

N-type TOPCon



132 Half-Cut TOPCon Cell
Bifacial Dual Glass

Model No: FST-G12R.132G-XXX
(where XXX = 600-635)



Higher Efficiency



Bifaciality Factor : $80 \pm 10\%$



Lower Degradation



Outstanding Power Generation



PID Free/Low LID Protection



Lower Temperature Coefficient



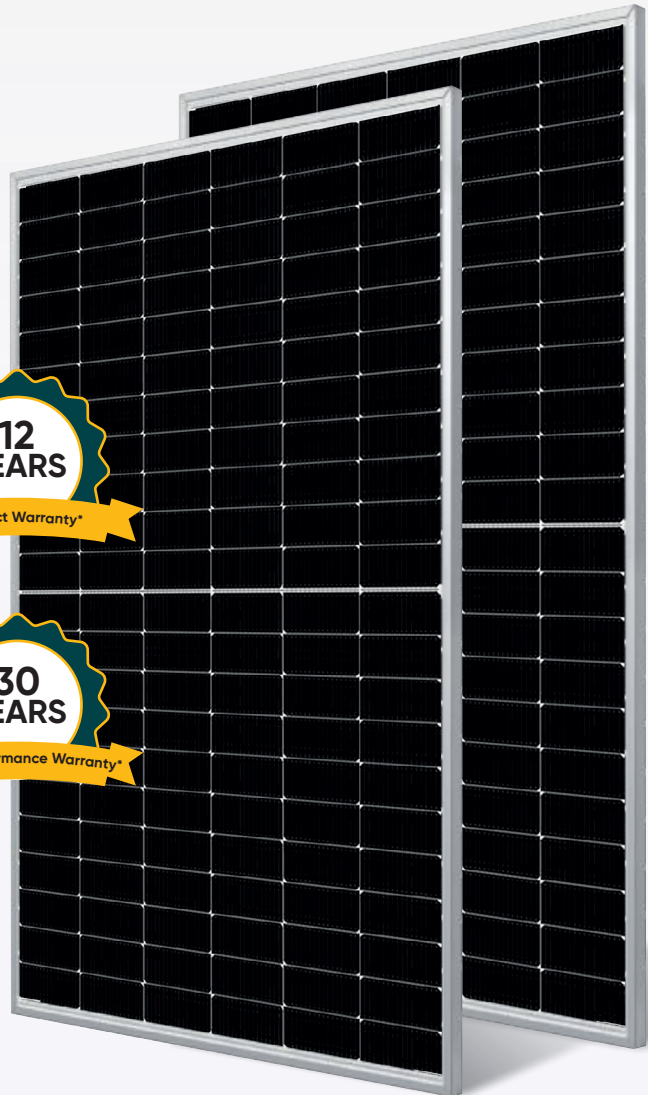
Less Hot Spot Shading Effects



Enhanced Bifacial Factor



Exceptional Mechanical Resistance



23.51%

Maximum Efficiency

635 Wp

Maximum Power Output

0~+4.99 W

Positive Power Tolerance

GRADE A

Cells Guaranteed

Certifications (Under process)



BIS | IEC 61730 | IEC 61215 | UL 61730 | IEC 61701 (salt mist) | IEC 62716 (Ammonia)
IEC 61853-1 & 2 (PAN File) | LeTID | IEC 60068 (sand & dust) | IEC 62804 (PID) | CEC | CE

For more details, please contact:

FS Green Energies Pvt. Ltd.

Corporate Office:
Samanvay House, Beside Urmi Society,
Nr. Alkapuri Haveli, Jetalpur Road,
Alkapuri, Vadodara - 390 007, Gujarat.

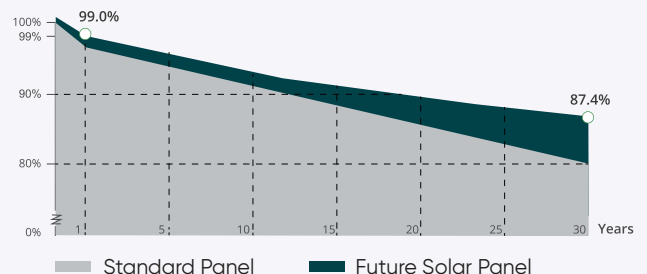
Manufacturing Unit:
Survey No 160, Karjan Sadhli Road,
Juni Jithardi Village, Karjan - 391 240
Gujarat.

☎ 73531 61333 ✉ inquiries@futuresolar.net 🌐 www.futuresolar.net

LINEAR PERFORMANCE WARRANTY

1st Year Degradation < 1%

2-30th Year Degradation < 0.4% p.a.



