

VEGA PLUS



SAATVIK
FOR A BETTER FUTURE

BIFACIAL-MONO PERC 144 CELLS

525 Wp | 530 Wp | 535 Wp
540 Wp | 545 Wp | 550 Wp
SGE XXX-144 MBHC (XXX-525-550 Wp)

KEY FEATURES

-  **High Module Conversion Efficiency**
Module efficiency up to 21.29 % achieved through advanced cell technology and manufacturing process
-  **Advanced Technology**
MBB-Multi Busbar (10BB) / Halfcut MONO PERC cells Ga Doped Wafers.
-  **Positive Tolerance**
Power output with a positive tolerance.
-  **Excellent performance in low light**
Superior output in low irradiance Increased power production even in low-light environments.
-  **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 and certified for up to 288 Hrs
-  **Withstanding a Harsh Environment**
Reliable quality leads to better sustainability, even in harsh environments such as deserts, farms, coastal and the areas with ammonia exposure
-  **Rigorous Testing Criteria**
100% I-V Measurement, HiPOT test and EL inspection, ensures defect-free modules
-  **Bifaciality factor 70±5%**
The ratio of rear efficiency in relation to the front efficiency subject to the same irradiance

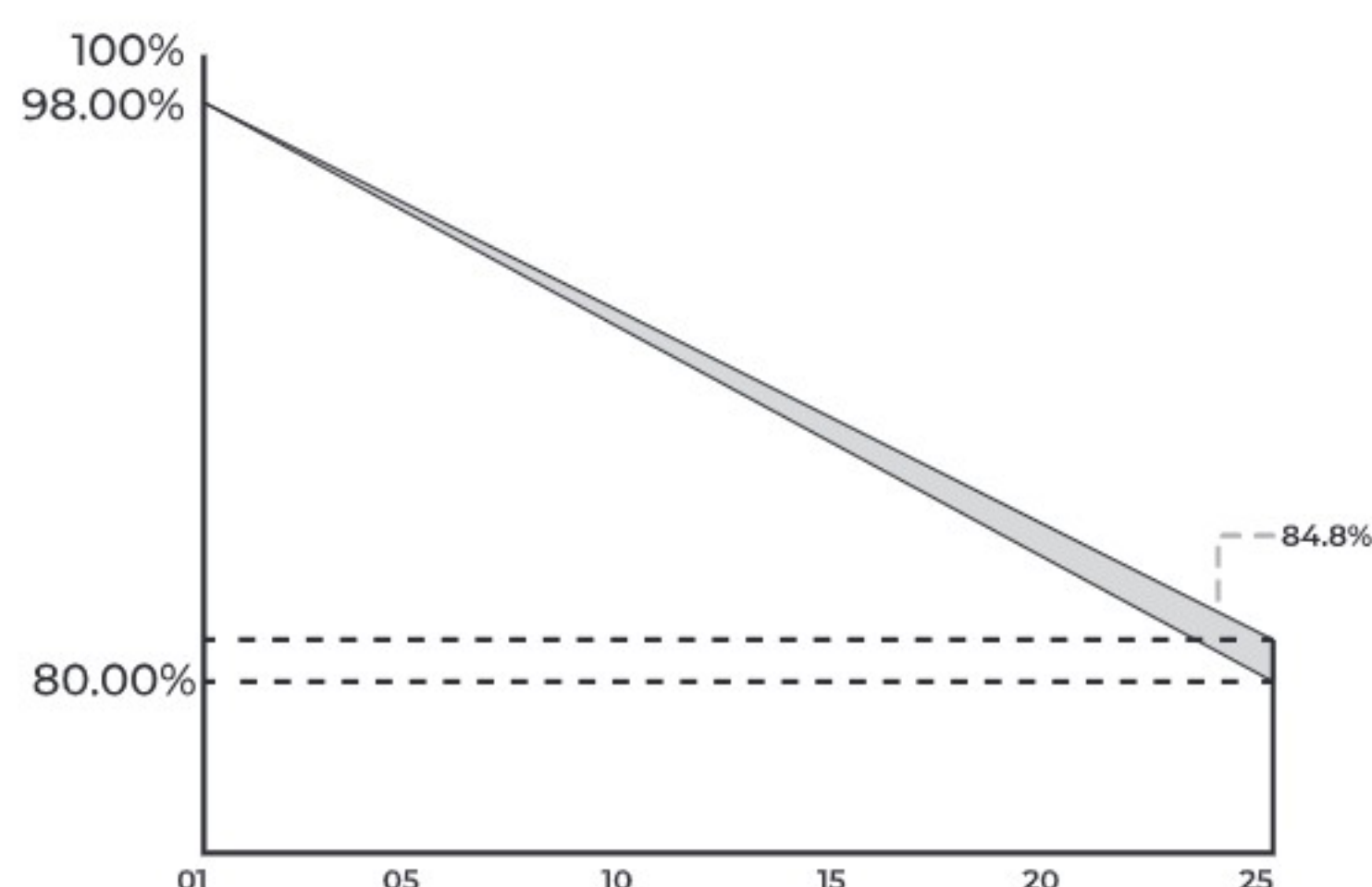


Product Warranty**
12 years of product warranty



Performance Warranty**
Power degradation <2.0% in first year and <0.55% / year in 2 to 25 years

