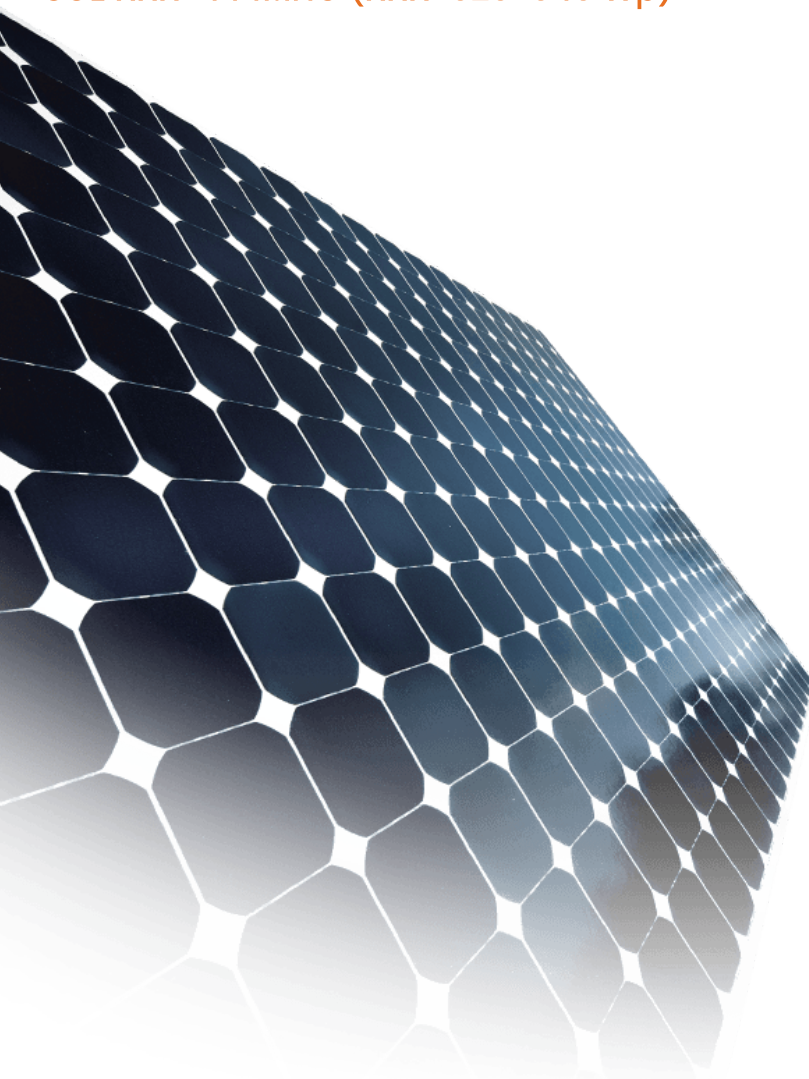# SAATVIK

Bifacial – MONO PERC – 144 Cells
525 Wp I 530 Wp I 535 Wp I 540 Wp I 545 Wp
SGE XXX- 144MHC (XXX-525-545 Wp)

Key Features

High Module Conversion Efficiency
Module efficiency up to 21.0 % achieved through advanced cell technology and manufacturing process.

Advanced Technology
MBB- Multi Busbar (10BB) / Halfcut MONOPERC cells / Ga Doped Wafers

Positive Tolerance Cell Output
Guaranteed 0~+4.99 Wp positive tolerance to ensure power output

Excellent Weak Light Performance
Advanced glass and surface texturing allow for excellent performance in low-light environment.

Extended Wind and Snow load Tests
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

Excellent PID Resistance
Excellent Anti-PID performance guarantee limited power degradation and certified for up-to 288 Hrs.

Withstanding Harsh Environment
Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline, ammonia.

Rigorous Testing Criteria
100% EL inspection ensuring defect-free modules.

Current Sorting
To minimize the current mismatch losses to maximize system power output.

