



STxxxG12RNHB-96

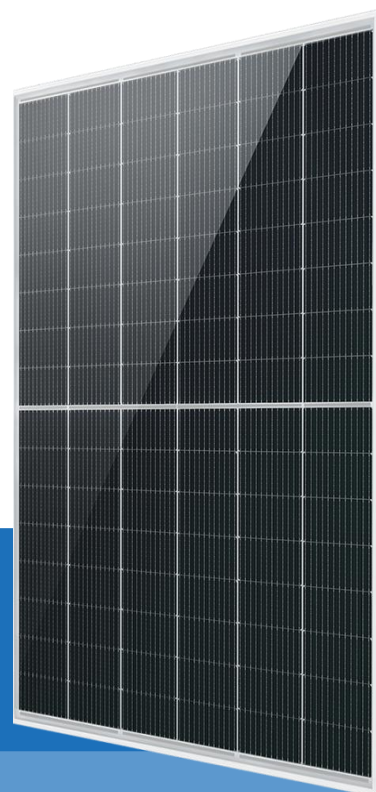
0~+5W

440~460W

TOPCon Mono-crystalline Bifacial Module

23.0%

High Module Conversion Efficiency



Key Features



Outstanding performance in weak-light conditions



Lower operating temperature



Half-cell and MBB design



Extended wind and snow load tests

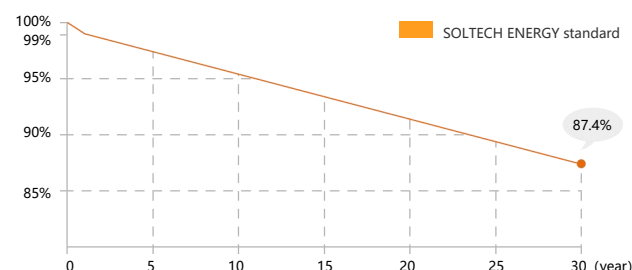


Withstanding harsh environment



Use scenario customization

Quality Certification



Materials and workmanship warranty



Linear performance warranty

First year power degradation < 1%
Annual degradation < 0.4%

Product Guarantee

ISO 9001:2015 Quality management systems
ISO 14001:2015 Environment management systems
ISO 45001:2018 Occupational health and safety management systems
IEC 61215/IEC 61730/IEC 61701/IEC 62716
TUV/CE/CQC/MCS/BIS/SASO/SGS/INMETRO



Electrical Characteristics

Module Type		ST440G12RNHB-96		ST445G12RNHB-96		ST450G12RNHB-96		ST455G12RNHB-96		ST460G12RNHB-96	
Working Conditions		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power at STC/NMOT(Pmax)	W	440	330.9	445	334.6	450	338.4	455	342.2	460	345.9
Optimum Operating Voltage(Vmp)	V	28.94	26.91	29.14	27.10	29.33	27.28	29.42	27.36	29.47	27.41
Optimum Operating Current (Imp)	A	15.20	12.29	15.27	12.35	15.34	12.41	15.47	12.51	15.61	12.62
Open Circuit Voltage(Voc)±3%	V	34.46	32.05	34.66	32.23	34.85	32.41	34.94	32.49	34.99	32.54
Short Circuit Current(Isc)±3%	A	16.14	13.05	16.21	13.11	16.28	13.17	16.40	13.26	16.54	13.37
Module Efficiency	%	22.0		22.2		22.5		22.8		23.0	
Maximum System Voltage	V	1500 (DC)									
Maximum Series Fuse Rating	A	25									
Operating Module Temperature	℃	-40~+85									

STC: Irradiance 1000W/m², cell temperature 25°C, atmospheric quality AM1.5
NMOT: Irradiance 800W/m², ambient temperature 20°C, AM1.5, wind speed 1m/s

Mechanical Characteristics

Solar Cell (No.of cells)	N-Mono 182x210 48 PCS
Dimensions	1762x1134x30 mm
Weight	23.6 kg(±3%)
Glass	2.0+2.0mm Low-iron tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 rated 3 bypass-diodes
Output Cables	4mm ² /2x300mm or Customized length
Mechanical Load	5400Pa/2400Pa
Safety Rate	Class II (IEC)

Temperature Characteristics

Temperature Coefficient of Pmax	%/°C	-0.30
Temperature Coefficient of Voc	%/°C	-0.25
Temperature Coefficient of Isc	%/°C	+0.05
Nominal Module Operating Temperature	°C	45±2

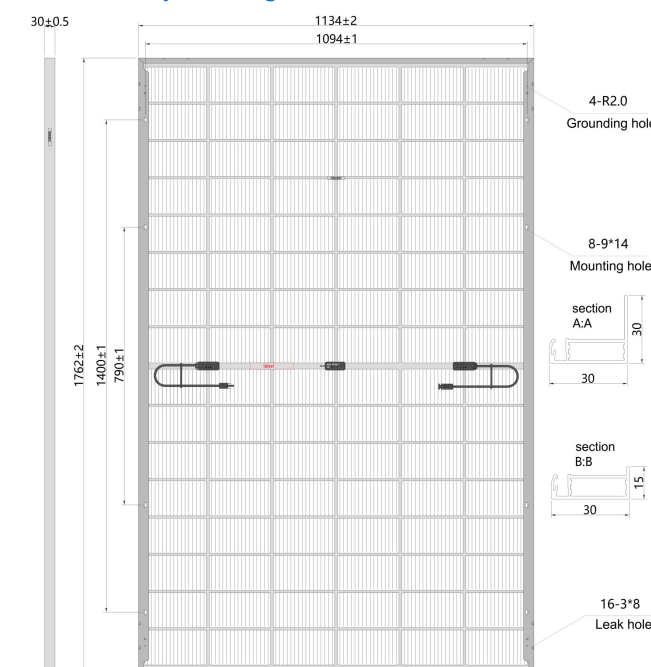
Different Backside Power Gain(440W)

Power Gain		5%	15%	25%
Maximum Power Pmp	W	462.0	506.0	550.0
Optimum Operating Voltage(Voc)	V	28.94	28.94	28.94
Optimum Operating Current(Imp)	A	15.96	17.48	19.00
Open Circuit Voltage (Voc)	V	34.46	34.46	34.46
Short Circuit Current(Imp)	A	16.97	18.59	20.20

Packing Configuration

Container 40'HQ	37PCS/pallet	26pallet/40'HQ	962 PCS/40'HQ
17.5m Land Truck	37PCS/pallet	36pallet/truck	1332PCS/truck

Assembly Drawing (mm)



I-V Curves(440W)