** Please read Saatvik solar warranty documents thoroughly

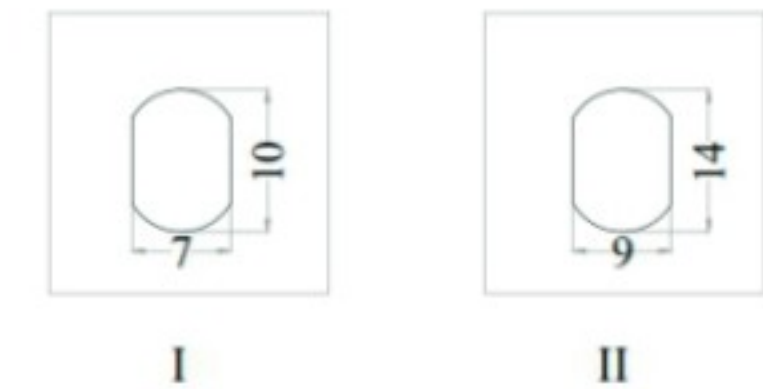
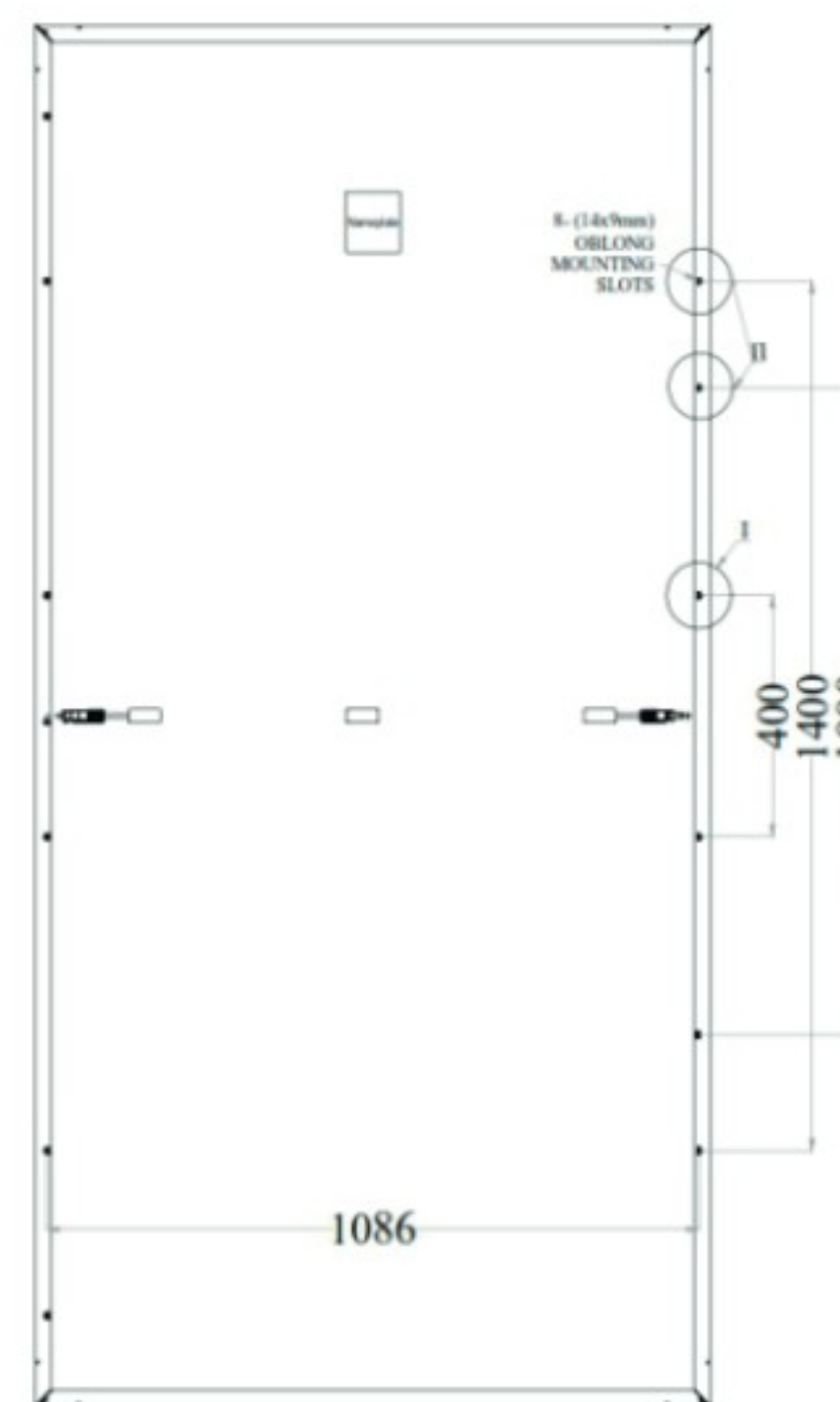
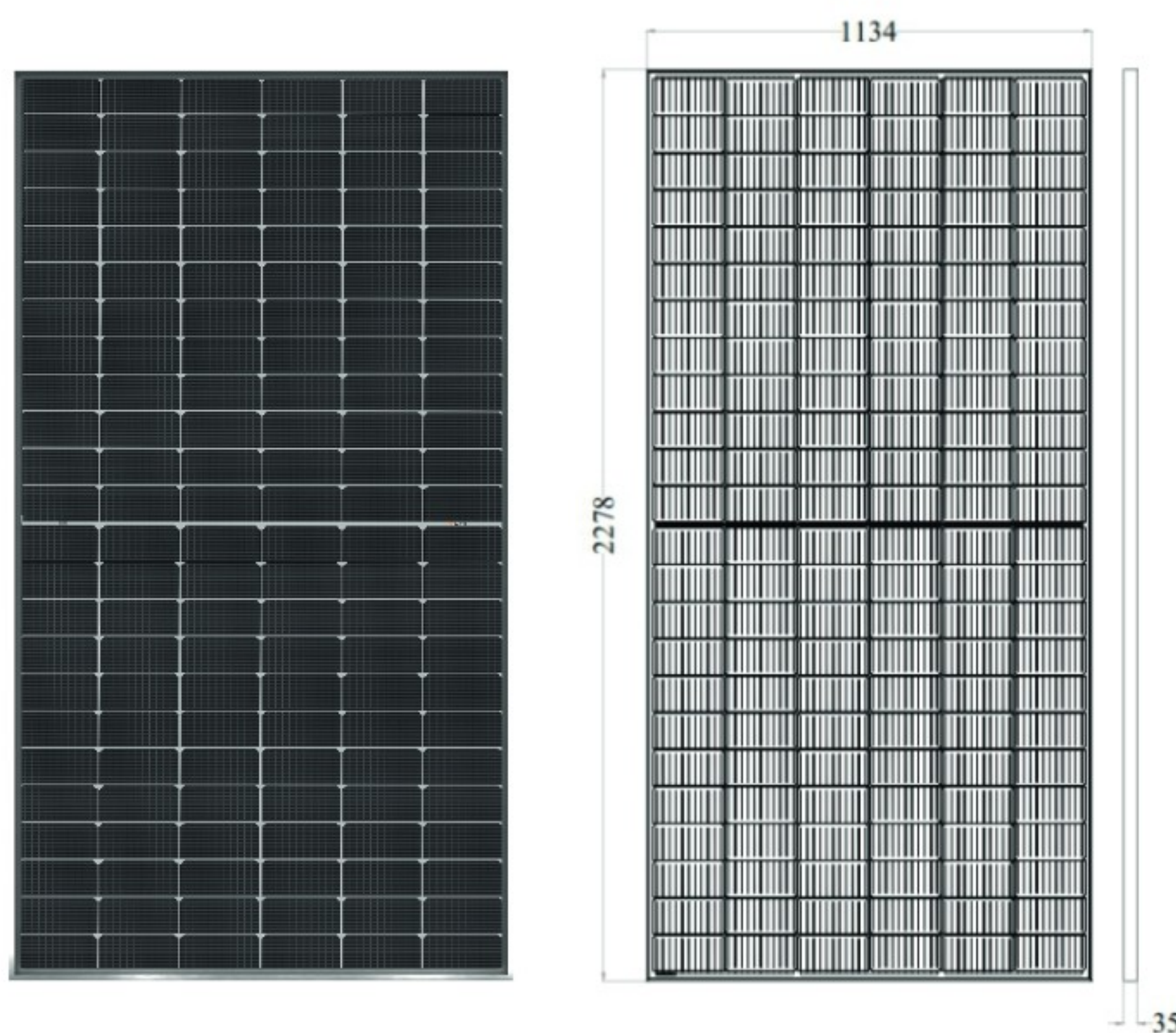