Bifaciality Factor 70 ± 5%
The ratio of rear efficiency in relation to the front efficiency subject to the same irradiance

Linear Performance Warranty

Product Warranty 12 Years: Material & Processing.
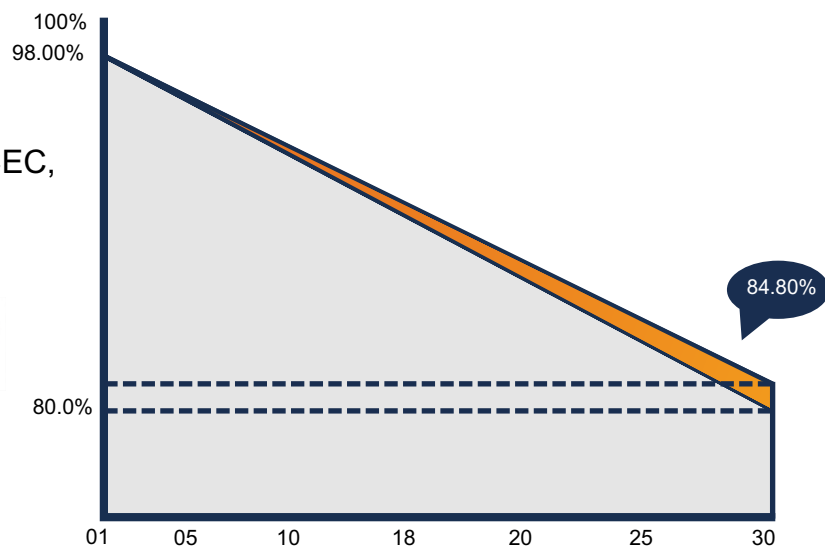First year Degradation Upto -2.0 %
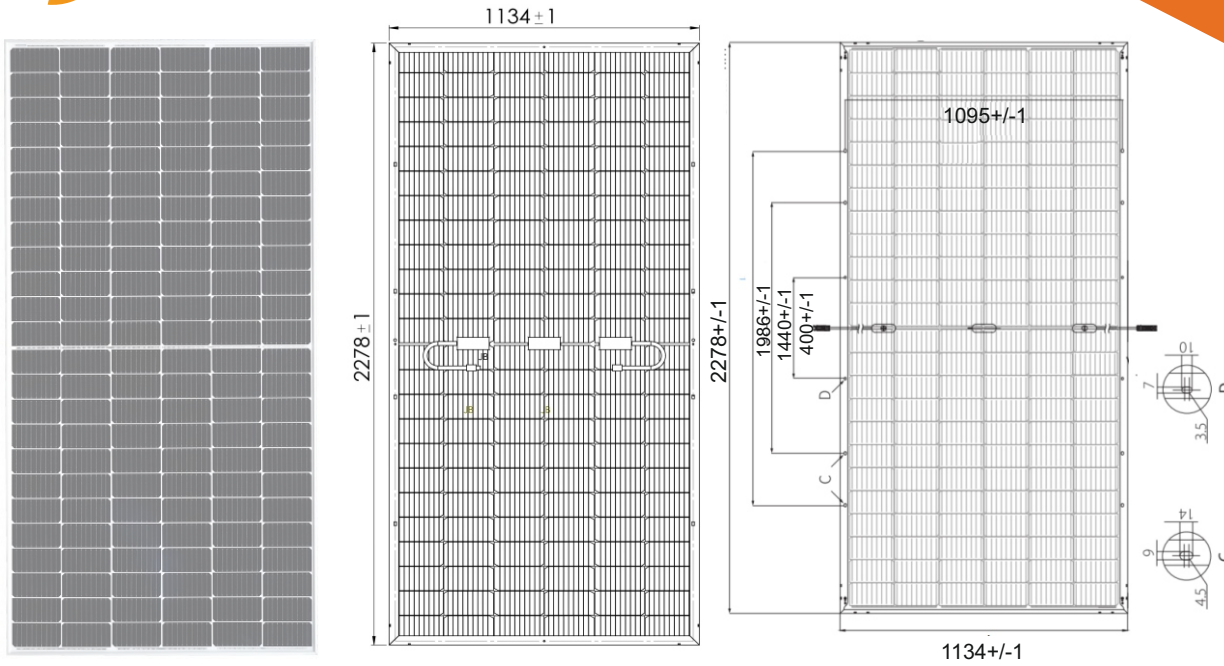Linear Power output 25: 2-25 Annual degradation -0.55%

