TOPCO SOLAR

TPM7-SHDB144

530-560W

MONOCRYSTALLINE PERC BIFACIAL PV MODULE

Excellent Cell Efficiency
- MBB technology reduce the distance between busbars and finger grid line which is benefit to power increase

Anti PID
- Ensured PID resistance through the quality control of cell manufacturing process and raw materials

Bifacial Technology
- Up to 25% additional power gain from back side depending on albedo

Better Weak Illumination Response
- More power output in weak light condition, such as haze, cloudy, and early morning

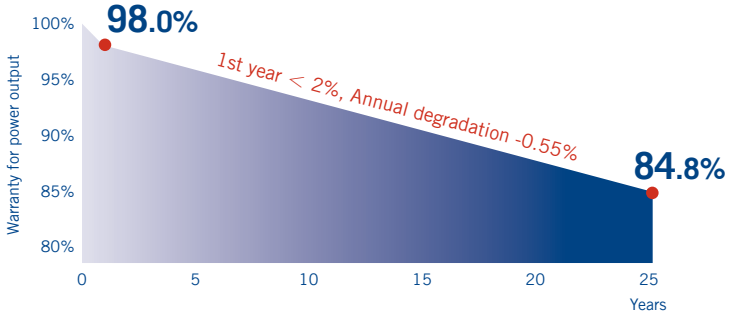
Adapt To Harsh Outdoor Environment
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment

Excellent Quality Managerment System
- Warranted reliability and stringent quality assurances well beyond certified requirements

Linear Power Output Warranty

12 12-year warranty for materials

25 25-year warranty for linear power output



Quality Management System and Product Certification

IEC 61215/IEC 61730/IEC 61701/IEC 62716/UL61730
ISO 14001: Environmental Management System
ISO 9001: Quality Management System
ISO45001: Occupational Health and Safety Management System

Version EN-20250211

TPM7-SHDB144 | 530-560W
MONOCRYSTALLINE PERC BIFACIAL PV MODULE

TOPCO SOLAR

Electrical Characteristics (STC)

Module Type (TPM7-SHDB144)		530	535	540	545	550	555	560
Maximum Power Voltage Vmp	[V]	41.1	41.3	41.5	41.7	41.9	42.1	42.3
Maximum Power Current Imp	[A]	12.91	12.96	13.02	13.07	13.13	13.19	13.24
Open Circuit Voltage Voc	[V]	49.4	49.6	49.8	50.0	50.2	50.4	50.6
Short Circuit Current Isc	[A]	13.65	13.71	13.77	13.83	13.89	13.95	14.01
Module Efficiency	[%]	20.52	20.71	20.90	21.10	21.29	21.48	21.68

Electrical Characteristics (NMOT)

Maximum Power Pmax	[Wp]	396.4	399.9	403.6	406.8	410.8	414.6	418.1
Maximum Power Voltage Vmpp	[V]	38.2	38.4	38.5	38.8	38.9	39.1	39.3
Maximum Power Current Impp	[A]	10.38	10.42	10.47	10.49	10.56	10.61	10.64
Open Circuit Voltage Voc	[V]	46.2	46.3	46.5	46.7	46.9	47.1	47.2
Short Circuit Current Isc	[A]	11.02	11.07	11.12	11.17	11.22	11.27	11.31

ELECTRICAL CHARACTERISTICS WITH 25% REAR SIDE POWER GAIN

Front power Pmax	[W]	530	535	540	545	550	555	560
Total power Pmax	[W]	663	669	675	681	688	694	700
Vmp (Total)	[V]	41.2	41.4	41.6	41.8	42	42.2	42.2
Imp (Total)	[A]	16.08	16.15	16.23	16.30	16.37	16.44	16.51
Voc (Total)	[V]	49.5	49.7	49.9	50.1	50.3	50.5	50.7
Isc (Total)	[A]	17.02	17.10	17.17	17.25	17.32	17.39	17.47