Certifications & Standards

IEC 61215, IEC 61730, IEC 61701, UL 61215,
UL 61730, IS 14286, IEC 62716, IEC 62804
IEC 62782, IEC 60068-2-68, IEC61853-1&2

Certifications





ELECTRICAL DATA PERFORMANCE

Module Type		525Wp		530Wp		535Wp		540Wp		545Wp		550Wp	
Conditions	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power, Pmax (Wp)	W	525	390	530	393	535	397	540	401	545	405	550	408
Voltage at Maximum power, Vmp	V	41.31	39.00	41.48	39.16	41.64	39.31	41.77	39.43	41.96	39.61	42.12	39.76
Current at maximum power, Imp	A	12.71	9.99	12.78	10.05	12.85	10.10	12.93	10.17	12.99	10.21	13.06	10.27
Open circuit voltage, Voc	V	48.85	46.11	49.05	46.30	49.25	46.49	49.45	46.68	49.65	46.87	49.85	47.06
Short circuit current, Isc	A	13.35	10.78	13.42	10.84	13.50	10.61	13.59	10.98	13.65	11.02	13.74	11.10
Module Efficiency (%)		20.32%		20.52%		20.71%		20.90%		21.10%		21.29%	
Operating Temperature (°C)		-40°C~+85°C			Temperature coefficient of Isc (α)						+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 (Wp)		0~+3%			Application						Class-A		
Temperature coefficient of Pmax (γ)		-0.36%/°C			Safety Class						Class-II		
Temperature coefficient of Voc (β)		-0.28%/°C											

STC: Irradiance 1000W/m², module temperature 25°C, AM =1.5; NOCT: Irradiance 800W/m², ambient temperature 20°C AM = 1.5 wind Speed 1m/s. Average power reduction of 4.5% at 200W/m² as per IEC 60904-1. Except Pmax, all other parameters have tolerance of +/-5%, measurement uncertainty +/-3%.

BI-FACIAL OUTPUT - BACKSIDE POWER GAIN*

Bifacial Gain	Measurement	Unit	525Wp	530Wp	535Wp	540Wp	545Wp	550Wp
5%	Peak Power (Pmax)	W	551	557	562	567	572	577
	Module Efficiency	%	21.34	21.54	21.75	21.95	22.15	22.34
10%	Peak Power (Pmax)	W	578	583	589	594	600	605
	Module Efficiency	%	22.36	22.57	22.78	22.99	23.22	23.42
15%	Peak Power (Pmax)	W	604	610	615	621	627	632
	Module Efficiency	%	23.37	23.59	23.82	24.04	24.26	24.47

*Power gain from the rear side depends on the ground reflectance (Albedo) & Bifaciality factor

