

Swan series

Double Glass BiFacial N-Type TOPCon Solar Module

430~455Watt

Model: UL-***M-96DDGN

Maximum Efficiency: **22.77%**



Bifacial Mono Module

Capable of generating power at back side,
80±5% efficiency of the front side



Longer Term Reliability

Passed the IEC63209-1:2021 standard test
(With testing standards 2 to 3 times stricter than regular IEC requirements)



Outstanding Mechanical load Resistance

2400 Pa wind load, 5400 Pa snow load



Anti-PID(potential induced degradation)

Passed anti-PID test under 85°C damp heat 85%
relative humidity for 192 hours



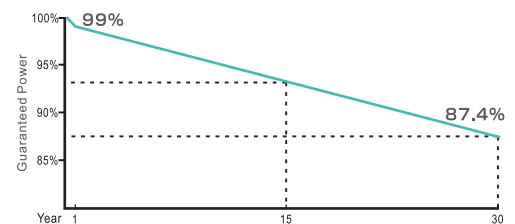
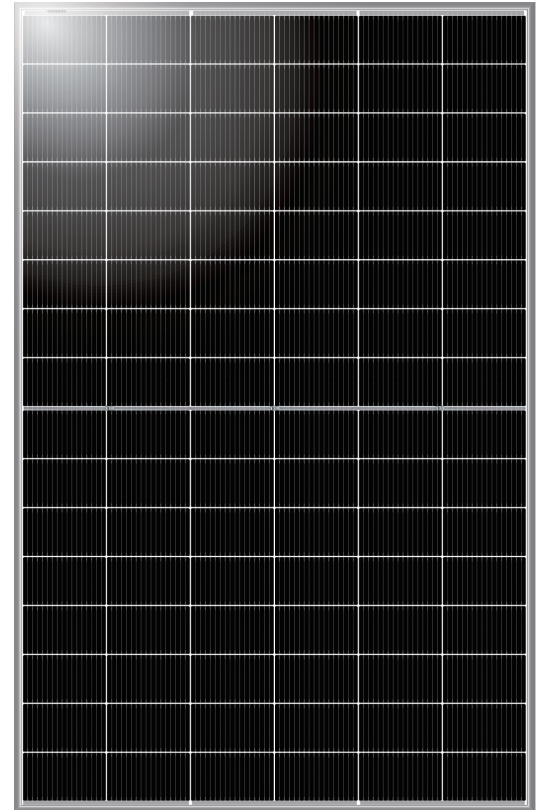
Lower LCOE

Lower shading and resistive loss Lower temperature coefficient



Widely Applied To Various Scenarios

Flexibly applied to roofs, ground surfaces, water surfaces, mountainous
areas, and other diverse environments



15 Year Product Warranty **1%** Power Degradation In The First Year

30 Year Linear Power Warranty **0.4%** Linear Power Degradation



CEC Listed



IEC 61215, IEC 61730

ISO 9001: 2015 (Quality management systems)

ISO 14001: 2015 (Environmental management systems)

ISO 45001: 2018 (Occupational health and safety)

UNI 9177 la CLASSE DI REAZIONE AL FUOCO: 1



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DOUBLE GLASS BIFACIAL 430~455Watt



ELECTRICAL SPECIFICATIONS

Module Type	UL-430M-96DDGN			UL-435M-96DDGN		UL-440M-96DDGN		UL-445M-96DDGN		UL-450M-96DDGN		UL-455M-96DDGN	
	STC*	NOCT*		STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*
Maximum Power(Pmax)	W	430	326	435	330	440	333	445	337	450	341	455	345
Maximum Power Voltage(Vmp)	V	29.08	26.75	29.21	26.87	29.35	27.00	29.48	27.12	29.61	27.24	29.75	27.37
Maximum Power Current(Imp)	A	14.79	12.18	14.89	12.27	14.99	12.35	15.09	12.43	15.20	12.52	15.30	12.60
Open-circuit Current(Voc)	V	34.56	31.45	34.70	31.58	34.84	31.70	35.00	31.85	35.14	31.98	35.29	32.11
Short-circuit Current(Isc)	A	15.90	12.83	15.95	12.87	16.00	12.91	16.05	12.95	16.10	12.99	16.15	13.03
Module Efficiency STC	%	21.52		21.77		22.02		22.27		22.52		22.77	

