

G12R-66P

N-type Bifacial Double Glass Module

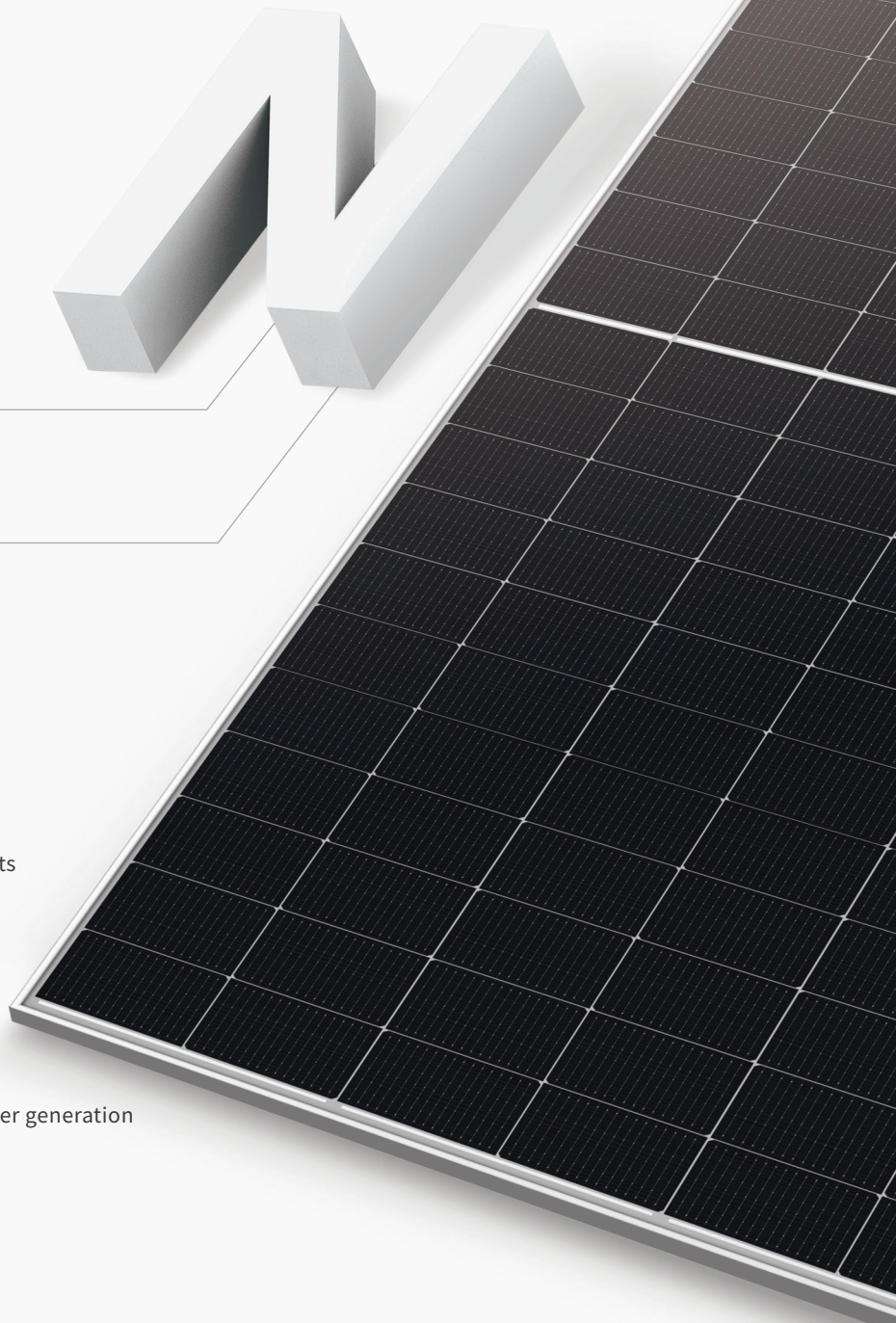
HSM-ND66-GR615~650 (IEC1500V)

650W

Maximum Power Output

24.1%

Maximum Efficiency



Superior Customer Value

- Container space utilization saves shipping costs
- Low-voltage design optimizes BOS cost



High Energy Yield

- Consistent high yield in varying conditions
- Enhanced thermal resistance and bifacial power generation