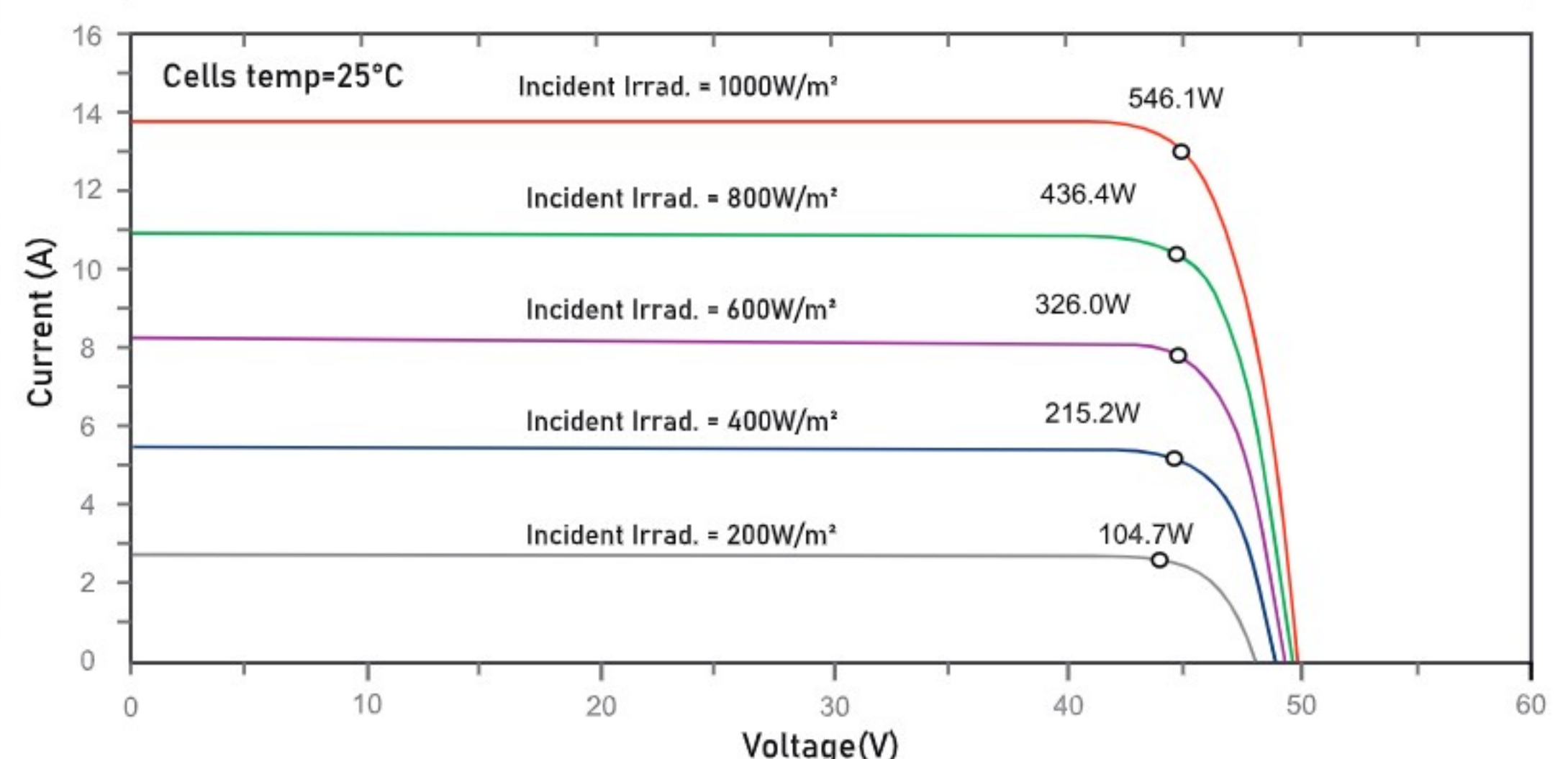
MODULE MECHANICAL DATA

SPECIFICATION DATA	
Cell Type	Half Cut-PERC Monocrystalline, 144Cells
Dimensions	2278x1134x35 mm
Weight	28 Kgs
Front Cover	3.2mm Tempered Glass
Backsheet	Transparent Backsheet
Frame Material	Silver Anodized Aluminium Profile
J-Box	IP68, 3 diodes
Cable	350mm, 4mm²
Connectors	Mc4 Compatible Connector
Standard Packaging	31 Pieces/Pallet
Module Pieces per Container	620 pieces (40*HQ)

Note: • The specifications included in this datasheet are subject to change without notice.
• The electrical data given here is for reference purpose only.
• Please confirm your exact requirements with the sales representative while placing your order.
• Refer installation Manual instructions & Saatvik warranty statement for terms & conditions.
• The dimensional tolerance for the short/long side of the module is ±2 mm, and diagonal difference ≤ 3 mm.

I-V CHARACTERISTICS AT DIFFERENT IRRADIATIONS

PV MODULE : SGE 545-144 MBHC



STVK/PMG/SGEXXX-144MBHC-REV06