



N-TYPE HJT HIGH EFFICIENCY BIFACIAL MODULE

ENEM-210RNHHDG96-435-460

435-460 W

Power Output Range

23%

Maximum Efficiency

< 0.3 %

Annual Degradation



High Power Output



High anti-LID & anti-PID performance



High Reliability



High Efficiency



N-Type HJT Technology



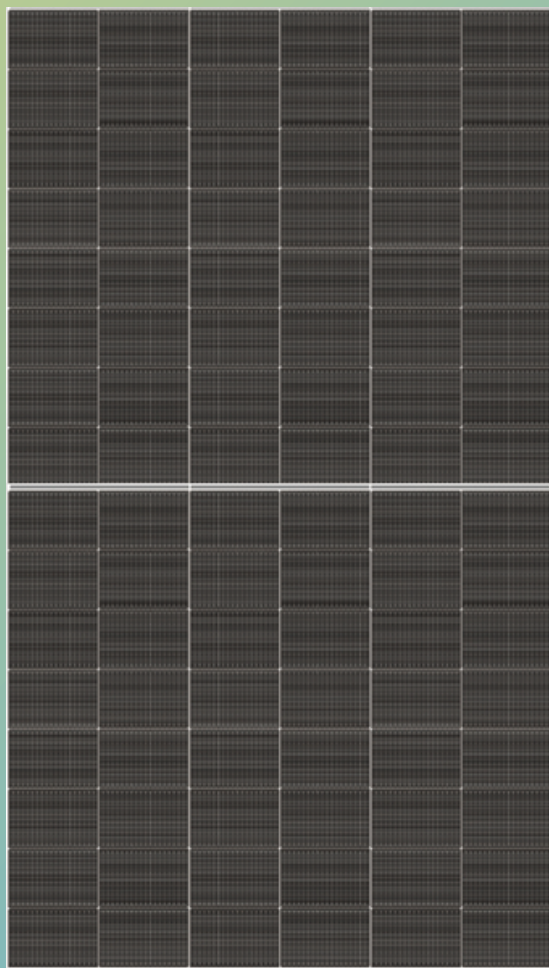
Lead metallization process



Most stable power temperature coefficient

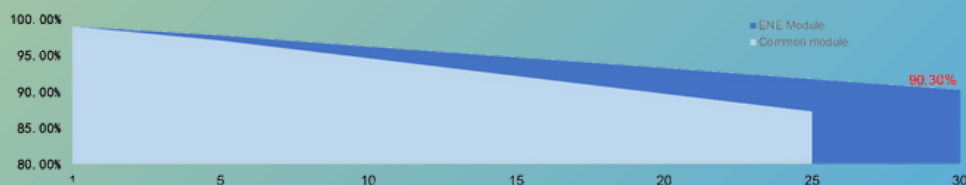


Over 90% bifaciality ratio



0.3% Annual Degradation over 30 years

15 years Product Warranty / 30 years Linear Power Warranty



ELECTRICAL DATA (STC)

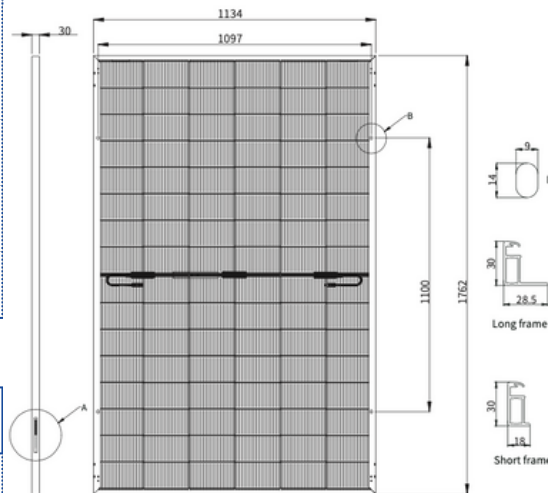
Model Type	ENEM-210RNHHDG96-435-460					
Rated Power in Watts-Pmax(Wp)	435	440	445	450	460	465
Open Circuit Voltage-Voc(V)	36.42	36.52	36.62	36.72	36.82	36.92
Short Circuit Current-Isc(A)	15.20	15.31	15.42	15.53	15.64	15.75
Maximum Power Voltage-Vmpp(V)	30.50	30.61	30.72	30.83	30.94	31.05
Maximum Power Current-Impp(A)	14.27	14.38	14.49	14.60	14.71	14.82
Module Efficiency (%) ★	21.8	22.0	22.3	22.5	22.8	23

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3

Electrical characteristics with 10% rear side power gain

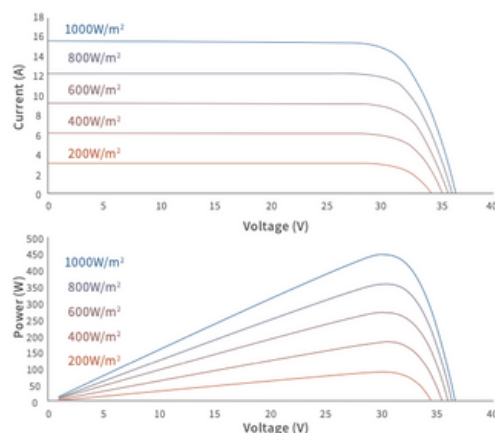
Total Equivalent power - Pmax (Wp)	487	493	499	504	510	515
Open Circuit Voltage-Voc(V)	36.55	36.65	36.75	36.85	36.95	37.05
Short Circuit Current-Isc(A)	17.05	17.17	17.29	17.42	17.54	17.66
Maximum Power Voltage-Vmpp(V)	30.61	30.72	30.83	30.94	31.05	31.16
Maximum Power Current-Impp(A)	15.94	16.07	16.19	16.31	16.44	16.56

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground



ELECTRICAL DATA (NMOT)

Model Type	ENEM-210RNHHDG96-435-460					
Maximum Power-Pmax (Wp)	332	335	339	343	347	351
Open Circuit Voltage-Voc (V)	34.76	34.86	34.95	35.05	35.14	35.24
Short Circuit Current-Isc (A)	12.15	12.24	12.32	12.41	12.50	12.59
Maximum Power Voltage-Vmpp (V)	29.12	29.23	29.34	29.45	29.55	29.65
Maximum Power Current-Impp (A)	15.94	16.07	16.19	16.31	16.44	16.56



MECHANICAL DATA

Solar cells	n-type HJT
Cell configuration	96 cells (6×8×6×8)
Module dimensions	1762×1134×330mm
Weight	21.8kg
Superstrate	1.6mm(0.08 in), High Transmission, AR Coated Heat Strengthened Glas
Substrate	1.6mm(0.08 in), Heat Strengthened Glass
Frame	Anodized Aluminium Alloy, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky by pass diodes
Cables	4.0mm², 1250mm(+), 1250mm(-), connector Included, or customized length
Connector	MC EVO IP68/MC 4
Maximum mechanical test load	5400 Pa (front) / 2400 Pa(back), under certain installation method

TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	43°C±2°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	0.047%/°C
Temperature Coefficient of Pmax	-0.24%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	30A
Limiting Reverse Current	30A

PACKAGING CONFIGURATION

	40ft(HQ)
Number of modules per container	936
Number of modules per pallet	33
Number of pallets per container	26

