

JHN5/60H 445-465Wp

N-TOPCon Monocrystalline Half-cut Cell Solar Module



M10 N-TOPCon Technology

TOPCon cells combined with MBB provides ultra-high power output



Excellent weak light performance

More power output in weak light condition, such as cloudy, morning and sunset



Lower LID

The N-type TOPCon module has better reliability and lower LID



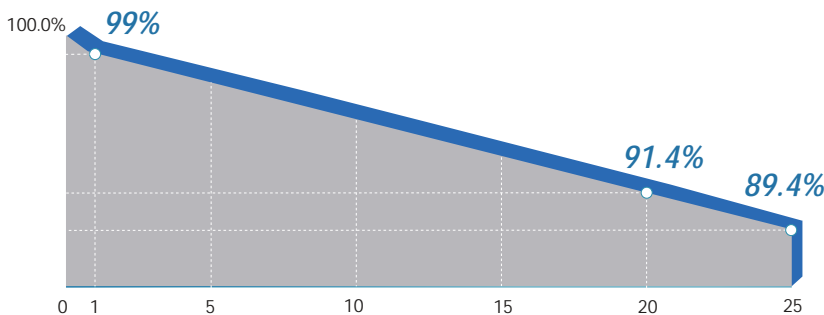
PID Resistance

According to IEC TS 62804-1



Linear Performance Warranty

$\leq 1\%$ 1st year Degradation $\leq 0.4\%$ Annual Degradation



12 Years Product Warranty

25 Years Linear Power Warranty



IEC61215:2021
 IEC61730:2016
 IEC62804(PID free)
 ISO9001/14001/45001

ELECTRICAL CHARACTERISTICS

Module Type	JHN5/60H445		JHN5/60H450		JHN5/60H455		JHN5/60H460		JHN5/60H465	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Peak Power (Pmax) (W)	445	328	450	332	455	335	460	339	465	343
Maximum Power Voltage (Vmp) (V)	34.0	31.9	34.2	32.0	34.4	32.2	34.6	32.3	34.8	32.5
Maximum Power Current (Imp) (A)	13.09	10.30	13.16	10.36	13.23	10.42	13.30	10.48	13.37	10.55
Open-circuit Voltage (Voc) (V)	41.4	38.7	41.6	38.9	41.8	39.0	42.0	39.2	42.2	39.3
Short-circuit Current (Isc) (A)	13.75	11.12	13.83	11.18	13.91	11.25	13.99	11.32	14.07	11.38
Module Efficiency	20.56%		20.79%		21.02%		21.25%		21.48%	

*STC (Standard Test Condition): Irradiance 1000W/ m², Cell Temperature 25°C, AM 1.5

*NMOT(Under Nominal Module Operating Temperature): Irradiance of 800W/ m², Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

MECHANICAL CHARACTERISTICS

Cell Type	N-TOPCon Mono-Crystalline
Cell Arrangement	120pcs (2×(6×10))
Dimension (L×W×H)	1909×1134×35mm
Weight	23.0kg
Front Cover	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Cable	4mm ² /400mm(+)&200mm(-)
Connector	MC4 Compatible
Snow/Wind Load	5400Pa/2400Pa

OPERATING PARAMETERS

Power tolerance	0~+5W
Maximum System Voltage	1500V DC (IEC)
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	25 A
Protection Class	Class II

TEMPERATURE CHARACTERISTICS

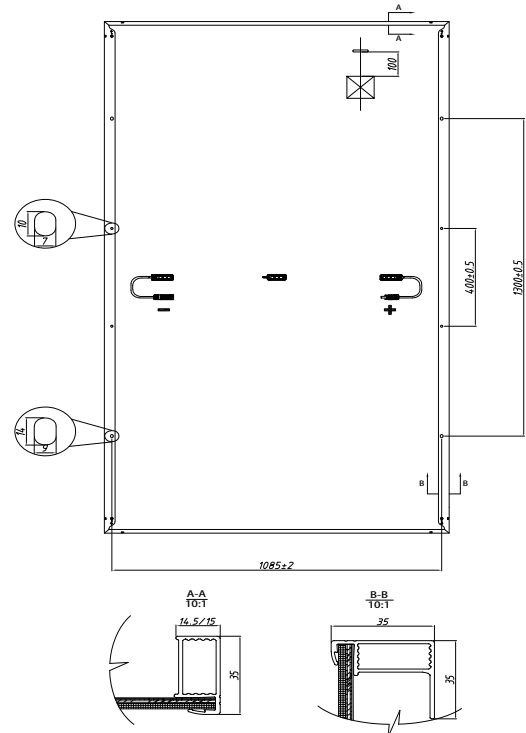
Temperature coefficient of Pmax	-0.33%
Temperature coefficient of Voc	-0.26%
Temperature coefficient of Isc	0.055%
NMOT	44±2°C

PACKING MANNER

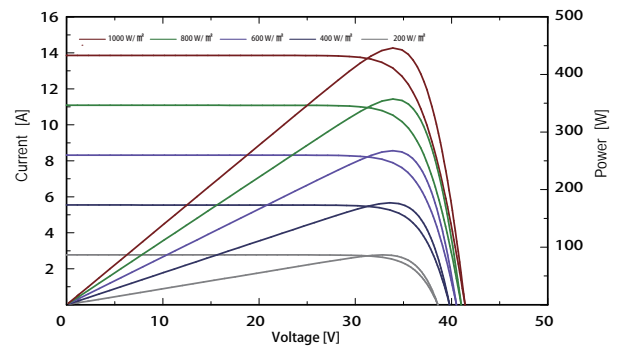
Packing Type	40HQ
Piece/Pallet	31
Pallet/Container	24
Piece/Container	744

Engineering Design

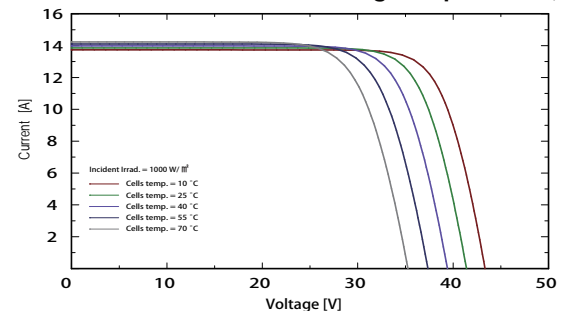
*Unit:mm



I-V/P-V Curve at Different Irradance (455W)



I-V Curve at Different Working Temperature (455W)



*Power measurement tolerance: ±3%

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