Long-term Reliability

- Resistant to harsh environmental conditions

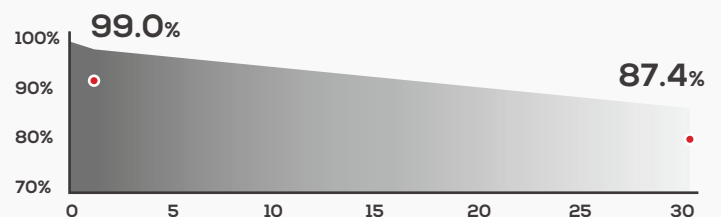
Linear Performance Warranty



Years
Product Warranty



Years Linear
Performance Warranty



Comprehensive Products and System Certificates



IEC 61215 / IEC 61730 ISO 9001:2015 ISO 45001:2018 ISO 14001:2015
 ISO 9001: 2015 / Quality management system
 ISO 45001: 2018 / International standards for occupational health & safety
 ISO 14001: 2015 / Standards for environmental management system

HSM-ND66-GRxxx, where xxx = Pmax at STC
 Measurement Tolerance: Pmax (W) ±3%; Voc (V) ±3%; Isc (A) ±4%
 STC: Irradiance 1000W/m², Cell Temperature 25°C, AM1.5
 BNPI: 1000W/m² +φ*135W/m²

Electrical Parameters (STC* & BNPI*)

Testing Condition		STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI		
Maximum Power	Pmax (W)	615	679	620	685	625	690	630	695	635	701	640	705	645	710	650	715
Open Circuit Voltage	Voc (V)	48.72	48.86	48.94	49.11	49.16	49.30	49.38	49.50	49.60	49.74	49.82	49.96	50.04	50.18	50.26	50.40
Short Circuit Current	Isc (A)	16.00	17.66	16.05	17.73	16.10	17.77	16.14	17.81	16.18	17.86	16.22	17.89	16.26	17.93	16.30	17.97
Maximum Power Voltage	Vmp (V)	40.79	40.79	40.98	41.00	41.18	41.20	41.40	41.40	41.62	41.63	41.84	41.83	42.06	42.03	42.28	42.23
Maximum Power Current	Imp (A)	15.08	16.65	15.13	16.71	15.18	16.75	15.22	16.79	15.26	16.84	15.30	16.86	15.34	16.90	15.38	16.94
Short circuit current at BSI	Isc (A)	19.70		19.76		19.82		19.86		19.91		19.97		20.03		20.09	
Module Efficiency	(%)	22.8		23.0		23.1		23.3		23.5		23.7		23.9		24.1	

Electrical Characteristics with 10% Bifacial Gain*

* The additional gain from the back side depends on mounting (structure, height, tilt angle etc.) and albedo of the ground

Maximum Power	Pmax (W)	677	682	688	693	699	704	710	715
Open Circuit Voltage	Voc (V)	48.72	48.94	49.16	49.38	49.60	49.82	50.04	50.26
Short Circuit Current	Isc (A)	17.60	17.66	17.71	17.75	17.80	17.84	17.89	17.93
Maximum Power Voltage	Vmp (V)	40.79	40.98	41.18	41.40	41.62	41.84	42.06	42.28
Maximum Power Current	Imp (A)	16.59	16.64	16.70	16.74	16.79	16.83	16.87	16.92

Temperature Coefficient

Nominal Module Operating Temperature*	43±2°C
Temperature Coefficient of Isc	+0.045%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Pmax	-0.28%/°C

Operating Parameters

Operating Temperature	-40~+70°C
Module [T98] max	70°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Bifaciality (φVoc/φIsc/φPmax)	98±2% / 80±5% / 80±5%

Mechanical Data

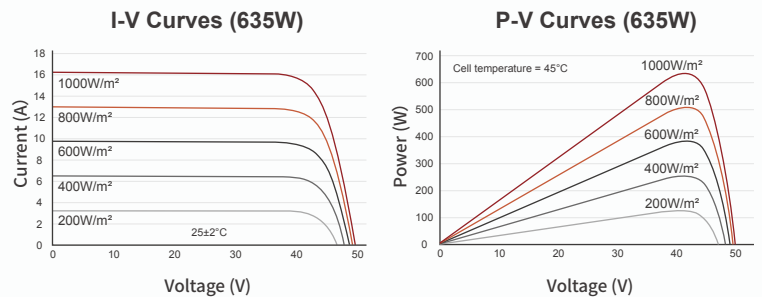
* Please refer to installation manual for details

No. of Cells	132pcs (6×22)
Dimension	2382×1134×30 mm
Weight	32.6kg±3%
Front Glass	2.0mm, Heat Strengthened, AR coating Glass
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
J-Box	IP68
Cables	4.0mm², +300mm, -200mm (can be customized)
Maximum Static Load	Front: 5400Pa/Back: 2400Pa
Fire Rating	IEC Class C
Connectors	Staubli Electrical Connectors AG, PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR

Packaging Configuration

Modules per Pallet	36pcs
Modules per 40'HQ Container	720pcs
Pallets per 40'HQ Container	20pcs

Curve Graph



Engineering Drawing

[Unit: mm]

