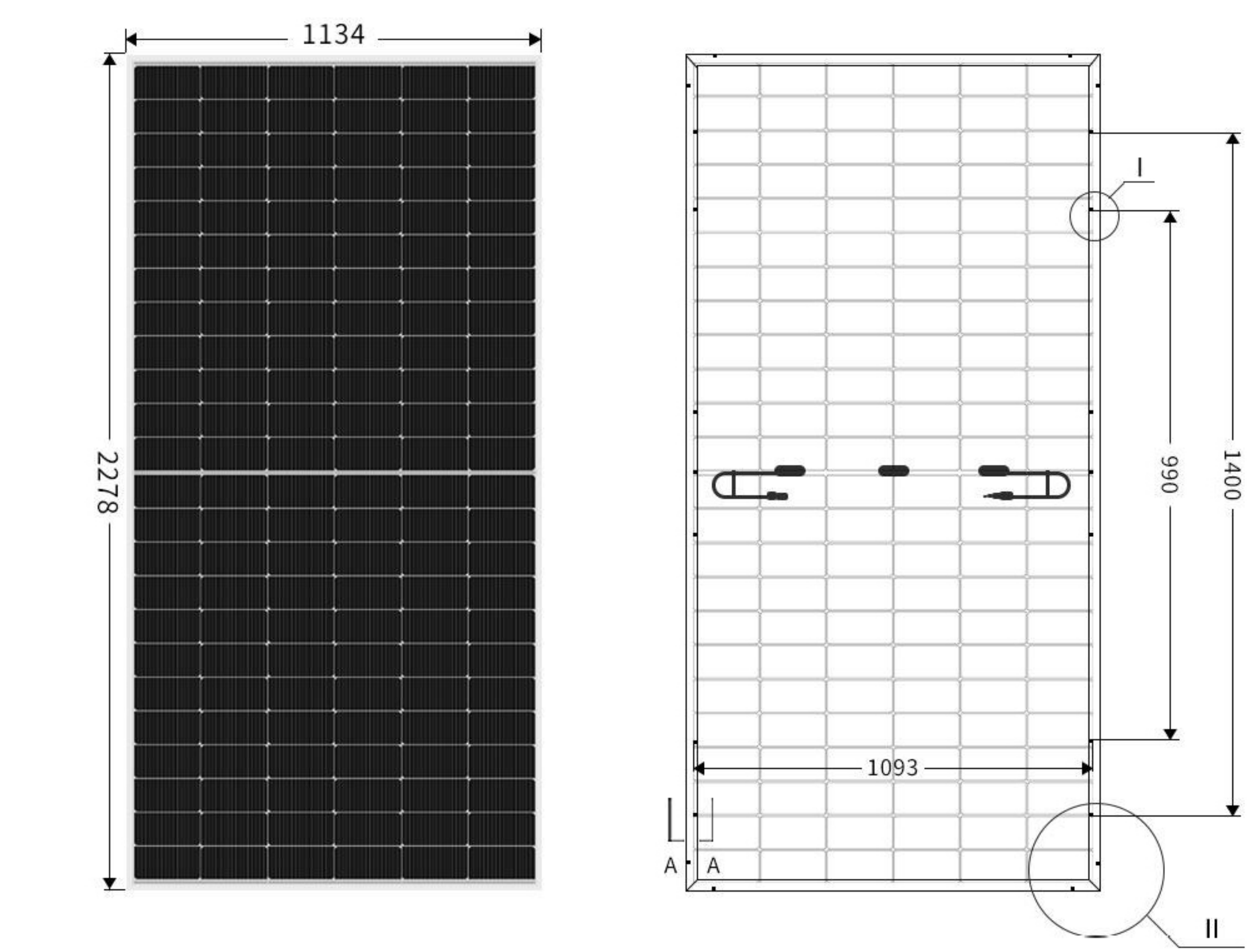
Effectively reduce the risk of heat spot on high efficiency