*STC:Cell temperature:25°C,Irradiance:1000W/m²,Ari mass:1.5G,Power measurement tolerance: ±3%
 *NOCT:Air temperature:20°C,Irradiance:1000W/m²,Ari mass:1.5G,Wind speed:1m/s

OPERATING PARAMETERS

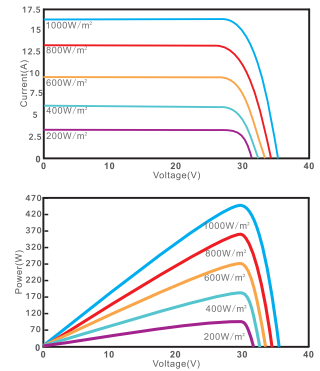
Operating Temperature	-40°C~85°C
Maximum system voltage	DC1500V(IEC)
Maximum series fuse rating	30A
Nominal operating cell temperature	43±2°C
Power tolerance	0~+5Watt

TEMPERATURE RATINGS

Temperature coefficients of Pmax	-0.29%/°C
Temperature coefficients of Voc	-0.25%/°C
Temperature coefficients of Isc	0.046%/°C

I-V CURVE

I-V characteristics at different irradiances (reference to 450 W)



REAR SIDE POWER GAIN(REFERENCE TO 450W FRONT SIDE)

Pmax/W	450	473	495	518	540	563	585
Pmax gain	0%	5%	10%	15%	20%	25%	30%
Voc/V	35.14	35.14	35.14	35.14	35.14	35.14	35.14
Isc/A	16.10	16.91	17.71	18.52	19.32	20.13	20.93
Vmp/V	29.61	29.61	29.61	29.61	29.61	29.61	29.61
Imp/A	15.20	15.96	16.72	17.48	18.24	18.99	19.75

SPECIFICATIONS

Cell Type	N-type TOPCon Mono Half Cell
No.of cells	96(6×8×2)
Dimensions	1762*1134*30mm
Weight	23.7kg
Front Glass	2.0mm,Anti-Reflection Coating,High Transmission,Low Iron,Tempered Glass
Back Glass	2.0mm,High Transmission,Low Iron,Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68,3diodes
Connector	☒ MC4 Compatible:PV-UL608 or ☐ Original:MC4-EVO2 or ☐ others _____

Cable Length (Including Connector) ☐ Short Cable: (+)400/(-)200mm or ☒ Long Cable:(+)1200/(-)1200mm
 or ☐ Customized Length _____

PACKAGING INFORMATION



36 Pcs/Pallet



72 Pcs/Stack



Length:1775mm



Width:1130mm



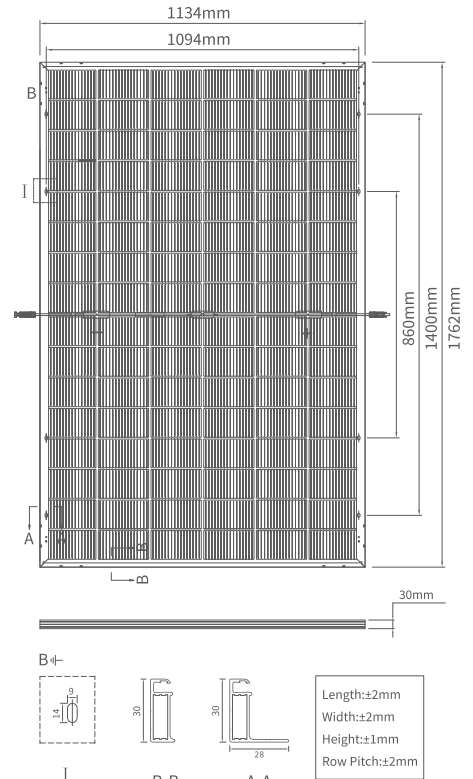
Height:2540mm



Weight:1770kg/Stack



13 Stack/40HQ
936 Pcs/40HQ



Specifications included in this datasheet are subject to change without notice.

Ulica Solar reserves the right of final interpretation.

Version number: UL-1762-96DDGNBB-30-EN-V2.0