Certifications and standards

IEC 61215, IEC 61730, IEC 61701, UL 61730 CEC, CEC-Aus, IEC 62716, IEC 62759, IEC 62804, IEC 62782, IEC 60068-2-68, IEC 61853

TÜVRheinland CERTIFIED · IS · IEC · ISO · MAKE IN INDIA

Munich RE · CE

Certification are under progress

100%
98.00%

84.80%

80.0%

01   05   10   18   20   25   30

Electrical Data Performance

Conditions	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power Pmax(0 ~+ 4.99)	Wp	525	393.2	530	397.5	535	401.3	540	405.0	545	408.8
Maximum voltage	Vmpp	41.34	38.29	41.5	38.48	41.65	38.68	41.8	38.79	42.08	38.8
Maximum current	Impp	12.71	10.27	12.78	10.33	12.86	10.39	12.94	10.46	13.03	10.46
Open circuit voltage,	Voc	49.60	45.94	49.80	46.17	49.98	46.41	50.16	46.54	50.49	46.56
Short circuit current,	Isc	13.35	10.78	13.42	10.85	13.50	10.91	13.59	10.98	13.67	11.08
Module Efficiency(%)		20.34		20.54		20.73		20.92		21.12	

Operating Temperature(℃)	-40℃~+85℃	Temperature coefficients of Isc	0.048%/°C
Maximum system voltage	1500 VDC	Nominal operating cell temperature (NOCT)	45 ± 2 °C
Maximum series fuse rating	25A	Fire Safety	Class-C
Power tolerance	0~+3%	Application	Class-A
Temperature coefficients of Pmax	-0.35%/°C	Safety Class	Class II
Temperature coefficients of Voc	-0.28%/°C		

Bifacial Gain	Measurement	Unit	525	530	535	540	545
5%	Maximum Power(Pmax)	Wp	550	555	560	565	570
	Module Efficiency	%	21.29	21.48	21.68	21.87	22.07
10%	Maximum Power(Pmax	Wp	575	580	585	590	595
	Module Efficiency	%	22.26	22.45	22.65	22.84	23.03
15%	Maximum Power(Pmax	Wp	600	605	610	615	620
	Module Efficiency	%	23.23	23.42	23.61	23.81	24.00

**STC: Irradiance 1000 W/m2 module temperature 25* °C, Am=1.5; NOCT: Irradiance 800 W/m2, ambient teperature 20°C, Am=1.5, Wind speed 1m/s. Average power reduction of 4.5% at 200 W/m2 as per IEC 60904-1. Measuring Uncertainty +/- 3%
**Power gain from rear side depends upon the ground reflectance (Albedo) 8 Bifaciality factor.

MODULE MECHANICAL DATA

SPECIFICATION	DATA
Cell Type	Half Cut- PERC Monocrystalline, 144 Cells
Dimensions	2278X1134X35mm
Weight	28 kgs
Front Cover	3.2 mm Tempered Glass
Backsheet	Transparent Backsheet
Frame Material	Silver Anodized Aluminium Profile, (black frame on request)
J-Box	IP67, 3 diodes
Cable	350mm, 4mm2
Connectors	MC4 Compatible Connector IEC/UL Certified
Standard Packaging	30Pieces/Pallet
Module Pieces per Container	620 pieces (40* HQ)

I-V Characteristics At Different Irradiations

PV module: Saatvik Green Energy Pvt. Ltd,
Cells temp. = 25°C

Incident Irrad. = 1000 W/m² — 540.7 W
Incident Irrad. = 800 W/m² — 433.5 W
Incident Irrad. = 600 W/m² — 324.8 W
Incident Irrad. = 400 W/m² — 215.0 W
Incident Irrad. = 200 W/m² — 105.3 W

Voltage [V]