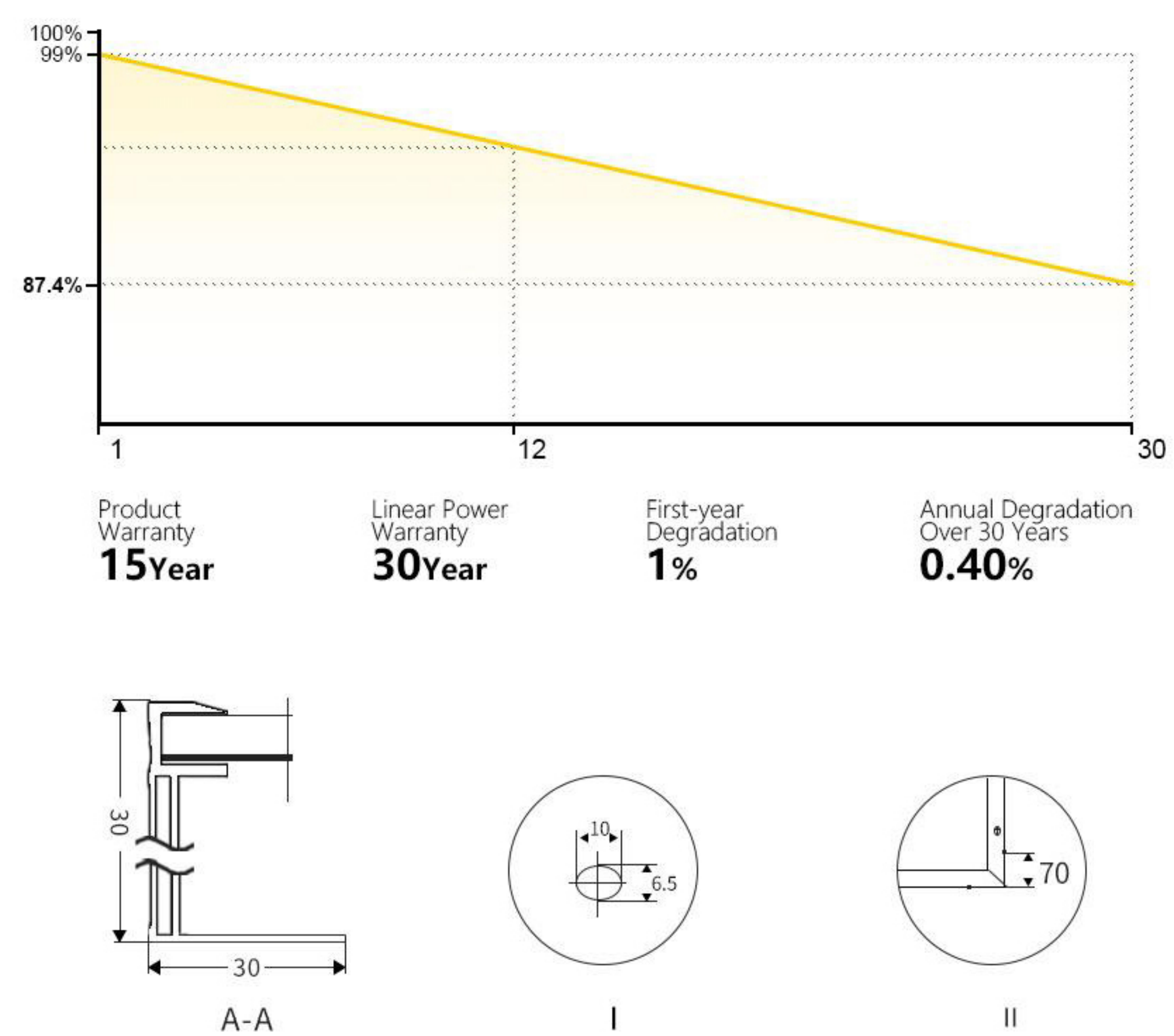
Stronger the physical property

Optimize the property of power generating and reliability of the system

DIMENSIONS OF PV MODULE



LINEAR PERFORMANCE WARRANTY



MECHANICAL DATA

Solar Cells	Mono N-TYPE
Cell Orientation	144 (6 x 24)
Module Dimensions	2278 x 1134 x 30mm
Weight	31kg
Front Glass	2.0mm
Back Glass	2.0mm
Frame	Anodized Aluminium Alloy
J-Box	IP 68 Rated
Cables	4.0mm², 350mm or Customized Length
Connector	MC4 Compatible

PACKAGE	Modules per Pallet:37 pieces	Modules per 40'HQ Container:740 pieces
---------	------------------------------	--

TEMPERATURE RATINGS

Nominal Operating Cell Temperature(NOCT)	45±2℃
Temperature Coefficient of P _{MAX}	-0.30%/℃
Temperature Coefficient of V _{OC}	-0.25%/℃
Temperature Coefficient of I _{SC}	+0.046%/℃

MAXIMUM RATINGS

Operational Temperature	-40℃ to +85℃
Maximum System Voltage	1500V DC
Max Series Fuse Rating	30A
Mechanical Load	5400pa
Wind Load	2400pa

MODULE TYPE

		HTS-144M10H590LDG		HTS-144M10H595LDG		HTS-144M10H600LDG		HTS-144M10H605LDG		HTS-144M10H610LDG	
Test Environment		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power	P _{MAX} (W)	590	446.3	595	450	600	453.7	605	457.4	610	461.1
Maximum Power Voltage	V _{MPP} (V)	45.46	43.72	45.67	43.91	45.88	44.1	46.09	44.29	46.3	44.48
Maximum Power Current	I _{MPP} (A)	12.98	10.2	13.03	10.24	13.08	10.28	13.13	10.32	13.18	10.36
Open Circuit Voltage	V _{OC} (V)	53.2	50.6	53.4	50.79	53.6	50.98	53.8	51.17	54	51.36
Short Circuit Current	I _{SC} (A)	13.58	10.71	13.62	10.75	13.66	10.79	13.7	10.83	13.74	10.87
Tolerance	(W)	0 ± 5		0 ± 5		0 ± 5		0 ± 5		0 ± 5	
Module Efficiency	(%)	22.8		23		23.2		23.4		23.6	

STC:Irradiance 1000 W/m²,Cell Temperature 25℃,Air Mass AM1.5 according to EN 60904-3.
Average efficiency reduction of 4.5% at 200W/m² according to EN 60904-1
NOCT: Irradiance at 800 W/m²,Ambient Temperature 20℃,Wind Speed 1m/s.

BIFACIAL OUTPUT-REAR SIDE POWER GAIN 10% FOR REFERENCE

Module Type	HTS-144M10H590LDG	HTS-144M10H595LDG	HTS-144M10H600LDG	HTS-144M10H605LDG	HTS-144M10H610LDG
Pmax (W)	649	654.5	660	665.5	671
Voc (V)	53.2	53.4	53.6	53.8	54
Isc (A)	15.08	15.14	15.20	15.25	15.31
Vmp (V)	45.46	45.67	45.88	46.09	46.3
Imp (A)	14.28	14.33	14.39	14.44	14.49