Mechanical Characteristics

Solar cells	Mono PERC
Cells orientation	144(6×24)
Module dimension	2278×1134×35 mm (With Frame)
Weight	28±1.0 kg
Glass	3.2mm,High Transmission,AR Coated Tempered Glass
Junction box	IP 68,3 diodes
Cables	4 mm² ,400 mm (With Connectors)
Connectors*	Original MC4

Application Conditions

Maximum system voltage	1500 V DC
Operating temperature	-40℃~+85℃
Maximum series fuse	30 A
Front Side Maximum Static Loading	Up to 5400Pa
Rear Side Maximum Static Loading	Up to 2400Pa

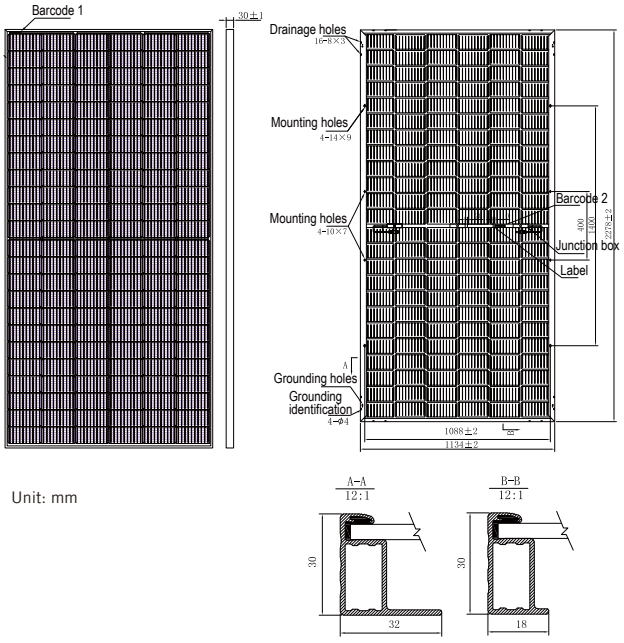
Temperature Characteristics

NMOT	44℃±2℃
Temperature coefficient of Pmax	-0.35%/℃
Temperature coefficient of Voc	-0.29%/℃
Temperature coefficient of Isc	0.05%/℃
Bifaciality	70±10%

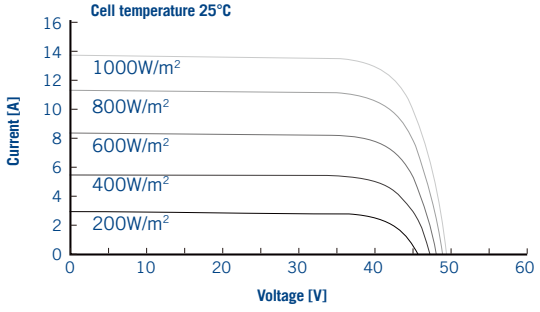
Packing Configuration

Piece/Box	31
Piece/Container(40'HQ)	620

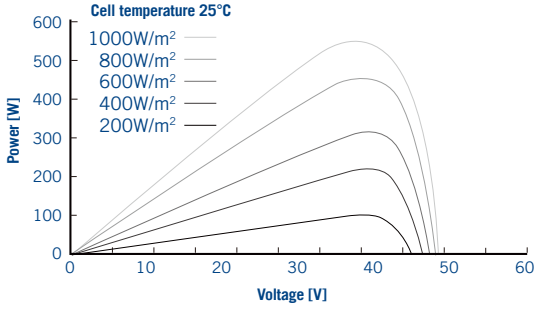
Engineering Drawings



I-V CURVES OF PV MODULE (530W)



P-V CURVES OF PV MODULE (530W)



Declaration: With the technical progress and product updates, there exists a deviation between the technical parameter of the Topco Solar's future products and the technical parameter in this specification, The Topco Solar reserves the right to adjust the technical parameter at any time without notifying the customers, Topco Solar reserves the final right of interpretation.

Topco Solar Inc.
1810 E Sahara Ave Ste 212 Las Vegas,
Nevada 89104, USA

www.topcosolar.com