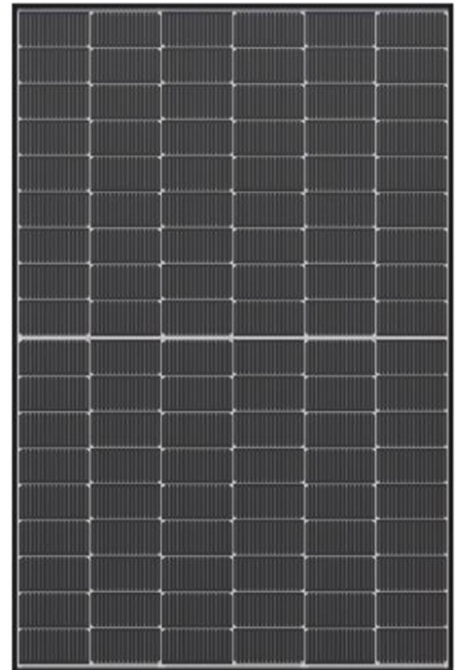


# HALF-CELL N-Type TOPCon MONOFACIAL MODULE

**420-440W**  
POWER OUTPUT

**22.5%**  
MAX EFFICIENCY



**Efficient conversion rate**  
Up to 22.5% component conversion efficiency



**Excellent low light performance**  
Able to output more electricity under low light conditions such as cloudy days, morning and evening



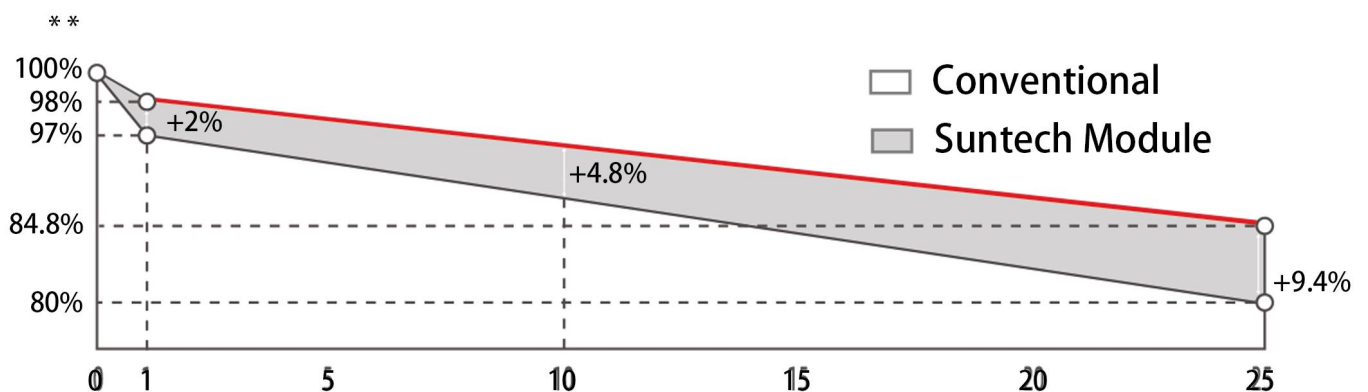
**Withstand harsh environments**  
Reliable quality that makes module resistant even to high temperatures, salt water and ammonia



**Superior load capacity**  
Capable of withstanding negative pressure up to 2400 Pa and positive pressure up to 5400 Pa

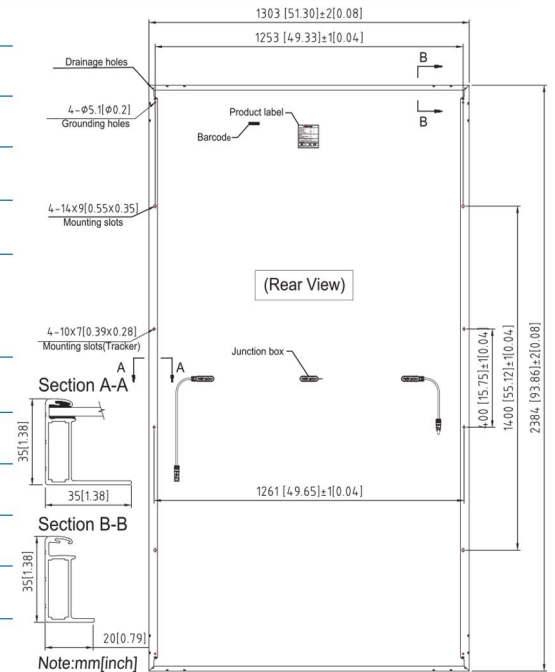
First year power degradation **2%**

Annual degradation **0.40%**



## Mechanical Characteristic

Solar Cell	N-type Monocrystalline silicon 182 mm
No. of cells	108 (6 × 18)
Dimensions	1722 × 1134 × 30 mm
	21.0 kgs (46.3 lbs.)
Front/Back Glass	3.2 mm fully tempered glass
Output Cables	4.0 mm <sup>2</sup> , (-) 350 mm (+) 160 mm in length or customized length
Operating Module Temperature	-40 ° C to +85 ° C
Maximum System Voltage	1500 V DC (IEC)
Maximum Series Fuse Rating	25 A
Power Tolerance	0/+5 W
	Anodized aluminum alloy frame



## Electrical Characteristics

Module Type	STP440S-C54/NshM		STP435S-C54/NshM		STP430S-C54/NshM		STP425S-C54/NshM		STP420S-C54/NshM	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (P <sub>max</sub> /W)	440	336.4	435	332.5	430	328.7	425	324.9	420	321.0
Optimum Operating Voltage (V <sub>mp</sub> /V)	32.69	30.5	32.51	30.3	32.33	30.2	32.15	30.0	31.96	29.9
Optimum Operating Current (I <sub>mp</sub> /A)	13.46	11.03	13.38	10.96	13.30	10.89	13.22	10.82	13.14	10.75
Open Circuit Voltage (V <sub>oc</sub> /V)	38.98	37.0	38.85	36.9	38.72	36.8	38.59	36.6	38.46	36.5
Short Circuit Current (I <sub>sc</sub> /A)	14.41	11.62	14.33	11.55	14.25	11.49	14.17	11.42	14.09	11.36
Module Efficiency (%)	22.5%		22.3%		22.0%		21.8%		21.5%	

## Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2 ° C
Temperature Coefficient of P <sub>max</sub>	-0.30%/° C
Temperature Coefficient of V <sub>oc</sub>	-0.25%/° C
Temperature Coefficient of I <sub>sc</sub>	0.046%/° C

## Graphs