Standard Panel

Future Solar Panel



G12R Cells
16BB



Residential



Commercial &
Industrial

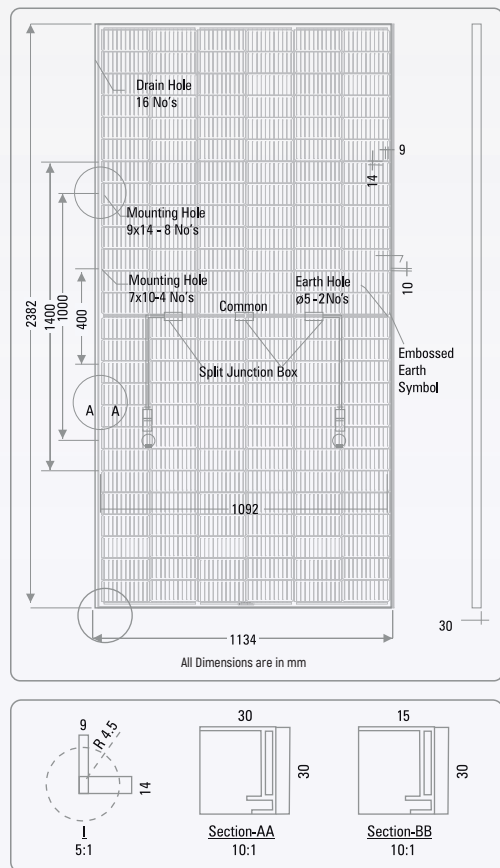


Utility

* T&C Apply

SOLAR PV MODULE

Half-Cut TOPCon CELL
Bifacial Dual Glass 600-635 Wp



MECHANICAL SPECIFICATIONS

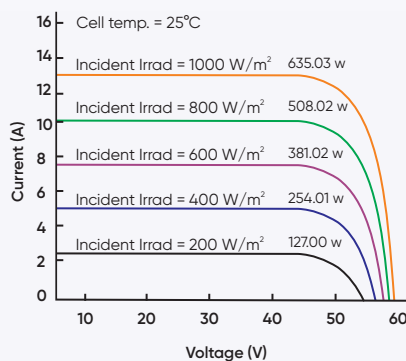
External Dimensions	2382 (±2mm) X 1134 (±2mm) X 30 (±1mm)
Weight	33.5 Kg.
Solar Cells	16 BB, TopCon, 105 mm X 182 mm
Front Glass	2.0 mm ARC Heat Strengthened Glass
Rear Cover	2.0 mm Heat Strengthened Glass
Frame	Anodized Aluminium Alloy (Silver)
Junction Box	3 Split, IP 68 Rated
Connector	MC4 Connector
Mechanical Load	5400 Pa for Snow load, 2400 Pa for Wind Load
Output Cable	4.0 mm ² /400 mm Long (Length can be customized)

PACKING CONFIGURATION

Container	40' HQ
Pieces per Pallet	36
Pallet per Container	20
Pieces per Container	720

TEMPERATURE CHARACTERISTICS

Pmax Temp. Coefficient (%/°C)	-0.32
Voc Temp. Coefficient (%/°C)	-0.26
Isc Temp. Coefficient (%/°C)	0.046
Operating Temp. (°C)	-40 to + 85
Nominal Operating Cell Temp. (°C)	45±2



ELECTRICAL CHARACTERISTICS (STC)

FST-G12R.132G-XXX	600	605	610	615	620	625	630	635
Maximum Power, P Max (Wp)	600	605	610	615	620	625	630	635
Maximum Voltage, Vmp (V)	40.42	40.46	40.55	40.70	40.70	40.81	40.93	40.99
Maximum Current, Imp (A)	14.84	14.95	15.04	15.13	15.22	15.31	15.4	15.49
Open Circuit Voltage, Voc (V)	48	48.3	48.6	48.9	49.2	49.5	49.8	50.1
Short Circuit Current, Isc (A)	15.57	15.61	15.65	15.69	15.73	15.77	15.81	15.84
Module Efficiency (%)	22.20%	22.39%	22.58%	22.75%	22.95%	23.13%	23.33%	23.51%
Fill Factor (%)	80.25%	80.22%	80.19%	80.15%	80.11%	80.04%	80.05%	80.01%
Power Tolerance	0 to +4.99 W							
Maximum System Voltage	1500 V (IEC & UL)							
Maximum Series Fuse Rating	30 A							

* STC - Irradiance = 1000 W/m², Module Temperature = 25 °C and AM = 1.5 Measuring Tolerance = ±3%

ELECTRICAL CHARACTERISTICS (NOCT)

FST-G12R.132G-XXX	600	605	610	615	620	625	630	635
Maximum Power (W)	441	445	449	452	456	460	464	467
Maximum Voltage, Vmp (V)	37.50	37.54	37.63	37.77	37.77	37.87	37.98	38.04
Maximum Current, Imp (A)	11.76	11.85	11.92	11.98	12.08	12.14	12.21	12.28
Open Circuit Voltage, Voc (V)	44.85	45.13	45.41	45.69	45.97	46.25	46.53	46.81
Short Circuit Current, Isc (A)	12.41	12.44	12.48	12.51	12.54	12.57	12.60	12.63

* NOCT - Irradiance = 800 W/m², AM = 1.5, Ambient Temperature = 20° C, Wind Speed = 1 m/s, Measuring Tolerance = ±3%

Gain	FST-G12R.132G-XXX	600	605	610	615	620	625	630	635
5% Max. Power (P max)		629.78	635.06	640.39	645.75	651.00	656.08	661.81	666.70
10% Max. Power (P max)		659.77	665.30	670.88	676.50	682.00	687.33	693.33	698.45
20% Max. Power (P max)		719.75	725.78	731.87	738.00	744.00	749.81	756.36	761.95
30% Max. Power (P max)		779.73	786.27	792.86	799.50	806.00	812.29	819.39	825.44

* Bifacial Gain :The additional gain from the backside compared to the power of the front side at STC, It depends on mounting structure, Height, angle, Ground surface etc.

* T&C Apply

The specification and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Future Solar reserves the right to make necessary adjustment to the information described herein at any time without further notice.